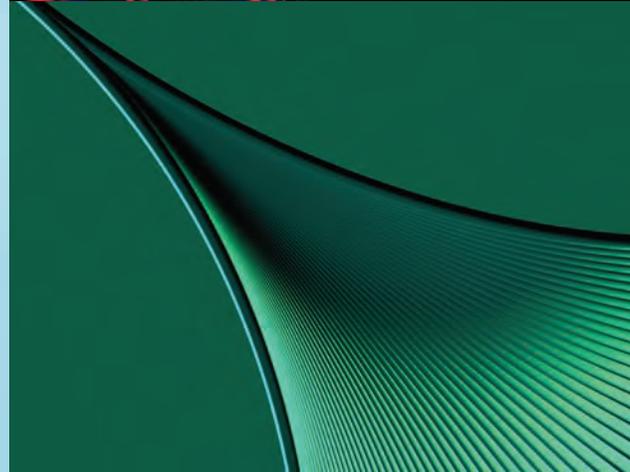
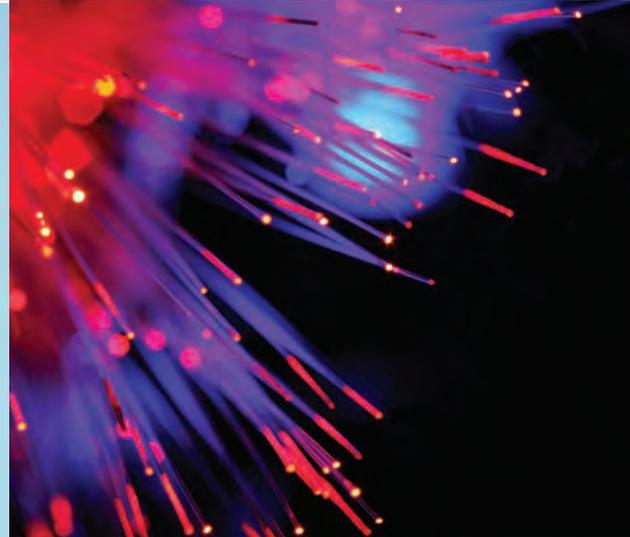


Distinction through Discovery

A Research-Oriented
First Year Experience

Jeffrey L. Buller



Distinction through Discovery



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HARRIET L. WILKES HONORS COLLEGE

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Contents

Introduction 8

DISTINCTION IN THE ACADEMIC WORLD—COLLEGE TRANSITION 17

Unit One: Becoming an Educated Person 18

The Purpose of a College Education 18

The Difference between Pre-College Learning and College-Level Learning 26

How Colleges and Universities Work 37

Using Your Resources 42

Five Essential Tools 51

Unit Two: Setting Goals and Evaluating Results 59

Identifying Your Learning Preferences 59

Applying Learning Preferences to Specific Learning Goals 67

Setting Goals: Being Intentional 72

Evaluating Results: Being Reflective 76

Learning from Unpleasant Experiences: The Case of Sexual Harassment 84

Unit Three: Conducting Original Research 93

The Nature of Research 93

Acquiring Knowledge versus Creating Knowledge 101

Quantitative Research 108

Qualitative Research 112

Following Appropriate Research Protocols 117

Unit Four: Creative and Critical Thinking 138

Creative Thinking 138

Critical Thinking 145

Critical and Creative Analysis of College-Level Material 157

Conducting Original Research into Critical and Creative Thinking 162

Critical and Creative Thinking about Campus Codes 167

Unit Five: College-Level Communication 182

Considering Your Purpose 182

Considering Your Audience 190

Distinction in Oral Communication 197

Strategies to Make Written and Oral Communication More Effective 204

Distinction in Multimedia Communication 213

DISTINCTION IN SELF-DETERMINATION—PERSONAL TRANSITION 221

Unit Six: Developing Time-Management Skills 222

- The Theory of Time Management 222
- The Practicalities of Time Management 227
- Resources for Effective Time Management 237
- Best Practices in Time Management 246
- Coping With Stress 251

Unit Seven: Making Difficult Decisions 276

- Effective Strategies for Making Decisions 276
- Basing Decisions on Your Core Principles 282
- Making Decisions about Sexuality 289
- Making Decisions about Drugs and Alcohol 298
- Making Decisions about Managing Money 301

Unit Eight: Self-Advocacy 316

- Interacting with Friends, Roommates, or Family Members 316
- Interacting with Professors and Administrators 322
- Emotional Intelligence 329
- Seeking Help with Occasional Challenges 335
- Seeking Help with Serious Problems 342

Unit Nine: Choosing a Major 353

- What Majors Are and Are Not 353
- How Not to Choose a Major 359
- Suggested Approaches to Choosing a Major 364
- Developing an Academic Plan 373
- Selecting Courses to Fit Your Academic Plan 379

DISTINCTION IN THE COMMUNITY—SOCIAL TRANSITION 385

Unit Ten: Diversity 386

- The Role of Diversity in Higher Education 386
- Addressing Complex Issues within Matters of Diversity 395
- The Similarities and Differences between Diversity and Multiculturalism 402
- Addressing Ambiguous Issues within Matters of Multiculturalism 410
- Research and Creative Activity about Issues of Diversity 415

Unit Eleven: Living in a Community 428

- The Importance of Communities as Resources 428
- The Residence Hall as a Learning Community 436
- Living/Learning Communities 444
- Service Learning 448
- The Pro's And Con's of Social Networking 457

Unit Twelve: Making the Most of Your College Experience 467

- Networking and Building Contacts 467
- Taking Advantage of Extracurricular Opportunities 473
- Athletics and the College Experience 480
- Taking Advantage of Co-Curricular Opportunities 485
- Internships and Experiential Education 489

Unit Thirteen: Wellness 506

- The Concept of Integrated Wellness 506
- Physical Wellness: Making Healthy Choices 515
- Emotional and Spiritual Wellness 523
- Environmental Wellness 532
- Occupational Wellness 537

**DISTINCTION IN THE FUTURE—TRANSITION TO
GREATER OPPORTUNITIES 541**

Unit Fourteen: Documenting Your Successes 542

- The Résumé 542
- The Portfolio 551
- The E-Portfolio 559
- The Letter of Application 564
- The Interview 569

Unit Fifteen: Transitions beyond the First Year 576

- The Second Year Experience 576
- Study Abroad 589
- Graduate School 603
- Professional School 609
- Careers 617

Appendix A: Tips Known by Every Successful College Student 626

Appendix B: The Structure of a College or University 651

Introduction

To the Student

No matter what path brought you to the college or university you're attending, you're about to have an exciting, challenging, and rewarding undergraduate experience.

- If you're beginning college **shortly after high school**, you'll find that the next few years will bring you many opportunities for increased independence. You'll have the chance to study disciplines not offered by many high schools and, in most cases, you'll be able to discover social and extracurricular activities that are important to you. Being on your own can be a fantastic experience, but aspects of it can also provide unexpected challenges, and you're likely to have plenty of questions along the way.
- If you're a **non-traditional student**, it may have been a few years — perhaps even *many* years — since you were last involved in formal education. The vast majority of your experiences will soon seem quite familiar to you, but a few things may have changed since you attended classes, wrote papers, and took exams. Perhaps you're concerned about competing against students whose study or research skills seem a bit fresher than your own. Such a concern is common and understandable, but the experience you've had in life — together with your enthusiasm about new opportunities — will more than compensate for this difference, and you'll quickly see how higher education today appreciates and addresses the needs of students just like you.
- If you're a **transfer student**, you already know a lot about college and how to succeed, even though your new institution will certainly have some differences from the previous school you attended. Course requirements at your new school may not be the same. Campus offices with the same name may handle different issues and concerns from those addressed by their counterparts at your old school. The mission and philosophy of your new college or university may be unlike those of the institution from which you transferred. Perhaps you even transferred *because of* these differences. You'll certainly have plenty to learn in your coursework and new community, at the same time that you're

getting acquainted with a new set of policies, expectations, and colleagues. And this book will help you do that.

Beginning a new undergraduate program requires flexibility and adaptation from *everyone*. To help with this process, many schools provide a First Year Experience or College Transition course that's designed to acquaint students with their new academic and social environment. Many years of research have demonstrated that these courses — commonly called “College/University 101,” “Introduction to College/University,” “Student Success,” “Freshman Transition,” or something of this kind — allow undergraduate students to make faster progress in meeting higher academic expectations, decrease attrition and failure rates, and promote more effective socialization. See, for example, Schnell, Louis, and Doetkott (2003), Bailey and Karp (2003), Stovall (2000), Sidle and McReynolds (1999), and Hoff, Cook, and Price (1996). But it's not just “at risk” students who benefit from a First Year Experience program. College Transition courses also benefit students who have strong academic backgrounds, including those who attend selective and highly selective institutions, such as flagship universities, or who enroll in honors programs or colleges. See Day (1989) and Feldman (2004). For this reason, students who are expected to engage in significant undergraduate research need a different *kind* of transition to college than do students whose academic preparation for college hasn't been very strong.

In other words, some students benefit from learning how to take multiple-choice examinations, use the library, read a college-level textbook, take notes in class, remember detailed information, and write simple prose. But it's our assumption that you don't need this kind of remedial help. So, rather than providing you with college *survival* skills, this course has been designed to build on the college *success* skills you already have. In fact, it's our belief that, if you didn't already know how to take multiple-choice examinations, use the library, read a college-level textbook, take notes in class, process detailed information, and write simple prose, **you wouldn't be here**. For this reason, rather than reiterate what you already know, *Distinction Through Discovery: A Research-Oriented First Year Experience* takes a different approach.

- This book has been written to provide you with resources that highly capable college students say they want and need: clear explanations of how a college or

university is organized, where to go to get their questions answered and problems solved, what they should start doing *now* in order to be prepared for opportunities later, what undergraduate research means and how to become involved in it from the very beginning of their studies, and a host of other topics that tell well-prepared college students precisely what they need to know when they need to know it.

- In addition, this book is designed to get you thinking from the very beginning of your college career about what research is in various fields and how that research is conducted. As the book progresses, you'll be exposed to more and more intellectual resources that you'll need in order to conduct sound undergraduate research. In fact, rather than simply learning *about* the First Year Experience, you'll be taught how to conduct research into *your own* First Year Experience, providing skills that you can apply to your other coursework and to your life after college.
- Moreover, this book has been written to help you not only achieve the goals you've already set, but also develop goals even more creative and ambitious than you ever believed possible — then to surpass *those* goals as well.
- This book is designed to guide you in your progress from doing well on standardized tests to coping with complex, even ambiguous issues, from solving problems with equations you already know to exploring new topics by deriving fresh equations, and from telling your teachers the right answers to asking your professors the right questions.
- In each unit, you'll find a number of terms and names printed in **bold face type**. This format is intended to indicate that these are particularly important words that you should be certain to know. If any of these words is unfamiliar to you, be sure to look it up in a dictionary or online; your instructor will expect you to understand every word in this book, perhaps even asking you to explain or identify some of them on a quiz or exam. Not simply skipping over something you don't understand is an important prerequisite for research. Sound scholarship involves being able to locate appropriate sources when you don't understand something, and we'll expect you to follow that practice from the

very beginning.

Distinction Through Discovery focuses, therefore, on material that will help you make progress towards doing significant research, even as an undergraduate. We know that you may not have wanted to take this course or participate in the program where this textbook is used, so we make the following commitment to you, and we take it very seriously: We won't waste your time in these units by insulting your intelligence or telling you things you've already learned on your own; we *will* make your college experience richer, easier, and more enjoyable. Have a *wonderful* time this year!

To the Instructor

This textbook has been designed so that you can easily adapt it to any course or program you are teaching.

- *Distinction Through Discovery* can serve as the primary textbook for a First Year Experience or College Transition course. For courses that meet once each week, many instructors will choose to assign one unit per class. But the topics may be covered either in the order we provide or in any sequence you wish. *Distinction Through Discovery* is equally adaptable to trimester or quarter-system courses, brief orientation programs, yearlong courses, and other methods of introducing material to first-year students.
- Because of institutional variation, the material that follows must at times remain rather general. Instructors are always encouraged to combine the book's discussion of "what happens in college" with their own, more specific discussions about "what happens in *this* college."
- At certain schools, the book may simply be provided to students as a reference work for them to consult whenever they need advice about a particular issue or wish to take advantage of a special opportunity. While *Distinction Through Discovery* has been designed particularly for first-year students, it also has equal value for transfer students and can serve as a resource throughout a student's entire undergraduate program.

The goals of *Distinction through Discovery* are to provide students with the information and resources they'll need, not merely to *succeed* at college, but to *excel* at it. In

particular, it seeks in each chapter to guide students in the techniques they'll need to begin performing sound undergraduate research. In fact, a good way to approach the course, workshop, or program in which this book is used is to ask yourself: *How can I best make each student's First Year Experience the subject of his or her own original research?* You're likely to find this book more helpful if you see your role, not as teaching students how to thrive in a college environment, but as coaching them in how to make their own discoveries about how they, as unique individuals, can thrive in a college environment.

Certain features and sidebars appear throughout this textbook that have been created to promote further reflection, discussion, or extended review. Each unit will contain one or more *Key Principles* to which students can be asked to respond either orally or as part of a written assignment.

Key Principle

Text formatted in this way contains ideas intended to help students achieve distinction in a wide variety of situations. Key Principles can be used as the starting point for a group discussion or essay, and instructors may sometimes wish to modify or reinforce the ideas introduced in the Key Principle sections through examples drawn from their own experience.

In addition, units will contain five essential tools intended to help students succeed in their work and prepare for successful undergraduate research.

Being Intentional

Text appearing in this sort of box will deal with goal setting. It will encourage students to think in advance about what an experience may be like and what they could gain from it.

Being Reflective

Text appearing in this sort of box will deal with evaluating the results of an experience. It will encourage students to pause a moment before going on to the next activity and reflect carefully on what they have just learned.

Being Innovative

Text appearing in this sort of box will deal with how students could potentially use the material found in that unit as the basis for an original research project. While the suggestions made in this book could certainly be used for actual projects at the undergraduate level, it is not the expectation that every student will pursue every suggestion. Rather, the ideas explored in the Being Innovative sections are intended to teach students about the steps necessary to complete original research successfully and to identify the resources they'll need in order to examine any topic in greater depth. Effort has been made to expose students to a variety of research approaches, including those in the humanities, natural and social sciences, fine or performing arts, and professional fields.

Being Analytical

Text appearing in this sort of box will deal with critical thinking. It will encourage students to break arguments down, consider their source and context, and spot fallacies in them.

Being Imaginative

Text appearing in this sort of box will deal with creative thinking. It will encourage students to be innovative, see matters from new perspectives, and apply their resourcefulness to various sorts of problems and opportunities.

Finally, each unit ends with several exercises that students can complete on their own or that can be discussed in class. The last item in each unit is a brief bibliography:

REFERENCES refer to the in-text citations that appear within that unit, while **RESOURCES** provide recommendations for further study.

In an effort to encourage students to transfer skills acquired in one area to problems encountered in another, we've include a significant amount of internal cross-referencing ("As we saw in Unit Four...", "One of the issues that we'll discuss in Unit Nine," and so on). It's useful to draw similar connections in class as well, in order to reinforce the idea that the concepts explored in a First Year Experience course are not merely "hurdles" to get out of the way, but rather are resources to be used in connection with everything the students will encounter in college life and beyond. As a further way of illustrating this point, the units also include examples of how life skills can be applied to academic situations and how academic skills can be applied to real life situations. The hope is thus that students will not merely learn about college and undergraduate research, but will begin to **develop a culture and habit of inquiry**, research, and discovery that they'll apply to situations for the rest of their lives.

As a fellow instructor in a First Year Experience program, the author of this textbook is vitally interested in ongoing assessment and continual improvement efforts. So, if there are any ways in which *Distinction Through Discovery* could be enhanced in further editions so as to be more useful to you, please do not hesitate to write.

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Many colleagues have been exceptionally generous with their ideas and suggestions for making *Distinction Through Discovery* a reality. Among those who gave valuable assistance to this project are Brenda Bryant (Mary Baldwin College), Ira Cohen (Illinois State University and Hunter College—City University of New York), Laure Pengelly Drake (University of Montana), Mark Farris (Midwestern State University), Stephanie A. Fitchett (University of Northern Colorado), Donald Kaczvinsky (Louisiana Tech University), John N. McDaniel (Middle Tennessee State University), Thomas R. McDaniel (Converse College), Peter C. Sederberg (Emory University), and Debbie A. Storrs (University of Idaho). Faculty members at Florida Atlantic University who contributed suggestions and ideas for this book include Eugene Belogay, Jacqueline Fewkes, Michelle Ivey, Robin Jordan, Ryan Karr, Sandra McClain, Jon Moore, and Nick Quintyne. Sharon Dormire of FAU's Christine E. Lynn College of Nursing deserves special commendation for developing the phrase "Distinction through Discovery" as the theme for Florida Atlantic University's undergraduate research initiative. Brittany Shaw, a graduate student in graphic design at FAU, designed the corresponding logo used for this initiative. Nicholas von Staden supplied some of the photography. Members of the administration and staff of Florida Atlantic University to whom the author owes a debt of gratitude include Kate Kraynak, Catherine S. Meschievitz, Mihaela Metianu, Sandy Ogden, Gary Perry, Sean Pierce, Mark Tunick, and Dawn Harris Wooten. Megan Geiger provided exceptional editorial service. Finally, several former students — all of whom were precisely the sort of very capable college students for whom *Distinction Through Discovery* is intended — suggested ideas for content; they include Catherine Armbruster, Rebecka Epps, and Carrie Meyer. Without the thoughtful contributions of all these friends, colleagues, and students, this book would not have been possible.

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Distinction in the Academic World – College Transition

Unit One:

Becoming an Educated Person

Learning Objectives:

1. To set clear and reasonable goals for what to expect in college.
2. To see the difference between different types of learning.
3. To understand how colleges and universities are structured.
4. To explore the resources available to students for college success.
5. To become acquainted with the five essential tools that will be used throughout this book.

The Purpose of a College Education

The ancient philosopher **Aristotle** (384-322 BCE), born in the small village of Stagira in northern Greece, went on to become one of the most influential figures in intellectual history. In his treatise now known as the *Nicomachean Ethics*, Aristotle states that each of our actions is performed in order to achieve some specific goal. For instance, if we saw a group of people cutting down some trees, it would be natural to ask, “Why are you doing that?” If they replied, “We need the lumber,” we would have *an* answer but, according to Aristotle, we wouldn’t really have *the* answer. The way in which we know we haven’t yet arrived at a final answer is because we can then ask the equally reasonable question, “And why do you need lumber?” If we continue this process long enough (and if the loggers didn’t get annoyed with all our silly questions), we might end up with a conversation that goes something like this.

QUESTION: Why are you cutting down those trees?

ANSWER: We need the lumber.

QUESTION: And why do you need lumber?

ANSWER: We’re going to use it to build a boat.

QUESTION: Why do you want to build a boat?

ANSWER: We want to go fishing.

QUESTION: Why do you want to go fishing?

ANSWER: So that we can catch some fish.

QUESTION: And why do you want to catch fish?

ANSWER: So that we can eat them.

QUESTION: Why do you want to eat the fish?

ANSWER: Because we're hungry.

QUESTION: But why do you want to satisfy your hunger?

ANSWER: Because when we're not hungry, we're happy.

At this point, Aristotle says, the process has to stop. It makes no sense to continue with the question “And why do you want to be happy?” because it can have no meaningful answer. People want to be happy for its own sake, not because it serves as a means to any further goal. So, since happiness is desirable in and of itself, it constitutes what later philosophers would call the *summum bonum*, a Latin phrase meaning “the highest good,” the *ultimate reason* for which any action is taken. This idea that every action is performed for some purpose, and each purpose leads eventually to a *summum bonum*, can be used to explore the issue of what brought you to college and to this course in the first place.

An undergraduate education represents a significant investment of time and expense. It's thus a reasonable question to ask, “Since college costs so much and takes so long, why do you bother doing it?”

In 1976, and again in 2006, students said the two most important reasons for attending college were “To learn about things that interest me” and “To get a better job.” In 2006, earning more money was a close third, with 69 percent of students saying that “To be able to make more money” was a very important reason for going to college, compared with 49.9 percent of incoming students in 1976. And in 2006, 66.5 percent of students indicated that “the chief benefit of a college education is that it increases one's earning power.”

<http://www.heri.ucla.edu/PDFs/pubs/briefs/40yrTrendsResearchBrief.pdf>.

A similar survey conducted by the Department of Education found some interesting differences between what high school seniors from different generations regarded as very important to them.

Issue	Percentage of Students Who Described This Issue as Very Important to Them		
	1972	1992	2004
Finding steady work	78.2%	88.5%	87.3%
Having lots of money	17.9%	37.1%	35.1%
Correcting inequalities	27.1%	20.2%	19.7%
Giving my children better opportunities	67.7%	76.0%	81.0%
Living close to parents or relatives	8.0%	16.6%	24.5%

See http://nces.ed.gov/programs/digest/d11/tables/dt11_407.asp.

In a similar way, when any college student is asked a question like “Why are you in college?” or “What do you regard as most important to you?” he or she may answer in many different ways.

- I want to get a good job.
- I want to study something I really enjoy.
- I want to improve my leadership skills.
- I want to travel abroad.
- I want to learn as much as possible about as many things as possible.
- I want to discover who I really am.

- I want to challenge myself.
- I want to reinforce my faith.
- I want to participate in intercollegiate athletics.
- I want to live on my own.
- I want to have as much fun as possible.

And you could easily add a dozen or more other goals to this list. Some people might even say, “I don’t want to be here at all; it’s my parents (or spouse or employer) who are *making* me do this.” As you reflect on the reasons why people go to college, you’ll probably feel that some reasons are preferable to others. Yet *each* of these reasons can be a logical and reasonable response for *someone*. Even so, we might say that none of these reasons is really the *ultimate* answer because, according to Aristotle’s approach, it’s still possible for us to ask “And why is that important to you?” So, let’s take one of our possible responses and explore where subsequent questions might lead.

QUESTION: Why are you in college?

ANSWER: I want to get a good job.

QUESTION: And why do you want a good job?

ANSWER: I want to make a lot of money.

QUESTION: Why is money important to you?

ANSWER: I want to be able to travel the world, meet a lot of interesting people, and know that I can pay my bills.

QUESTION: Why would it be important for you to pay your bills?

ANSWER: When I’m in debt, it makes me feel insecure and worry that I’m going to ruin my credit rating. Insecurity and worry make me miserable.

QUESTION: And why is it important to you to travel and meet new people?

ANSWER: I get bored if I spend too much time in one place, hearing the same things over and over. I need a little adventure in life.

QUESTION: But why do you like adventure?

ANSWER: I don’t know. The change, the chance of danger, the exotic locales ... all of that just makes me happy.

Of course, each person who engages in this type of question-and-answer exercise will have different intermediate steps, even if he or she began by saying “I want to go to college because I want to get a good job.” Some people are hoping to support a family, while others might define “a good job” not in terms of the salary it provides but in terms of the challenge and excitement it offers. The important thing about this type of inquiry is to probe as deeply as we can into why each of our goals is important to us and what they are adding to our lives. Periodic investigation of this kind is useful for everyone. It helps us understand whether there are alternative ways of achieving our goals and how to recognize a suitable objective when it’s been attained.

In this course, we’re going to call this type of introspection **Being Intentional**, and we’ll use it to clarify our goals before we start an activity and develop a plan for getting the most out of everything we do. With this framework in mind, you’re ready for your first exercise of this type.

Being Intentional

What do you expect to gain from this course? How will what you gain allow you to become more successful at the things you want to do in college or later in life? Don’t settle for a trivial or superficial answer, but also don’t provide an answer just because you think it’s what the instructor wants you to say. Even if you would never have taken this course had you been given the choice, by being intentional about the time you’ll have to spend here anyway you can make your experience more productive and less of a waste of time. So, think carefully about something serious that you’d *like* to gain from this course.

Now, on the basis of what you decided about why you’re attending college and what you hope to gain from this course, develop a brief statement that summarizes what you hope to achieve in your undergraduate experience. You can think of this statement as your **educational hypothesis** and your entire undergraduate experience as a **type of experiment** to determine whether your hypothesis was correct. We’re going to call this hypothesis your **philosophy of learning** and, although you’ll certainly revise it many times before you graduate, it offers an initial guide to how you can get the most out of college. Don’t be surprised if, when you are completely candid with yourself,

you find out that you're not always motivated by such factors as saving humanity or learning the meaning of life. There are no right and wrong answers when you're asked, "Why are you here?" There is merely *your* philosophy and everyone else's. Between now and the time you graduate, you'll face a number of difficult challenges, even frustrations. So, what motivates you to keep going when things get tough? Do you want to ...

- live a comfortable life?
- help others?
- avoid being bored?
- feel more at home in the world?
- be loved?
- live up to the expectations of others?
- overcome a fear?
- or achieve something else?

Follow your reasoning through as many levels as you may need, always asking "And why is *that* important to me?" until you can reasonably ask the question no further. Don't be content with a shallow analysis like, "I want to improve my artistic technique so that I can make a living from my paintings. I want to make a living from my paintings so that I'll be happy." There are many levels of reflection that the speaker has skipped over here. Probe as deeply as you can. What is it about ways of making a living other than as an artist that would be dissatisfying for you or make you *unhappy*? Why is your talent as an artist — rather than your ability to analyze, repair, counsel, lead, or understand — the single most important motivation in your life? By allowing these questions to carry you wherever they may go, you'll come to understand what needs to be included in your philosophy of learning because it helps define who you are.

Four Views of Why People Go to College

1. There are three ways to estimate the monetary yield of a college education to the individual: earnings differentials, the net present value of a college education (the present value of a college education after costs are subtracted and corrections are made to adjust for the

changing value of money over time), and traditionally calculated private rates of return (Becker and Lewis 1992; Leslie and Brinkman 1988). The earnings differentials concept has been identified as the most rudimentary approach for estimating the pecuniary value of a college education. The earnings measure indicates how much more, on average, a college graduate earned than other individuals with less education. This measure has been used because it is easy to calculate and generally less contentious than more complex measures. A drawback to the earnings differential is that the measure identified only benefits and omitted costs. Because of this, earnings differentials were of little value when comparing the yield on an investment in education with other investment alternatives. The measure also failed to account for preexisting differences between college attendees and non-attendees. Hoffman and Summers (2000) 92-93.

2. One of the central claims of the market ideology of education is that schooling is important to economic success. While there is little doubt that people with more education tend to earn higher wages, the relationship between education and things like wealth and productivity is much more complex than the common “more equals more” assumption. Even if this simple causal proposition were correct, at the individual level it contains the seeds of its own demise – as more people hold a high school diploma that diploma loses its value, as more hold a college degree it too becomes worth less. Rather than more education translating into higher wages, more education ends up being required simply to prevent returns to education from falling. Smith (2003) 44.

3. As a result of your college education, you will understand how to accumulate knowledge. You will encounter and learn more about how to appreciate the cultural, artistic, and spiritual dimensions of life. You will be more likely to seek appropriate information before making a decision. Such information also will help you realize how people’s lives are shaped by global as well as political, social, psychological, economic, environmental, and physical forces. You will grow intellectually through interaction with cultures, languages, ethnic groups, religions, nationalities, and socioeconomic groups other than your own. Gardner, Jewler, Barefoot (2008) 11.

4. Since 1967 an annual study called the American Freshman Survey has probed the attitudes and plans of freshmen all around the United States. In its last year – 2005 – 263,710 students at 385 colleges and universities responded. A record high number of freshmen, 71 percent, said it’s very important to be “very well off financially,” compared with 42 percent in 1967. Interestingly, only 52 percent of

current freshmen admitted that it was very important or essential for them to “develop a meaningful philosophy of life,” compared with 86 percent in 1967. Lyubomirsky (2008) 44.

Do you find yourself agreeing with one of these views more than the others? Do you tend to approve more of that statement because of its content, approach and perspective, or style of writing? Which aspects of why you wanted to go to college are missing from all four statements?

Even though your philosophy of learning may well apply to you alone, try to compose these statements without using first person forms (*I, me, my; we, us, our, ours*). By refraining from saying *that* you believe something and by merely stating *what* you believe, you condense your thought to its purest form and craft the type of statement that you can reassess objectively throughout your college career. For instance, a student’s statement of his or her learning philosophy might look like the following

No one is able to achieve anything truly significant when acting alone. Every object that surrounds us is the product of numerous talents and contributions, often extending centuries into the past. For this reason, it is important to discover new approaches that help people work together collegially so as to improve the quality of health and security at all levels of society. Only then will each person achieve a personal level of satisfaction from knowing that he or she has done everything possible to make the lives of other people better.

Philosophy of Learning

The Difference Between Pre-College Learning and College-Level Learning

Now, in order to assist you in fulfilling the educational philosophy you've just developed, colleges and universities teach you to learn in specific ways. In other words, college-level learning isn't merely "harder" or more advanced than the type of learning that occurs elsewhere in American schools; it is also a different *type* of learning. But how is one sort of learning different from another? Perhaps an example might make this concept clearer. You already know that learning how to say "shopping center" in French or use a spectrometer is quite a bit different from being able to speak French fluently or design and conduct a chemical experiment. The first type of learning involves acquiring facts and skills, while the second type involves understanding processes, recognizing when certain actions are appropriate, and applying creativity to new situations. You don't learn French simply to repeat from memory the sentences you learned from a textbook, and you don't learn chemistry merely to reproduce experiments that have already been performed hundreds of times. You study these subjects because you want to be able to act appropriately in

unfamiliar or unpredictable situations. That type of learning is different from memorization or acquiring simple skills.

In fact, although we often use the term “learning” as though all learning were alike, there are many different ways in which education occurs. Consider the following:

- Learning the date of the Battle of Trafalgar
- Learning how sociologists use the terms *group* and *community*
- Learning how a new software program works
- Learning to play a musical instrument
- Learning a sport
- Learning how computers process information
- Learning how to pack items safely in a limited space
- Learning to recognize a new trend in fashion or opinion
- Learning to spot whether a writer has effectively proven a point
- Learning how to get a group of people to work together towards a common goal
- Learning to give others constructive criticism
- Learning how to make people feel appreciated and valued
- Learning to accept yourself for who you are
- Learning to compose a piece of music
- Learning something about the universe that no one has yet discovered

As you review this list, it becomes clear that one type of learning can be very different from other types. We can learn things that others have known before, and we can learn things that no one has known before. Through a well-constructed undergraduate program, students progress from simple forms of learning — such as memorization and application of techniques — to more complex forms of learning — such as discovery and invention. While you will learn many facts and definitions throughout your undergraduate education, the emphasis in your more advanced courses will be on discovering the best ways for you to learn on your own, to evaluate alternative explanations, to discover new patterns or possibilities, and to increase your desire to

continue learning throughout your lifetime. At that time, you'll be conducting original and innovative research.

These different types of learning are so critical to what students do in college that many scholars have attempted to identify and classify them. One of the most influential of these researchers was **Benjamin S. Bloom** (1913-1999), an educational psychologist at the University of Chicago. During the 1950s, Bloom developed a famous classification of educational objectives that has come to be known simply as **Bloom's Taxonomy**. Bloom divided educational objectives into three separate domains: **the affective domain**, **the psychomotor domain**, and **the cognitive domain**. The affective domain relates to whether we can respond to others appropriately from an emotional or social point of view, feel empathy when others are suffering, and understand how our beliefs influence our behavior. The psychomotor domain involves our ability to engage in physical activities, like using tools or playing a musical instrument. The cognitive domain relates to our ability to think, remember, and understand. Bloom subdivides this cognitive domain into six, highly interrelated activities.

1. **Knowledge:** memorization of facts in such a way that a student can later correctly identify, recognize, or define specific information.
2. **Comprehension:** internalization of information in such a way that a student can later restate, summarize, or paraphrase that information.
3. **Application:** mastery of information in such a way that a student can later correctly apply it in new, but similar, situations.
4. **Analysis:** the ability to break information down into discreet elements or premises, prioritize that information, and distinguish fact from opinion.
5. **Synthesis:** the ability to draw general conclusions from specific instances, propose new hypotheses, and identify patterns.
6. **Evaluation:** the capacity to assess alternative explanations in light of evidence, identify the strengths and weaknesses of suppositions, and recommend possible solutions to highly complex problems.

See Bloom (1956). As you'll discover in your coursework, college-level learning involves all six of these activities from Bloom's Taxonomy. You'll still be required to memorize facts and figures, and you'll still spend plenty of time mastering new terms, skills, and formulae. But most professors — particularly in advanced courses — place a great deal of emphasis on Bloom's last three objectives. In other words, a significant portion of what colleges and universities hope students will learn does not involve a specific set of facts, theories, formulae, processes, or basic skills. Although all these ingredients are essential to college coursework, they are usually regarded as means to an end, not as the end in themselves. The goal for most professors is guiding students to analyze, synthesize, and evaluate information at a higher level than they did in their earlier schooling. They understand that additional information will emerge in all disciplines over the course of your lifetime. New discoveries will be made. New theories will be established. Entirely new fields of study will be developed. If a college education consisted only of learning a specific body of knowledge, it would soon become outdated. For this reason, college-level learning always focuses on *how* to acquire and assess information, rather than on the content of the information itself. Good mental habits of objectivity, curiosity, creativity, and critical analysis will remain useful long after all the facts you learn in college are forgotten or replaced by new discoveries.



While Bloom's Taxonomy continues to be influential throughout the American educational system, subsequent scholars sought to improve on it. For instance, **Lorin Anderson, David Krathwohl**, and a team of other scholars expanded Bloom's Taxonomy so that it would better suit American higher education's emphasis on **student learning outcomes** (the observable results of the learning process) and **assessment techniques** (the way in which people determine whether student learning outcomes have been achieved). Anderson and Krathwohl's revised taxonomy views learning not as a **hierarchy**, as did Bloom's, but as a **grid** in which each of **six cognitive processes** — remembering, understanding, applying, analyzing, evaluating, and creating — could be used to address **four different types of knowledge** — factual knowledge, conceptual knowledge, procedural knowledge, and metacognitive knowledge (awareness of one's own learning process and level of understanding). See Anderson, Krathwohl, et al. (2000 and 2001). In a similar way, **L. Dee Fink** of the University of Oklahoma sought to develop a taxonomy of learning that incorporated elements of Bloom's affective domain, psychomotor domain, and cognitive domain into a single, more unified structure. See Fink (2003). Even more radically, **Howard Gardner** has suggested that traditional view approaches to intelligence and learning are far too simplistic and that there is not merely one type of intelligence, but **multiple intelligences**. Among the various forms of intelligence that Gardner recognizes are linguistic intelligence, musical intelligence, spatial intelligence, and interpersonal intelligence. High achievement in one of these areas, Gardner argues, does not necessarily translate into high achievement across the board. See Gardner (1983) and Gardner (2006).

Some Examples of College-Level Learning

Regardless of the exact way in which we classify different types of learning, understanding, and intelligence, it's clear that a college-level education will encourage students to engage in several approaches to knowledge that they may not have encountered in their earlier education. While it's impossible to list *every* academic area that a student might encounter in college, here are a few examples of what professors may expect their students to learn at a four-year college or university.

MATHEMATICS

While many college-level courses will assume that students have mastered advanced levels of algebra, other courses may also require at least some background in calculus. Even in disciplines that are not directly related to mathematics, it may be assumed that you are familiar with concepts encountered in calculus courses, such as the **differential**, the **integral**, and the **limit**. In mathematics courses themselves, you may increasingly be asked to consider the implications of alternative mathematic universes, such as geometric systems in which one or more of **Euclid's postulates** do not apply or arithmetic systems that are restricted to only a specific range of numbers. Learning to imagine these alternative mathematical universes helps underscore what we take for granted about human experience, what is dependent on our assumptions, and what is inherent in the universe as we experience it.

NATURAL SCIENCES

College-level courses in the natural sciences usually progress from replicating experiments to devising new experiments. By this means, students are expected, not simply to master an existing body of knowledge, but ultimately to add to it. As

current freshmen admitted that it was very important or essential for them to “develop a meaningful philosophy of life,” compared with 86 percent in 1967. Lyubomirsky (2008) 44.

Do you find yourself agreeing with one of these views more than the others?

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Philosophy of Learning

theory, a self-consistent model of interpretation that makes sense out of disparate observations. At other times, the products of human thought and creativity might be examined in light of their historical, social, or cultural context. Approaches such as **form criticism** and **source criticism** may be used to determine how texts and artifacts fit within a larger context. As a means of strengthening critical and creative reasoning skills, college students may be challenged to justify every theoretical or interpretive assumption they make when discussing the products of human culture. In terms of the *content* — such as facts, methods, and specific works — studied in humanities courses, there is often a healthy amount of disagreement among teachers at colleges and universities. Defenders of any particular **canon** (the body of works deemed essential for all educated people to know) are likely to be challenged to justify and re-examine why that specific set of works should take precedence over others. This ongoing debate is part of a much larger academic discussion about whether the humanities should emphasize *what* people know

about human culture, *how* people draw conclusions about human culture, or some combination of the two. As a result, college-level humanities courses frequently expect students to reflect deeply on their values, basic assumptions, and core beliefs.

FINE AND PERFORMING ARTS

College courses in the fine and performing arts ask students to create or critique art at an advanced level and to understand major **theories of art** as well as the role of the arts in society. **Studio courses** address the production of art through coaching, analysis, practice, exposure to alternative methods, and the process of self-discovery. **Appreciation courses** address the personal and social reception of artistic works. But appreciation courses do not ask students merely to *admire* important works of art; they also train students to think critically and analytically about the aesthetic experience, about *why* we respond to art as we do, *how* specific works are structured, and the relationship of individual pieces of art to others. College-level arts courses may require students to examine **iconography** (the use of symbols in art), historical trends, aesthetic theory, and the role of both

artist and audience in creating a complete aesthetic experience.

SOCIAL AND BEHAVIORAL SCIENCES

As in the natural sciences, courses in the social and behavioral sciences are likely to help students progress from understanding the discoveries of others to making discoveries of their own. They may require students to learn established **protocols** for designing and conducting psychological and social experiments, the proper design and implementation of surveys, the distinction between **correlation** and **causality**, the proper statistical techniques to use when interpreting data, and ethical standards when engaging in research. In certain courses, students might be expected to apply the methods and premises of other disciplines, such as **mathematical modeling** (the use of formulae and other mathematical relationships to describe a social system) and **game theory** (a specific type of mathematical model that addresses the interrelationship of choices made by individuals within a group), in order to help explain complex patterns of behavior.



As this brief illustration suggests, many college courses do far more than expect students to *retain* a body of knowledge. They also assist students in *increasing* that body of knowledge by teaching them how to develop new, important, and creative ways of understanding our world.

Being Innovative

The concept of why learning is important changes over time. Even cultures within the same period may believe that education is important for different reasons.

Chose two historical periods (or two subcultures within the same period) and try to determine:

1. How each of these communities defined or regarded learning. Are there distinctive images, metaphors, or comparisons that each group uses when it discusses education?
2. What each of the communities regarded as the purpose of learning. What goals did they hope would result from education?

3. How these views of learning and education help us understand each of the groups better. How do the two groups differ from one another? How are they similar to or different from our own views about learning?

What tools and resources would you need in order to conduct this study? Are there primary sources you would need to consult? Is knowledge of one or more foreign languages beneficial for conducting research in this area? What sort of information would you use in order to justify your premises and conclusions? Are other interpretations possible aside from the conclusions that you reach?

How Colleges and Universities Work

Colleges and universities often have organizational structures similar to those of other schools, organizations, and corporations. For instance, like most businesses, colleges and universities are usually organized in a **hierarchical** manner: Power, authority, and responsibility tend to flow from the **top down**. In the case of most institutions of higher education, this means that presidents supervise vice presidents who supervise deans who supervise department chairs who supervise faculty members who supervise students. This reporting structure tends to give colleges and universities a **pyramid-shaped** or **triangular organizational pattern**. While authority and responsibility become greater as you **move up** the institutional ladder, the number of people at each level becomes greater as you **move down**. In other words, there are more students than faculty members, more faculty members than department chairs, more chairs than deans, more deans than vice presidents, and more vice presidents than chief executive officers. Because this type of organizational chart is so common, your college or university probably isn't organized very differently from the last type of school you attended.

What makes this basic pattern more complicated, however, is that most colleges and universities also operate through **shared governance**. That is to say, many types of decisions are either delegated from upper levels in the hierarchy to lower levels or reached through a cooperative process that involves multiple parts of the institution

simultaneously. Student government associations, for instance, frequently have a great deal of autonomy in how they allocate the resources received from student activity fees, and the authority to develop and maintain the curriculum of the institution is usually assigned to the faculty, not the president or vice president. This combination of hierarchical/pyramid-shaped organizational structure with shared governance means that colleges and universities adhere more closely to a **profession/client** model of organization than to the **business/customer** model we encounter when we purchase other goods or services. In a profession/client model, the individuals whom the client consults, the **professionals**, have a great deal of specialized knowledge that may or may not be available to their supervisors. Because it is impossible for directors to be equally knowledgeable about all aspects of their professions, they must frequently defer to the **professional judgment** of the people they supervise. The situation is much different from the business/customer model encountered in a store or factory. A traditional “boss” often has more advanced or specialized knowledge than the employees who work in that area. He or she may well have done the employees’ jobs before or taught them what to do and, as a supervisor, has the authority to overrule or countermand any decision an employee makes. That type of relationship rarely occurs in an organization that follows the profession/client model. Moreover, a second important difference also exists. In the business/customer model, the customer is almost always in a stronger negotiating position: If the representative of the business does not meet all expectations, the customer will simply take his or her business elsewhere. But in a profession/client relationship, the *professional* is frequently in the stronger negotiating position: If the client is too demanding, the professional may simply decide not to work with that client any longer and insist that the client have his or her needs addressed by someone else.

Both these differences mean that decisions are made in contrasting ways in these two models. Consider the following scenarios. You are assisted in a clothing store by a salesperson who, for whatever reason, fails to help you adequately. Perhaps you wish to compare a large number of brands, colors, and sizes before you make your decision, and the salesperson becomes annoyed at how much time you’re taking. If you feel that the treatment you’ve received has been rude or inappropriate, you can

complain to the salesperson's supervisor and, if you are not given satisfaction at that level, continue your appeal to the store manager. Several different solutions to your problem might be offered. The supervisor may simply instruct the salesperson to do what you ask. You may be directed to a different salesperson who can then meet your needs. The supervisor may help you directly. And, if the problem seems bad enough, the store manager may even fire the original salesperson on the spot. But the situation will be quite different if, instead of being a customer in a store, you are a patient in a hospital. If your doctor gives you a diagnosis you don't agree with, it's not helpful to go to the chief surgeon or a hospital administrator and complain about the diagnosis. Both of these people, even if they supervise the doctor in question, are likely to tell you that they defer to the professional judgment of their staff and thus support their decisions. In other words, an administrator in a professional setting is highly unlikely to take any of the actions that may have resulted in the clothing store. No supervisor will ever order a doctor to reconsider his or her diagnosis, automatically assign you to a different doctor, perform the diagnosis himself or herself, or fire your original doctor. You are free, of course, to seek a second opinion *on your own*, but your doctor's supervisor won't pursue this option *for* you.

The reason why people act differently in these two situations is that, in a profession/client relationship, supervisors must rely on the professional judgment of the highly trained staff members who report to them. Colleges and universities work in the same way. A supervisor such as a department chair, dean, or the president is highly unlikely to second-guess the amount of work a professor requires of you, the teaching techniques adopted by a faculty member in a particular course, or the textbooks and activities you are assigned. If you or your parents complain about an issue of this kind to one of your professor's supervisors, the response you receive is likely to be very similar to what will happen in the hospital setting considered above: You may receive sympathy and understanding, but the faculty member's "boss" will not second guess a professor's judgment. The organization of a college or university simply doesn't work that way.

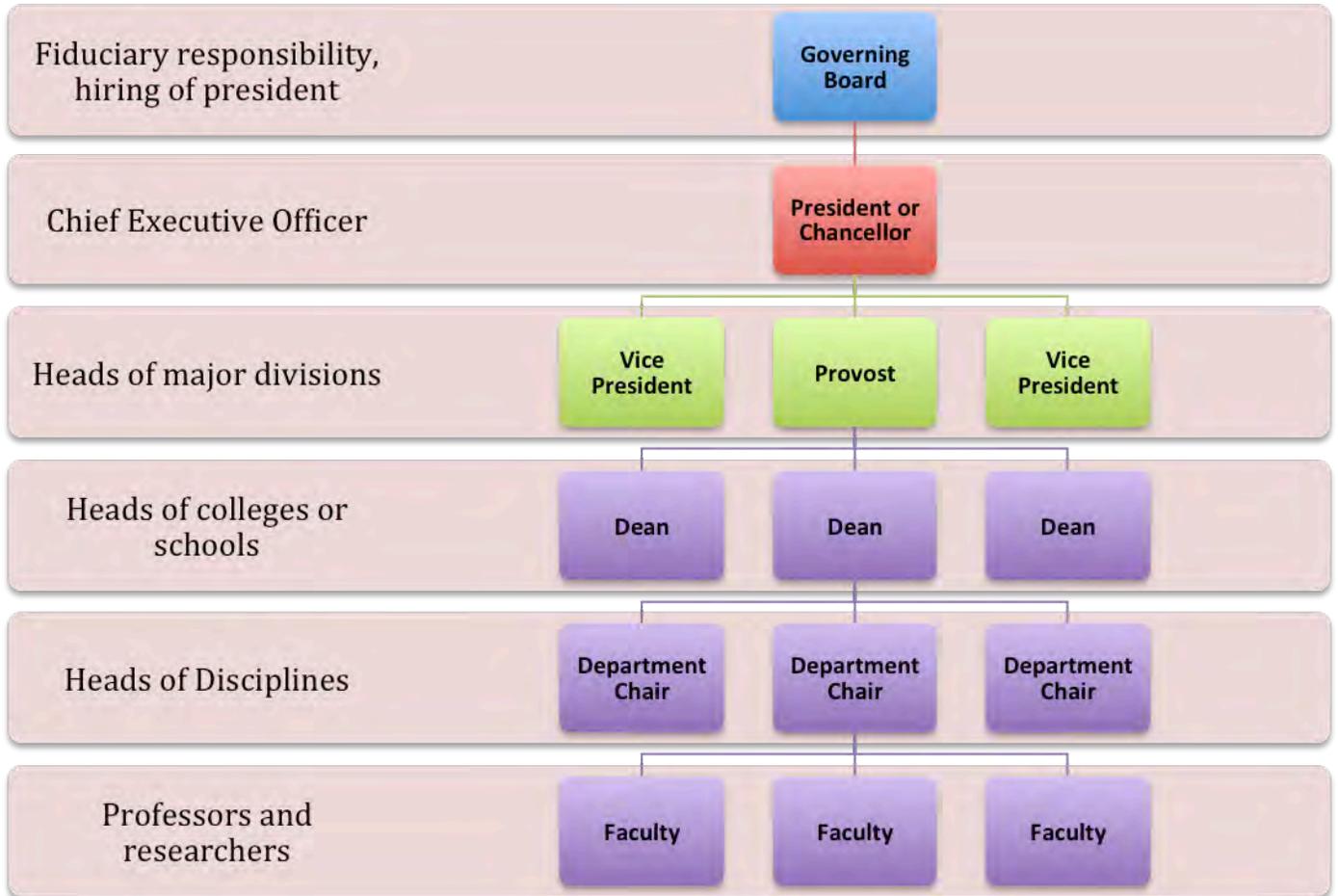
So, How *Are* Colleges and Universities Structured?

If the way in which colleges and universities are structured means that most issues can't be resolved with the same strategies you might adopt in the retail or corporate world, how *can* you have your questions or your needs addressed in an institution of higher education? In order to answer this question, it is important to begin with an understanding of how colleges and universities are structured. Equipped with this knowledge, you'll be in a much better position to know whom — and *how* — to ask for an issue to be addressed or a problem be solved. Although it can sometimes be difficult to believe, colleges and universities don't intentionally make it difficult for people to get the information they need. Sometimes, however, the people who work in higher education assume that their organizational structure is obvious to everyone simply because it's a part of their own daily lives. They forget that most students only go to college once and are unlikely to arrive knowing the difference between a **provost** and a **bursar** or that issues addressed by the Office of Financial Aid at one school are handled by the Business Office at another.

Key Principle

Questions at a college or university should always be handled at the lowest institutional level that deals with those issues. For instance, it is never appropriate to take an academic matter directly to the president, vice president, or dean unless it has already been thoroughly discussed with the faculty member and then with his or her department chair. “Going all the way to the top” is counterproductive in an academic setting and can cause you unnecessary delays in having your problem addressed.

To make it easier to understand who does what in a typical college environment, here is a simplified guide to the levels found in most institutions of higher education.



Governing boards, often known as a **Board of Regents** or **Board of Trustees**, typically have two primary responsibilities: hiring, evaluating, and (on occasion) dismissing the president, and being ultimately in charge of the institution's finances (i.e., they hold **fiduciary responsibility**). Vice presidents are in charge of the institutions major divisions, such as Enrollment Management, Business and Finance, and Student Affairs. The Vice President for Academic Affairs, who supervises the deans of the various colleges that make up the university or the schools that make up the college, is often known as the **provost**. The precise responsibilities of different offices and a more complete discussion of how colleges and universities are structured may be found in **Appendix B**.

Being Analytical

Suppose that, in the course of your reading for a class, you came across the following statement: *Although colleges and universities may use different terminology,*

their basic structure is the same no matter where in the world they're located. Does this statement corroborate the concepts that we've discussed in this unit, contradict them, or not really relate to them at all? How would you go about analyzing whether the author's statement is true or just a matter of the writer's opinion? What factors might you need to take into account if you wish to determine whether the structure of the college or university you attend is more similar to or more different from that of other institutions.

- a. How would you go about obtaining a list of institutions that would provide a reasonable comparison? Which factors would you consider (such as number of students enrolled, size of the faculty and staff, public versus private funding, institutional mission, location, and so on) as you compare schools?
- b. Which elements of institutional structure would you want to examine in this type of study? The number of deans or academic departments? The responsibilities of vice presidential divisions? The size and mission of the governing board? How appeals are handled for different types of decisions? Other factors?
- c. What would be a suitable hypothesis or premise for your study? (If you're unclear about what constitutes a hypothesis or a premise, look ahead to Unit Three.) In other words, what specifically would you set out to determine?
- d. What would you regard as appropriate evidence in support of a hypothesis or premise? Would you use statistical analysis? Would you compare organizational charts? Would you interview people at the institutions?
- e. If you discover that your institution is significantly different from others in specific ways, how might you determine how those differences arose?

Using Your Resources

At some point in your college career, it's possible — even likely — that you'll encounter difficulties in a course. It doesn't matter how good a student you are. It doesn't even matter if you're the sort of student for whom *everything* has always come

easily. We all face periods, at least occasionally, when we feel a bit puzzled, in over our heads, or challenged in a way that goes beyond our comfort level. It may be that you're taking an advanced course in an area that has proven difficult for you in the past. It may be that a particular professor's method of explaining material or organizing the course is different from the way in which you believe you learn best. It may be that you've reached a level in your major where there's simply a vast amount of material or where the concepts you encounter are far more difficult than what came before. It may be that you're a non-traditional student who was always successful at school before but now faces a number of challenges because you've been away from the classroom for a while. Any one of these factors can create added difficulties for you in your academic work. But other parts of our lives can also interfere with our academic success from time to time. You may be going through a period when your various commitments — to your family, to campus organizations, to your job, or to anything else that requires a significant amount of your time — seem to take priority over your schoolwork. Or you may be facing a traumatic or stressful time that makes it more difficult for you to focus on your courses. Whatever the reason may be, it's possible to overcome these obstacles and to achieve distinction in your academic work.

As we've already seen, success in college (and life) doesn't come from our ability to develop excuses like "I'm just not good at this subject." or "I'll never be as good as [SOMEONE ELSE] at this kind of work." When people think thoughts like that, what they're actually doing is giving themselves permission *not* to be successful. But, as we've seen, there's one truth that every undergraduate student should realize: If you're a good, well-prepared college student, you can succeed in *any* college level course, even if it's not in your major ... even if it's in a subject that you "just don't get." There are always ways of turning challenges into opportunities, particularly if you remember this important idea.

Key Principle

You don't have to be *the best* at something to *excel* at something.

You may not always be able to get the *highest* grade on a paper or assignment, but you can still get *superb* grades. Moreover, once you graduate from college, no one is ever

going to care whether you were the top-ranked student or the twentieth-ranked student in any particular course, as long as you were a successful student. And being successful in all your work is a goal you can achieve, even when everything else in your life seems challenging.

The key to success in your courses, as well as in many other aspects of your life, is to remember that you have resources available to you and to use those resources whenever you need them. Here are just a few of the resources you have available to you as a college student.

Enrichment materials associated with your textbooks. Both the field of higher education and the industry of textbook publishing have a great deal of experience in how to increase a student's chance at learning material effectively in any discipline. Many textbooks provide supplementary material, such as websites for students, CD-ROMs with additional information and exercises, and a full range of enhancements designed for every type of learning preference (see Unit Two), level of ability, and institutional focus. One easy way to secure additional help, therefore, is to visit the website of the company that publishes your textbook, find the section dedicated to the book you're using, and discover whether there are any supplementary materials available. If this approach doesn't work, perform an Internet search, using the author's last name, keywords from the title of the book, and an expression like "student resources." Particularly in disciplines such as foreign languages, mathematics, and the natural sciences, you are likely to find websites that other teachers originally designed for their own students but that are now available to any student who needs extra help. These review sites may include clear outlines of textbook materials, supplementary illustrations, rephrased definitions of key terms and concepts, and suggestions for further help. In math and science disciplines, additional problem sets with solutions may be found online, as well as automated vocabulary reviews keyed to specific textbooks. Finally, several academic disciplines provide resources that can help you in difficult courses. For instance, the American Psychological Association devotes a section of its website exclusively to the needs of students in psychology courses. (See <http://www.apa.org/about/students.aspx>.) So, if you discover that a textbook and class

section have not made certain concepts as clear as you would like, do not automatically assume that there are no other resources available. A little creative searching may uncover all the help you need.



The learning resource center on your campus. Most colleges and universities have a centralized location where students may go for additional help or access to supplementary materials in their coursework. Often called a Learning Resources Center, Study Skills Center, or Academic Assistance Center, the function of this office is to provide tutorial services, assess and address learning disorders, offer mini-courses that can enhance academic performance, and advise students on the best sequence of courses to meet their academic abilities and greatest challenges. Many times these centers will offer ancillary sections paired with the very courses that students find difficult. This type of **supplemental instruction** offers strategies for learning the course material more effectively and systematically. Learning resource centers can also assist students with improving their general techniques for academic success. They may offer time management seminars, workshops on the best way to take notes, tips on studying for exams, and advice on reducing stress. Some institutions also

provide more specialized learning centers in specific disciplines. For instance, there may be a writing center, math lab, or public speaking forum. Individual resource centers are less common in foreign languages (although they may be paired with a campus language lab), engineering, the natural or social sciences, and the fine or performing arts, but support groups or mini-courses to help you with these areas are sometimes available. When seeking help from a learning resource center, it's often useful to state your needs in a rather general fashion, allowing the staff to assess your situation and assign the best resources. For instance, if you go to a learning resource center and say, "I need a tutor in" some particular academic subject, you are likely to receive one, even if supplemental instruction on learning strategies, an examination for learning disabilities, or a group study review section would better serve your needs.

Private tutoring. Although learning resource centers can be invaluable in helping you overcome course challenges, some students make faster progress with private tutors. While you will probably need to pay private tutors for their services, the cost is likely to be worthwhile if the alternative is increased frustration or a poor grade in a course. Many private tutors are either upper-level majors or graduate students in the discipline they help teach. The advantage of hiring a private tutor is that this person will be much freer to focus on your individual academic needs than are the tutors who are provided by the institution, more flexible in the times they are available, and readily accessible by phone, instant messaging, or email. Indeed, you can think of the fees charged by the tutor as the price you pay to obtain a high degree of flexibility and access. Before agreeing to a long-term contract with a private tutor, you may wish to meet with that person for one or two trial sessions. Certain students who are excellent in one discipline find it difficult to comprehend how someone else can't understand concepts that are "so obvious and simple." As a result, they may be ineffective at understanding the troubles you're having. They may find it challenging to present material from a different perspective so that you'll understand it better. In other words, if you're going to pay extra for help from a fellow student, you'll want to find someone with whom you have a good rapport, who recognizes that people learn differently, and who is able to work within your schedule. If you can find a tutor who

meets those requirements, it's almost always worth the cost to get you back on track in a difficult course.

Study groups. Another service that learning resource centers may provide is assistance in forming study and support groups for certain academic areas or even individual courses. Nevertheless, just as a private tutor is sometimes preferable to an institutionally assigned tutor, sometimes your own study group is better than one created by someone else. In your own study group, you — along with a like-minded group of fellow students — can best decide how your time is allocated, how often to meet, and which external resources to contact. You may prefer a study group that devotes all of its time to working on problem sets rather than reviewing basic concepts or vice versa, you may be frustrated because other students in an “official” study group need to review substantial amounts of material you've already mastered, or you may find you prefer a more extended review but other students aren't particularly interested. A study group that you organize yourself can target your individual needs and those of other students who are like you. For this reason, if you discover that study groups organized by your instructor or your school's learning resource center are not meeting your needs, be entrepreneurial and develop your own.

The instructor of the course. The single best resource you have available to you when you are having trouble in a course is the person teaching that class. If your course has a designated teaching assistant, start by meeting with that person and have a calm, constructive conversation about the difficulties you're facing. If no teaching assistant has been identified, learn the instructor's office hours, make an appointment if necessary, and be ready to state clearly and concisely what aspect of the course material is causing you problems. When meeting with an instructor, it's often useful to *reverse* the strategy you would adopt when seeking help at a learning resources center. We saw that, when visiting one of these centers, you should state your needs in as general a manner as possible in order that the staff can best match the programs available to your individual situation. When meeting with a professor, however, be as

specific as you can about the difficulty you are having and what help you need in order to understand the material.

- Was there a point in the course at which you felt that your challenges really began?
- Are there certain types of problems or exercises that are easier for you in the course, while others cause you to struggle?
- Are you unclear as to when a particular principle is applied and when it is not relevant to an issue?

If the instructor has a lot of students stopping by for help, it may serve as an alert that certain issues need to be clarified for the class as a whole or that the pace of the course should be reconsidered. In other words, your questions may not only be helping you; they may also be helping your fellow students and allowing the instructor to improve the course as a whole.

While it is true that certain professors can seem quite remote or intimidating, don't allow their personal style to prevent you from seeking the help you need. Most professors are happy to help students in their courses, as long as those students don't come to see them ...

- **... only when it's too late, and the students are hoping to be "bailed out."**

It's not an admission of failure or ignorance to ask for help. That's what your professors are there for. A doctor doesn't think less of you for getting sick, and a professor won't look down on you if you have a question. Many students get into trouble because they wait too long to act when they are having problems in a course, thinking "I'll figure this out eventually." or "It'll get easier later."

Many college courses — particularly in math, science, logic, music, and foreign languages — build exponentially: You need to have mastered material covered in an earlier chapter in order to make any sense at all of the concepts that are developed in a later chapter. If you wait too long, you'll be so far behind for the help you need that it won't make a real difference in your performance. Remember, too, that it takes a surprising number of very high grades in a course to make up for even one low grade. For instance, suppose a student receives a zero on an assignment where all the work in that course carries equal

weight. Depending on where the instructor's cut-off point for each grade may be, it can take three or more *perfect* scores to bring that student's average even up to a C, six or more perfect scores to restore the student's average to a B, and as many as *fourteen perfect scores* to restore the student's chance of earning an A. If that doesn't sound particularly difficult, consider how unlikely it is for someone to complete even one assignment perfectly after having failed earlier work. Or consider, too, how impossible this goal would become if the failing grade were on a quiz or exam that counted for a large percentage of the student's final grade. Many college courses don't have six or more full quizzes or exams. In those cases, even one low grade can put an A or B out of reach for the entire course. So, it's inadvisable to wait until you actually receive a low grade before asking for the help you need. Apply your best critical and creative problem-solving strategies *before* the poor grades arrive, not after.

- **... after not attending classes or review sessions.** Many college professors find it difficult to be sympathetic with students who haven't done their part by coming to class, completing assignments in a timely manner, and taking full advantage of review sessions and other resources that are offered to them. Remember what we saw earlier about your college experience being similar to the profession/client relationship you have with your doctor. If a doctor prescribes you medicine and an exercise program, he or she is not likely to be sympathetic to you if you show up weeks later not having taken your medicine or performed your exercises but still expecting your health to improve. In your academic work, always make an effort to learn the material yourself and demonstrate to the professor the steps you've already taken to overcome your own difficulties.
- **... because they've placed other priorities ahead of their academic work.** Students need to balance their academic responsibilities with their family obligations, financial responsibilities, and the other tasks that arise in life. Some students believe, however, that their responsibilities to their families or jobs are so important that they should take precedence over their academic work. They are certainly within their rights to make this choice, but they have

no right to assume that standards or requirements will be waived for them as a result. One of the ideas that we'll deal with extensively in Unit Seven is

Key Principle

Every decision has consequences.

Placing other aspects of your life as higher priorities than your academic performance may well be your own decision, but you shouldn't then expect your instructors to ignore the consequences.

It's never a good strategy to enter a conversation with a professor in an accusatorial manner, implying that either you or your fellow students are not succeeding because of deficiencies in the teacher's performance or level of knowledge. Consider how you feel when someone asks you for help: It's only natural for people to feel more disposed to help someone when they haven't received the impression that it's their own failure or incompetence which has led to the other person's need for assistance. Moreover, the instructor's commitment to other students means that he or she can only allocate a certain amount of time to the problems you are having. The instructor is highly unlikely to spend his or her office hours re-explaining everything that's been covered in the course, compensating for material that should have been mastered in one of the course's prerequisites, or supervising you as you do your homework. You're much more likely to receive the help you need if you come to an instructor with a positive attitude and a few specific questions that help identify your specific challenges. At the end of your conversation, be gracious and thank the instructor for his or her time and help. You may be correct in thinking, "But it's this person's *job* to assist me"; even so, an extra amount of politeness and civility is likely to cause that teacher to go *beyond* the minimum requirements of his or her job in an effort to be of assistance to you. It may even be the case that, if your final score in the course ends up on the borderline between two grades, your demeanor during the conversations will lead the instructor to give you the benefit of the doubt because you were willing to take responsibility for seeking help. At the other extreme, a negative or hostile attitude could work against you, leaving the impression that you have a sense of entitlement to a good grade and are unwilling to take the suggestions you are offered.

Being Imaginative

Imagine that you want to explore possible correlations between whether a student studies independently, in a group, or some combination of these two approaches and any one of the following.

- a. Whether the subject the student is studying falls within that student's academic major.
- b. The grade the student receives on the quiz or exam for which the student is studying.
- c. The overall grade the student receives in the course.
- d. The student's cumulative grade point average.
- e. Whether the course is taught at an introductory, intermediate, or advanced level.

Before you even begin to collect data, try to envision what you are likely to discover. What patterns do you expect might emerge as a result of this study? Could the results help improve the way in which you and your fellow students study for a course? What issues of privacy and other ethical concerns would you need to address in order to conduct this study? What policies does your institution have in place regarding research involving human subjects? What quantitative or qualitative methods would you use when performing this research?

Five Essential Tools

Among the resources you have available to you for success in your undergraduate work and original research, there are five particularly important tools that we'll be exploring in this course.

1. Being Intentional

You're more likely to gain from any research project or life experience by giving some thought in advance to what you hope to accomplish. You can think of this tool as

developing hypotheses, premises, or questions that you'll use to gauge how successful the experience was and how it could be improved.

2. Being Reflective

Once a research activity or life experience is over, it's useful not to rush immediately onto the next one. Pausing for a moment to think "What did I learn from this activity?" will make each event more meaningful and help you to avoid having to relearn the same principle over and over again.

3. Being Innovative

In order to move knowledge forward, it's important not merely to learn what's already been known by others but also to learn things that no one has known before. Each academic discipline requires a certain amount of ingenuity, creativity, and innovation in order for people to be successful. By being innovative, you'll also develop new hypotheses, premises, and questions that you can consider when you're being intentional. In short, you'll be doing genuine research. Here's how the **Council on Undergraduate Research**, the world's premier organization devoted to college-level scholarship, defines what you'll be doing.

Definition of Undergraduate Research: An inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline. <http://www.cur.org/about.html>

4. Being Analytical

As we'll explore more completely in Unit Four, being creative is not simply a matter of thinking thoughts no one else has ever thought before. It's also important to create something useful and something that appears valid when tested. By being analytical, you'll break down arguments into their component parts to consider their sources, internal logic, and conformity with the facts.

5. Being Imaginative

Research and learning are not just about conducting experiments and analyzing data. We can also conduct research through application of our creativity and by considering new possibilities. Just as innovation is required to move knowledge forward, so is it an important aspect of our art, music, theater, and culture. Creativity without analysis

can devolve simply into idle speculation, but measurement and observation without creativity can make our research (and our lives) dry and two-dimensional.

Each unit of this textbook will provide you with opportunities to apply all five of these essential tools. In fact, you've already had an opportunity to work with four of them, so let's close this unit by spending a bit of time on the fifth.

Being Reflective

As you consider what you've read in this unit, think about:

- 1. What were the three most important ideas that were explored?**
- 2. Did any of the principles discussed in this unit surprise you?**
- 3. Which point or idea did you find yourself disagreeing with the most?**
- 4. Which concepts or principles made you feel, "Oh, I know all that already"?**

EXERCISES

1. Compare your philosophy of learning with the statements prepared by several other students. What common themes can you trace among two or more statements? How does each person's statement suggest that he or she is unique in some way?
2. Come to class next time prepared to answer the following questions. Where would you go at your college or university if you:
 - a. received a bill that contained an error?
 - b. wished to change your major?
 - c. believed that you received the wrong grade in a course?
 - d. had a conflict with a roommate/suitemate in a residence hall?
 - e. felt that a faculty member was not adhering to the syllabus you received in a course?
 - f. saw that one of the campus buildings had been seriously damaged?
 - g. needed to have a check cashed?
 - h. had a question about a fellowship or student loan?
 - i. wanted to obtain a parking permit for your car?
 - j. had a question about a prerequisite for a course?

- k. believed you were treated rudely or unprofessionally by a member of the maintenance staff?
 - l. were interested in starting a new student club?
3. Identify someone who works at the college or university that you attend, and ask for a five- or ten-minute interview to get to know that person better. If possible, this person should not be one of your current professors or anyone you already know particularly well.
 - a. How long has the person worked at the school?
 - b. Why did the person enter his or her current career?
 - c. Has the person ever worked somewhere else?
 - d. What does the person believe is the best thing about the school?
 - e. What does the person think is the greatest challenge at the school?
 - f. What advice would this person give a new student?
 - g. What goals does the person have in his or her professional life?
4. As candidly as possible, complete the following sentence: “The reason why I am attending *this* school is because ...”
5. This unit used hospitals and universities as examples of the profession/client model of organization. Can you think of other examples? Besides retail stores, what are some examples of the business/customer model of organization?
6. Identify a question or problem for which you believe there is no one correct answer or solution. (Don’t settle for simple examples, such as mathematical problems for which there are two or three correct answers.) If you were then required to do so, how would you begin to address your question or problem?
7. In a single sentence, identify a clear warning sign or “red flag” that would suggest you are having trouble in a course. Is it when you ...
 - a. ... do not immediately understand a concept discussed in class?
 - b. ... cannot understand something in your reading?
 - c. ... receive a certain grade on an assignment, quiz, or exam?
 - d. ... have a feeling or intuition that the course isn’t going as well as you wish?
 - e. ... notice something else?

Why have you identified the particular warning sign that you selected? Justify your choice. If you find that you have identified different warning signs in different subjects — such as an A- on an assignment in one discipline, but a D on a test in another — explain why you feel differently about different courses or subjects.

8. Choose a textbook for one of the courses you're currently taking. Explore on the Internet whether there are additional resources, such as a publisher's website or material made available by an instructor at another institution, that provide a supplement or additional help.
9. The governor of Florida, Rick Scott, had the following to say about the purpose of a college education.

Scott said Monday that he hopes to shift more funding to science, technology, engineering and math departments, the so-called "STEM" disciplines. The big losers: Programs like psychology and anthropology and potentially schools like New College in Sarasota that emphasize a liberal arts curriculum. "You know, we don't need a lot more anthropologists in the state," Scott said in an interview on the Marc Bernier Show. "It's a great degree if people want to get it, but we don't need them here. I want to spend our dollars giving people science, technology, engineering, math degrees. That's what our kids need to focus all their time and attention on. Those types of degrees. So when they get out of school, they can get a job."
<http://motherjones.com/mojo/2011/10/rick-scott-liberal-arts-majors-drop-dead-anthropology>

How might a student majoring in anthropology or the liberal arts reply to this argument and justify his or her academic pursuit? If states invest in higher education, do they have a right to expect a return on their investment in terms of job growth, as Governor Scott suggests?

10. In the unit, we saw data suggesting that students in the 1970's answered questions about what they regarded as important and why they were in college differently from the way in which students answered these questions thirty

years later. If you wished to explore these findings further, how would you go about learning the answers to each of the following questions?

- a. The percentage of students answering questions in particular ways changes over time. How could you determine whether those changes are statistically significant?
- b. The numbers tell you *that* opinions changed, but they don't tell you *why*. How could you determine the likely reasons why these changes occurred?
- c. If you were to divide the data into different segments, which factors do you believe would have the greatest impact? In other words, among which of the following are you likely to see the greatest differences: different genders, different ethnicities, different family incomes, different cities of residence, or different religious beliefs? How would you go about testing your new hypothesis?

11. In addition, some evidence suggests that the goals of those students from the 1970's were related in certain ways to their later satisfaction with life.

Researchers examined the attitudes of twelve thousand college freshmen at elite colleges and universities in 1976, when they were eighteen years old on average, and then measured their life satisfaction at age thirty-seven. Those who had expressed materialistic aspirations as freshmen – that is, making money was their primary goal – were less satisfied with their lives two decades later. Furthermore, materialists are more likely than nonmaterialists to suffer from a variety of mental disorders! Lyuobomirsky (2008) 43.

- a. How might you go about determining whether the phenomenon Lyuobomirsky describes was limited to *this* group of students from *this* period of time or is a more general phenomenon?
- b. How might you try to distinguish correlation from causality in such a study? In other words, how could you try to determine whether:
 - i. Being more materialistic at 18 or 19 causes one to be less satisfied with life at 37?
 - ii. The disposition to be dissatisfied later in life causes one to be more materialistic as young adults?
 - iii. Or a more complex set of relationships is at work?

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Unit Two:

Setting Goals and Evaluating Results

Learning Objectives:

1. To identify your learning preferences and develop strategies to compensate for challenges you may encounter.
2. To apply specific learning preferences to specific goals.
3. To understand more completely how to set goals and prioritize objectives.
4. To examine in greater depth the process of reflecting critically on the results of an action.
5. To practice critical thinking skills by addressing one significant social issue: sexual harassment.

Identifying Your Learning Preferences

Even very successful students sometimes feel that there are certain subjects at which they're naturally "good" or "bad." But, as we saw in Unit One, the truth is that students who received commendable grades in their earlier schooling can excel at *any* undergraduate course. It's true that you may have a particular affinity for one discipline over another, and it's also true there are certain areas of study that require innate talent or physical attributes in addition to intelligence and hard work.

Nevertheless, for the vast majority of your college work, you can not only meet your goals, you can actually *exceed* them if you put your mind to it. All you have to do is discover how you prefer to learn best and then match your individual learning preferences to a strategy that's appropriate to each academic discipline. Developing this versatility is one of the most important goals you can achieve in college. So, we'll begin this unit by identifying the ways in which you *like* to learn or believe that you learn most *easily*. We'll start with a form containing blank spaces numbered 1 through 30. After these spaces, you'll see a list of thirty activities, labeled A through *. Consider all 30 activities, and then record the letter or symbol that refers to each activity in your order of preference. In other words, use space number 1 to list the

activity you would most enjoy or find most appealing. Space number 30 should indicate the activity you would least enjoy or find least interesting. In between those two extremes, rank the other activities on the basis of how much they appeal to you. There are no right or wrong answers to this survey. It's merely a reflection of your own individual preferences.

1. _____	7. _____	13. _____	19. _____	25. _____
2. _____	8. _____	14. _____	20. _____	26. _____
3. _____	9. _____	15. _____	21. _____	27. _____
4. _____	10. _____	16. _____	22. _____	28. _____
5. _____	11. _____	17. _____	23. _____	29. _____
6. _____	12. _____	18. _____	24. _____	30. _____

- A. Listening to music by myself.
- B. Playing a videogame.
- C. Looking at the exhibits in a museum of science or technology.
- D. Reading a book alone in my room.
- E. Talking for hours with a group of friends.
- F. Assembling a model (such as an airplane, rocket, boat, or machine).
- G. Reading a challenging article about mathematics, statistics, economics, chemistry, or physics.
- H. Attending a lecture by a distinguished scholar, performer, entrepreneur, or politician.
- I. Painting a picture, making a drawing, singing a song, acting in a play, or performing in a band or orchestra.
- J. Attending a debate.
- K. Participating as a member in or serving as an officer of a literature club.

- L. Outlining a proof that demonstrates the truth of a hypothesis or premise.
- M. Spending an afternoon strolling through an art gallery all on my own.
- N. Serving as a member of a panel discussion.
- O. Solving a crossword puzzle, Sudoku, cryptogram, or “minute mystery.”
- P. Reading poetry by myself in the park.
- Q. Watching television.
- R. Going to a concert.
- S. Solving math problems.
- T. Taking something apart and putting it back together.
- U. Telling jokes or humorous stories.
- V. Dancing.
- W. Sitting in the front row of a classroom or auditorium.
- X. Writing a paper in a neat and orderly environment.
- Y. Going with a friend to the performance of a stand-up comic.
- Z. Studying by myself for a test, making note cards or outlines, and reviewing my own notes.
- §. Listening to music while studying math or chemistry.
- Δ. Putting on a costume and pretending to be someone else.
- †. Going to a movie with a group of friends.
- *. Explaining an interesting mathematical or scientific principle to someone else.

After you have placed these items in your order of preference, pay particular attention to the items in the **yellow shaded spaces numbered 1-8** (the eight activities that you most enjoy or find most appealing) and items in the **green shaded spaces numbered 23-30** (the eight activities that you least enjoy or find least interesting). With a pencil, place checkmarks in the following boxes as you are instructed.

<i>Place a checkmark below every time that one of the letters or symbols in that row's center box appears among items 1-8 on your numbered sheet.</i>		<i>Place a checkmark below every time that one of the letters or symbols in that row's center box appears among items 25-30 on your numbered sheet.</i>
I.	A, E, H, J, R, W, Y, §	I.
II.	B, C, M, Q, W, †	II.
III.	B, F, I, N, O, T, U, V, Δ	III.
IV.	D, G, K, O, P, X, Z	IV.
V.	C, G, L, O, S, §, *	V.
VI.	F, J, L, O, T, X	VI.
VII.	A, I, M, P, R, V, Δ, †	VII.
VIII.	A, D, M, P, Q, S, Z, Δ	VIII.
IX.	E, H, K, N, R, U, V, Y, †, *	IX.

If you have completed the chart correctly, some of the boxes above should contain three or more checkmarks. Other boxes might be empty or only contain one or two marks. Find the box or boxes on the left where the *most* checkmarks appear, and then do the same thing as you examine the boxes on the right. Identify the Roman numerals of these boxes, and then look at the outline below to discover what your answers have revealed about your individual learning preferences(s).

- I. Items in this category (A, E, H, J, R, W, Y, and §) deal with activities that tend to appeal to AUDIO LEARNERS.
- II. Items in this category (B, C, M, Q, W, and †) deal with activities that tend to appeal to VISUAL LEARNERS.
- III. Items in this category (B, F, I, N, O, T, U, V, and Δ) deal with activities that tend to appeal to EXPERIENTIAL LEARNERS.

years later. If you wished to explore these findings further, how would you go about learning the answers to each of the following questions?

- a. The percentage of students answering questions in particular ways changes over time. How could you determine whether those changes are statistically significant?
- b. The numbers tell you *that* opinions changed, but they don't tell you *why*. How could you determine the likely reasons why these changes occurred?
- c. If you were to divide the data into different segments, which factors do you believe would have the greatest impact? In other words, among which of the following are you likely to see the greatest differences: different genders, different ethnicities, different family incomes, different cities of residence, or different religious beliefs? How would you go about testing your new hypothesis?

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- a. How might you go about determining whether the phenomenon Lyubomirsky describes was limited to *this* group of students from *this* period of time or is a more general phenomenon?
- b. How might you try to distinguish correlation from causality in such a study? In other words, how could you try to determine whether:
 - i. Being more materialistic at 18 or 19 causes one to be less satisfied with life at 37?
 - ii. The disposition to be dissatisfied later in life causes one to be more materialistic as young adults?
 - iii. Or a more complex set of relationships is at work?

uncomfortable with that approach to learning and prefer to master material in some other way.

Recognizing your individual learning preference is important because it can help you work more effectively in every type of course. But remember: Understanding your preferred approach to learning doesn't give you an excuse or crutch. The purpose of this exercise isn't to encourage you to say something like, "Oh, well, I'll never do well in this subject since I'm just not a good visual learner." or "I should never sign up for that class since I don't seem to be a text-oriented learner." Part of what a good college education provides is an effective set of strategies so that students can learn better **even in those areas where they may face some initial challenges.**

Key Principle

Your goal in college shouldn't be to justify what you don't know or can't do. It should be to learn as much as you can about what you don't already know and to find out how to succeed at what you "can't yet do."

In other words, knowing how you prefer to learn will tell you how you can use your current academic approaches to succeed in environments where you may currently have some challenges.

What do these different types of "learning preferences" mean?

- **AUDIO LEARNERS** tend to learn very well from lectures, listening to podcasts, and receiving other types of spoken information. Those who have challenges with audio learning may find it extremely difficult to pay attention during lectures that don't include any graphics or opportunities for active learning; they may also find it difficult to remember lecture material after the class is over.
- **VISUAL LEARNERS** tend to learn very well from images, diagrams, and graphs. When they are trying to remember things, they may recall "seeing" the information on a page. Those who have challenges with visual learning may be easily confused by maps, charts, and images or find it difficult to "visualize" this information later.

- **EXPERIENTIAL LEARNERS** tend to learn very well from activities, simulations, and lab experiments. Those who have challenges with experiential learning may dismiss “hands-on” activities or projects done in breakout groups as “a waste of time,” preferring to get their information from a book or the instructor.
- **TEXT-ORIENTED LEARNERS** tend to learn very well from printed information or the written word. Those who have challenges with text-oriented learning may find it difficult to remember material after reading an assignment unless they take careful notes; they may also find it hard to summarize the key points of a complex written argument.
- **MATHEMATICAL AND SYMBOL-ORIENTED LEARNERS** tend to learn very well in situations where they are asked to deal with quantities, formulae, and where answers are either definitively clear-cut or, at the other extreme, exceptionally abstract. Those who have challenges with mathematical and symbol-oriented learning often view the world as filled with ambiguity and generally find courses in the humanities more personally satisfying than courses in math, science, economics, or statistics.
- **LOGICAL LEARNERS** tend to learn very well when information is presented systematically or when the subjects they are studying follow clear “rules.” Those who have challenges with logical learning may become impatient in classes that deviate too widely from an outline. Rather than reading the instructions before beginning a project, these students prefer simply to “plunge in” and start working.
- **IMAGINATIVE LEARNERS** tend to learn very well when given an opportunity to demonstrate their creativity or to explore subjects on their own. Those who have challenges with imaginative learning may find it frustrating when asked to make an original contribution or when they are in courses where answers are not clearly right or wrong.
- **INDEPENDENT LEARNERS** tend to learn very well on their own and when given free rein to work on projects by themselves. Those who have challenges with independent learning may get distracted when not given

sufficient “feedback” or become anxious because they believe that other students must be completing their work more quickly and successfully than they are.

- **SOCIAL LEARNERS** tend to learn very well when working in groups. They enjoy interaction with other students and usually do their best work as part of a team. Those who have challenges with social learning may get frustrated with group projects, feeling that others often don’t do their fair share of the work or are slowing them down; in the end, they may try to do most of the work by themselves.

Being Innovative

Suppose you wished to determine whether there is a correlation between certain academic majors and certain learning preferences. Do students who believe they learn best in certain ways tend to gravitate towards specific majors or, to the contrary, do various learning preferences tend to be distributed evenly among students in all academic majors?

- f. How might you focus this question differently if you were conducting this research:
 1. As just one among several five-page papers that you need to write for a specific course?
 2. As a single fifteen-page paper that is the major project for a specific course?
 3. As a senior thesis that is likely to be seventy or more pages in length?
- g. What steps would you take to make certain that the data you collect are truly representative of *all* students rather than reflective only of the sample you have available among your friends and other people in your classes?
- h. Which factors would you want to control in your study? Are such factors as age, gender, ethnicity, sexual orientation, or economic status likely to affect your results? What about the type of college that a student attends, its size, or its location?

- i. What hypothesis or premise would be the basis of your study? What methods would you use in order to interpret the data?
- j. If you discover that a correlation exists between a certain major and a certain learning preference, how might you explore whether there is also a *causal* relationship between these factors?

Applying Learning Preferences to Specific Learning Goals

How does recognizing your individual learning preference(s) help you succeed even in subjects that aren't your favorites or that have challenged you in the past? Consider the following example. If you already know that you prefer social and experiential learning, you may not realize exactly why you become frustrated when you're expected to do independent work in large lecture courses. You know that you like other people, and large courses give you contact with *lots* of other people. On the other hand, they don't give you the sort of interaction and hands-on experience you need to do your best. In order to ease this frustration, you might consider forming your own study group in these courses or exploring whether simulations are available that allow you to *apply* what you're learning in class. In other words, regardless of your academic strengths, you can always find a way to achieve distinction in your work by applying your most effective learning strategies even to subjects that you're "just not good at." As a way of demonstrating this principle, let's identify the five learning strategies you believe are most effective for you. To get you started here's a list of twenty study techniques that many college students have found helpful in their coursework.

1. Highlighting key words or phrases while reading a textbook.
2. Asking the instructor for permission to record class sessions and then listening to these recordings later.
3. Sketching out a diagram of key ideas or principles.
4. Outlining in words key ideas or principles.
5. Meeting once or twice a week with a study group as a way of making sure that you are all keeping up with the material.

6. Developing flash cards for important vocabulary, formulae, or concepts.
7. Reviewing slides or PowerPoint presentations from class.
8. “Reteaching” course material by helping a study partner master it.
9. Listening to music while studying.
10. Studying for an hour, taking a ten-minute walk, then studying for another hour.
11. Identifying something with which to reward yourself if you learn a certain set of material or earn a certain grade.
12. Developing a metaphor, picture, or mnemonic device to recall key ideas or concepts.
13. Writing down important formulae or vocabulary words over and over.
14. Acting out events or concepts from a class with a group of friends.
15. Making a joke, poem, or amusing story based on course material in order to remember it better.
16. Developing a timeline of significant events.
17. Creating a mock test or quiz to give to a friend. Taking the mock test or quiz that your friend develops.
18. Working with a group of friends to create a “game show,” based on the course material, in which everyone takes a turn as a contestant.
19. Placing Post-It Notes™ with course information on the wall of a room, and then reorganizing these notes as new patterns and connections are discovered.
20. Reading passages from notes or the textbook into a recorder. Then listening to these recordings in the car or on an mp3 player.

In the numbered spaces below, list five study strategies that you believe work well for you. Don't restrict yourself to ideas from the list above. Feel free to invent your own study techniques or to record ideas that have worked well for you in the past. If you do end up including some of the suggestions that have been provided in this unit, try to list at least two learning strategies that are your own creations.

My Five Best Learning Strategies

1. _____

_____.

2. _____

_____.

3. _____

_____.

4. _____

_____.

5. _____

_____.

Now that you've identified five learning strategies that work well for you, consider ways in which these strategies can be applied to subjects or types of learning that you find most challenging. Although there's likely to be a single subject in which you will

complete a major, concentration, or emphasis during your college career, true academic distinction results from a well-rounded program. For this reason, most colleges and universities require you to spend a quarter, a third, or even half of your time in general education courses or distribution requirements. Consider what you might think if someone were to tell you, “I’m extremely well educated and had a great college experience. It’s just that I’m illiterate. You see, I’ve discovered that I’m just not good at text-based learning. But I’m really well prepared in other ways!” The example is ridiculous, and you probably find it impossible to regard anyone, at least in our own culture, as “extremely well educated” and if that person couldn’t read or write. In much the same way, when people say that they’re “just not good at” *any* college subject — music, math, art, physical education, science, English literature, composition, or anything else — they’re placing themselves in pretty much the same category as that illiterate college graduate we just considered.

Key Principle

The best undergraduate education is not one that encourages students to explore only the disciplines they like. It’s one that also helps them excel even at disciplines they thought they’d *never* like.

With this principle in mind, use your own creativity to identify your five greatest learning challenges and at least three specific ways in which you can use your strengths to help you meet these challenges. Be as inventive in finding solutions as you can, and be absolutely honest about the subjects or types of assignments that you find hard. Think about those academic situations where you find yourself far from your comfort zone, and then be creative in suggesting ways in which your individual learning preference(s) might assist you in finding success there.

Being Imaginative

My Five Greatest Learning Challenges:

1. _____

2.

3.

4.

5.

My Strategies for Overcoming These Learning Challenges

1.

2.

3.

Setting Goals: Being Intentional

In Unit One, we saw that we can gain more from experiences if we approach them with a high degree of **intentionality**. Being intentional means that we consider in advance of an experience what we hope to accomplish or perceive during it, how that result relates to our long-term goals, and why those goals are important to us. But it's easy to use the term "goal" rather loosely. Having a Greek salad for lunch, earning a law degree from Harvard, and obtaining world peace may all be termed "goals," even though these intentions are very different in nature. We may not remember a few weeks from now what we had for lunch today, while earning a law degree from Harvard could change our entire lives. Similarly, we can easily determine whether we have or have not received that law degree, while recognizing whether world peace has actually been achieved could be the subject for significant debate. In order to distinguish among these various types of goals, let's adopt a more precise terminology.

Aspiration

We'll regard a goal that we consider worth striving for even if we can never achieve it to be an *aspiration*. World peace, universal happiness, curing all diseases, and ending global hunger are all examples of aspirations you may have. In this way, an aspiration is similar to the concept of a *limit* that you may encounter in a calculus course: the value that a function or sequence approaches, although it will never actually reach it.

We'll use the term *target* for a long-

sufficient “feedback” or become anxious because they believe that other students must be completing their work more quickly and successfully than they are.

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4. Outlining in words key ideas or principles.
5. Meeting once or twice a week with a study group as a way of making sure that you are all keeping up with the material.

significantly over time — having a quick, easy-to-use mechanism is a useful way to begin analyzing a goal in terms of how well it fits your values and personality.



Being Analytical

Suppose you had a friend who was a French literature major and who told you that he or she had the following goals. Analyze each of them to determine which components of the SMART Goals approach are missing from your friend's goals. You may find that all components are present, all are missing, or one or more are missing.

“What I'd really like to do in life is to:

1. Get into graduate school at a French university someday.
2. Find a cure for cancer.
3. Backpack from Paris to Marseilles during the summer between my junior and senior years.
4. Get rich.
5. Fall in love with someone, get married, and start a family before I'm 35.
6. Learn more about Voltaire and Rousseau.

7. Own a blue Bentley convertible while I'm still in my 20's.
8. Avoid getting sick before I complete graduate school.
9. Meet the star of my favorite TV show.
10. Learn to relax more.
11. Write my senior thesis completely in French.
12. Travel abroad each summer after I complete graduate school.
13. Get a teaching job at a private liberal arts college.
14. Overcome my fear of flying.
15. Be happy."

Evaluating Results: Being Reflective

The logical complement of setting goals is evaluating the results of your actions in order to determine whether any of these goals have been achieved. Being reflective helps you measure the progress you've made and set better, more meaningful goals for the future. Although you can be reflective simply by asking yourself the question "What did I learn from this experience?" there are also strategies you can use to make your reflection more productive. In order to see these strategies in action, let's consider a common experience you'll have in college: taking an exam.

In higher education, we frequently classify exams into four major categories.

diagnostic

A *diagnostic* test gathers baseline data to determine what is true right now in order for us to improve on the current situation or at least measure changes in the future. If you took a placement exam to determine which mathematics course or level of a foreign language you needed to take, that was a diagnostic test.

<p style="text-align: center;">formative</p>	<p>A <i>formative</i> test is one that simply provides help and constructive criticism. Formative tests give you insight into what you need to do to improve. If you've ever taken a sample pre-test or a quiz that didn't count towards your grade, that was a formative test.</p>
<p style="text-align: center;">summative</p>	<p>A summative test is one that results in a decision. Final exams are usually summative tests: They determine (at least in part) what your final grade in a course will be. Juries in art shows or music performance are also usually summative in nature.</p>
<p style="text-align: center;">formative-summative</p>	<p>A formative-summative test is one in which a decision is made but which also provides advice about how to improve. A midterm or unit exam would be formative-summative in nature if you received a grade from it but also learned what you needed to study harder for the next test.</p>

This distinction is useful because it can help guide our reflections about *any* experience. For example, suppose you've never had much interest in puzzles and so never tried Sudoku. A good friend of yours *loves* Sudoku, however, and gives you a book of these games, urging you to try them. You agree. Since you didn't seek out this activity, after you've tried a few puzzles, you might reflect on your experience by

asking yourself why you agreed to do so.

- **diagnostic:** Did you do it just to learn how good your skills were at something you'd never tried before?
- **formative:** Did you do it to learn how to become better at something that mattered to someone you care about?
- **summative:** Did you do it to make a decision about whether you were right all along about puzzles being something that doesn't appeal to you?
- **formative-summative:** Did you do it both to learn whether solving Sudoku was something you might like and to learn which skills you need to improve your ability to solve these puzzles?

By classifying the experience in one of these four categories, you can help develop a clearer sense of what your “take away” from that experience should be. If you don't stop to reflect on what you gained from having done something, it becomes very easy to fall into the habit of just doing one thing after another without receiving any sense that you're making progress or benefiting from what you do. People sometimes feel that they keep doing things but “never actually get anywhere,” and so they ask “What's it all about? Why do I even bother?” Being reflective is a continual reminder of why it is you've embarked on a particular course of action, and it can help you make better and more consistent progress by keeping your focus on the lessons you learn immediately after you've learned them.

Various scholars have proposed approaches we can use to make our practice of reflection more systematic. One of the easiest to learn is the system developed by **Gary Rolfe**, which he outlines in a number of sources, including two books co-authored with Melanie Jasper and Dawn Freshwater: *Critical Reflection for Nursing and the Helping Professions* (2001) and *Critical Reflection in Practice* (2010). Rolfe breaks the reflective process down into three simple questions.

1. **What?** Consider the type of experience you've had and review precisely what happened. How did you react at each step in the experience? How did those reactions alter the experience? We might regard this stage of the reflection as the **diagnostic** stage: It's an attempt to diagnose what the essential features of the experience really were so that they can be analyzed.

2. **So What?** Then consider the importance of the experience itself and of each step as it unfolded. What were the lessons that you can learn from what occurred? We might regard this stage of the reflection as the **summative** stage: It's an attempt to draw conclusions about the fundamental features of the experience.
3. **Now what?** Finally, consider how you'll apply those lessons in the future. How can the lessons derived from this experience improve other experiences you may have later? How will you act differently because of what occurred? We might regard this stage of the reflection as the **formative-summative** stage: It's an attempt to use the conclusions drawn from the experience as constructive advice for personal growth and development. Rolfe, Freshwater, and Jasper (2001) 27-29.

Rolfe's approach was first developed for use in nursing, a profession in which practitioners must continually learn how to improve both their techniques and their "bedside manner." But reflective practice has applications in other disciplines as well. For example, even before Gary Rolfe developed his system, **Graham Gibbs**, a professor of teaching and learning in higher education at Oxford University, suggested a six-phase reflective process that has broad applicability. In certain ways, Gibbs' system can be regarded as an approach that breaks several of Rolfe's stages into two parts. There are thus six stages in the Gibbs' approach to reflective practice.

1. **Description:** What happened?
2. **Feelings:** What were you thinking and feeling when it happened?
3. **Evaluation:** What was good and bad about what happened?
4. **Analysis:** What sense can you make of what happened?
5. **Conclusion:** What else could you have done or how could you have reacted differently?
6. **Action Plan:** As a result of this reflection, what would you do differently next time a similar situation arises?

In addition, Gibbs also inserts one additional feature into this process: His system treats this reflective activity as an ongoing activity. In other words, each action plan you develop informs those future experiences that will cause you to think about your

feelings and alternative reactions, starting the process all over again. For this reason, the model has been dubbed the **Gibbs Reflective Cycle**, and it may be illustrated as follows.



For more on the Gibbs Reflective Cycle, see Johns and Lee (2009) 7-8, 50-51 and Ghaye (2011) 15-17.

The strategies suggested by both Rolfe and Gibbs are useful techniques to adopt until reflective practice becomes a natural part of how you approach everything you encounter in life. Reflection gives each experience more meaning and helps us to benefit from what we do. But there can also be one additional benefit to a reflective practice. Research conducted by **Martin Seligman**, the Zellerbach Family Professor of Psychology at the University of Pennsylvania, suggests that certain types of reflection can actually make us happier. A group of severely depressed people were given the task of daily recording three good things that happened that day and discussing why those occurrences were good.

In this uncontrolled study, 94% of severely depressed people became less depressed and 92% became happier, with an average symptom relief of a whopping 50% over only 15 days. This compares very favourably with anti-depressant medication and with psychotherapy. Seligman at http://news.bbc.co.uk/2/hi/programmes/happiness_formula/4903464.stm

While such results are absolutely no reason to discontinue using your medications if you're taking them for depression, they do indicate the power that reflecting on the good (rather than fixating on the bad) can have in our lives.

One final reflective practice that you may wish to consider is the **learning portfolio** or **learning journal**. A learning portfolio consists of your own reflections about your learning, accompanied by selected samples of your work that illustrate your progress. **John Zubizaretta**, Professor of English, Director of Honors and Faculty Development, and former Dean of Undergraduate Studies at Columbia College in South Carolina (named the 2010 U.S. Professor of the Year by the Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education), suggests the following possible structure for a student's fully developed learning portfolio.

1. *Reflections on Learning* (reflective narrative(s) on philosophy of learning, meaning of learning, value of learning, learning process, learning preference)
 2. *Achievements in Learning* (transcripts, course descriptions, resumes, honors, awards, internships, tutoring)
 3. *Evidence of Learning, or Outcomes* (research papers, critical essays, field experience logs, creative displays/performances, data/spreadsheet analyses, course Listserv entries, lab reports)
 4. *Assessment of Learning* (instructor feedback, course test scores, exit/board exams, lab/data reviews, research project results, practicum reports)
 5. *Relevance of Learning* (practical applications, leadership experiences, relation of learning to personal and professional domains, ethical/moral growth, affiliations, hobbies, volunteering, affective value of learning)
 6. *Learning Goals* (plans to enhance, connect, and apply learning; response to feedback; career ambitions)
 7. *Appendices* (selected documentation)
- Zubizaretta (2009) 22.

The key ingredient to use throughout your portfolio is reflection. Rather than simply gathering together a series of exams, assignments, and papers, you should use the portfolio to understand better, not only what you've learned, but also how and why

you learned it. In what way did your learning in college cause you to grow intellectually, professionally, and personally? Where did certain educational processes force you out of your comfort zone, and what did you take away from those experiences? How does your learning reflect your personal values or cause your personal values to change?

A slightly different form of the learning portfolio is the *learning journal*. You can think of a learning journal as a diary or log in which you record your intellectual progress. What did you learn today? What issues confuse you or seem to



occupy your thoughts today? What topics do you hope to make progress on in the near future? **Jennifer Moon**, a researcher into learning at Bournemouth University in England, describes the value of a learning journal as follows.

Writing a journal enables a learner to go back over material that she has learned and expand the ideas or the linkages between ideas in relation to the original learning, explore internal experience (the sum of prior experiences), the way in which external experience relates to internal experience, how the 'meaning' of an event or an object to one person is related to that meaning for the writer — and so on. ... While in formal writing such as an essay, the 'track' of the flow of meaning through the text is within strict boundaries; in a journal there is freedom to explore. Moon (2006) 24.

Certainly your notes, no matter whether you take them on paper or a laptop computer, allow you to review material that you've learned. But in a learning journal, we can be more reflective about what we're finding easy, what we're finding challenging, and where we need to place greater emphasis. Since you're writing your learning journal

for yourself, not your professor, you can be as candid and free in format as you like. The journal is, after all, purely a formative, not a summative document. Moon also says that a learning journal can have six important benefits for students, namely it ...

1. slows the pace of learning
2. can increase the sense of ownership of learning
3. acknowledges the role of emotion in learning
4. give learners an experience of dealing with ill-structured material of learning
5. encourages metacognition (learning about one's own process of learning)
6. enhances learning through the process of writing Moon (2006) 26.

It's easy to understand the value of taking ownership of the learning process, learning more about how we learn well, and improving our writing through frequent practice. But the other three benefits may initially seem strange. What good does it do us to *slow* the pace of our learning, clutter our rational analysis of academic issues by bringing emotion into the picture, and experience the "ill-structured material of learning"? Moon argues that, when we learn things too quickly, we don't sufficiently engage in reflection. We start moving on to the next challenge before we've fully examined everything there is to understand about the *current* challenge. By intentionally slowing down the learning process we discover more about the material — and ourselves — than we do when we breeze through an assignment without being challenged. Similarly, when we focus on the *results* of a learning process too exclusively, such as gathering data from an experiment or getting an A in a course, we under-nourish the emotional dimension that should accompany the learning process. Learning should make us *happy*, but we don't have a chance to enjoy the fruits of our labors if we're always rushing towards getting a diploma, acceptance into graduate school, and landing a job.

As a means of communicating with yourself, a learning journal can help you explore what you like, what you don't like, and why you have these reactions. Moreover, if you look back at your learning journal a number of years later, you may be surprised to find that one of your greatest joys in life is something that you initially didn't care for very much. That process of growth and development is part of learning, too. And when we record painful educational experiences in our journals, the

systematic process of writing these issues down and working through them can make them less painful, underscoring for us how even unpleasant situations can be useful learning experiences. Finally, the “ill-structured” nature of the learning journal provides important insight into how learning occurs. Unlike a formal paper, ideas in learning journals are usually set down in no particular order, just as we happen to think of them. That’s actually much closer to how our thoughts progress than the structure imposed on a research paper or thesis. Learning frequently consists of false starts, blind alleys, and sudden leaps of insight. It’s often only after this fairly “messy” process has occurred that we *impose* order on our arguments and make a logical progression from Point A to Point B to Point C. By using the learning journal to become more comfortable with the “ill-structured” nature of our learning process — and by seeing the benefit that can arise out of seemingly disordered and disorganized thoughts — we can understand better how we develop our most innovative ideas and find a reason to be patient when the perfect answer doesn’t come to us right away.

Learning from Unpleasant Experiences: The Case of Sexual Harassment

As we’ve seen, it’s possible to learn and grow even from the unpleasant experiences in our lives. In fact, it’s those unpleasant experiences that frequently become our most important learning opportunities. Yet it’s also important to understand how to deal with challenges and unpleasant encounters while they’re still taking place. As an example of how we can learn to do so, we’ll turn next to one of the most unpleasant encounters that can happen in any social situation, including colleges and universities, is **sexual harassment**. The type of sexual harassment we usually think of when we first hear this term is called ***quid pro quo* harassment**. *Quid pro quo* is a Latin expression that can mean “What in return for what?” or “Something in return for something (else),” depending on its context. In this type of sexual harassment, a person either offers another person a benefit that is contingent on agreeing to sexual activity or threatens to retaliate in some manner if the other person does *not* agree to the sexual proposition. But there’s also another type of sexual harassment that’s often called **hostile environment harassment**, which occurs when someone’s use of sexual language, images, or gestures has a seriously negative effect on a person’s ability to

learn or work properly. For this reason, sexual harassment may involve, not merely overt and unwelcome sexual advances, but a wide range of actions and words that bring an undesirable and unnecessary sexual dimension to an environment. In the workplace, for instance, colleagues who post sexual images where others may see them could be accused of sexual harassment, even if they never make the slightest sexual overture to a coworker. Similarly, an employee who made unwelcome remarks of a sexual nature about a co-worker's appearance could be accused of sexual harassment, even if the words spoken could not reasonably be taken as a sexual advance. In an academic environment, this policy has to be interpreted in light of the individual context. As we'll see later, the very same words and images that would constitute sexual harassment in one course may well be perfectly appropriate in another, depending on the material that is being studied and the specific academic objectives of the instructor.

If you believe that you have been subject to behavior that constitutes sexual harassment, consult your school's policies in order to learn your rights and the remedies that are available to you. Although these policies differ significantly from one school to another, several common principles apply.

- **If at all possible, state clearly to the person who is causing the problem that his or her behavior is unwelcome to you and that it must stop.** You may find it very difficult to take this action if the person involved is a faculty member or someone else in a supervisory position at your school. Being unable to state that the behavior is unwelcome will usually not preclude you from taking other steps, but doing so can make those other processes easier. It means that you have been perfectly clear about your unwillingness to participate in activities that you find objectionable.
- **Contact the individual assigned to receive allegations of sexual harassment at your school.** Most institutions designate someone or some office as the point of first contact for an accusation of sexual harassment. At your college or university, that contact may be the office of the ombudsman, Equal Opportunity Programs, student life, or human resources. At some schools, you will have a choice of several individuals with whom to discuss your allegation,

in case you feel more comfortable talking to a man rather than a woman or vice versa. Most schools prefer charges of sexual harassment to be made in writing, although your school's policies may require that any credible accusation be investigated, even if you made your claim orally and you yourself do not wish to pursue it any further. While, if you request it, institutions will do what they can to protect your identity for as long as possible, the very nature of sexual harassment issues makes it all but impossible for your identity to remain concealed for the entire procedure. The right of due process allows the accused party to know and challenge the evidence of his or her accuser. So, the more serious a charge becomes, the less likely it will be that your identity can be concealed for very long.

Because of the extremely damaging publicity that can result from tolerating instances of sexual harassment, most colleges and universities will investigate these charges very aggressively. As we've seen, **some schools have policies that require *all* allegations of sexual harassment to be investigated, even if no formal complaint is filed.** For this reason, be aware that, if you confide an accusation of sexual harassment to a faculty member or staff, that person may be obliged to report your accusation to his or her supervisor. In cases where no explicit evidence of wrongdoing may be found, the institution may be limited in terms of what action it can take, unless similar incidents in the past suggest that there has been an established pattern of behavior. (Acts of sexual harassment rarely occur in isolation.) As difficult as it can be for victims of sexual harassment to accept at times, each accused person must be accorded all the rights permitted by law, the Constitution, and the policies of the institution. Cases of sexual harassment that involve private conversations can thus be particularly difficult for schools to resolve to anyone's satisfaction.

When it's obvious that you're confronted with an instance of sexual harassment, it's important to respond in the way outlined above. But frequently in higher education, situations arise when it's not altogether clear whether actual harassment is occurring. It's in these situations that your ability to think critically will be of particular importance. For instance, how should you respond if a professor uses materials in the classroom that make you uncomfortable because they involve explicit

depictions of sexual activity? All students have a right not to be placed in a hostile environment because of exposure to material of an overtly sexual nature, but that right really only comes into play **when the material is not relevant to the topic of the course**. If, on the other hand, the material may be considered closely related to the subject of the class, the professor has the right of **academic freedom** to introduce that content to the class.



To understand how this right works, let's consider several examples. Is a student right to be concerned or offended if a faculty member repeatedly shows images of naked men and women in class? That question cannot be answered without **context**. For instance, if the course is an advanced class in urology and gynecology, then any reasonable person would conclude that those images are directly relevant to the material that the students are studying. Similarly, if the course involves the study of world art, it's highly likely that the images are relevant to what the students are expected to learn. But what if the images are shown in an English literature class? In this case, the material may or may not be appropriate, depending on many different factors. Perhaps the instructor was trying to convey important insights into the cultural milieu that influenced the works being studied. Perhaps the images were part

of the author's own collection and added a vital dimension to the author's aesthetic principles. We can't immediately conclude that a particular set of material causes a hostile environment for students unless we explore *why* the professor introduced the material, the attitude that the professor conveyed about the material during its presentation, and the specific pedagogical goals that were being addressed.

Similar cases can be made for exposure to violent images in the classroom. Violence is often highly relevant to the topics discussed in college-level courses. The *Iliad* presents violent images. So does *Macbeth*. So does Picasso's *Guernica*. Unless we know the specific context in which a class is exposed to violent images, it's impossible to say whether they are appropriate to the faculty member's educational purpose in that course. For this reason, if you're disturbed by an instructor's use of sexual or violent material, discuss your concerns with your TA or professor. Try to understand the educational reasons why that material or those images were selected. In certain very rare instances, students may find that, even after seriously considering the instructor's explanation, they're so upset by the course material that they can't complete a course requirement. If that occurs, ask whether a substitute assignment may be possible in light of your individual situation. Keep in mind, however, that if the instructor agrees to provide you with alternative work, you may be depriving yourself of a significant opportunity to grow and learn. As we've already seen, **our greatest insights frequently arise in environments where we are the least comfortable**. Moreover, your instructor is perfectly free to decline your request for a substitute assignment if he or she believes that the material is *essential* to the objectives of the course. Think of the situation as parallel to a doctor who refuses to prescribe an alternative therapy for you: Ultimately, in a profession/client relationship (on this term, see Unit One), you have to rely on the professional judgment of the person who is treating you. If you feel that you can't accept that professional judgment, you're free to go elsewhere, but you are not free to insist that the professional alter his or her judgment. You may always ask but, in the end, that person's judgment must be respected as long as you work with that particular doctor or professor.

EXERCISES

1. Write a brief paragraph describing the best learning experience you ever had. What made it so memorable? Were there aspects of that experience you wish could be applied to all your college courses, regardless of their subject?
2. Identify an academic field or an area of personal interest that you find particularly fascinating. Is there any correlation between this subject and your individual learning preference(s)? Does the subject have any correlation with the philosophy of learning you developed in the last unit? Do you believe that your interest in this subject shaped your learning preference(s) and philosophy, or is it more likely to have been the other way around?
3. Based on your own interests in college and life, record one of your most important **aspirations** as this word was defined in this unit. Then use that aspiration to set a major **target** for the next five to ten years. Finally, set an **objective** that could get you closer to attaining that target.
4. Analyze the target and objective you just developed in light of the SMART Goals approach. Is there any way these goals can be rephrased so as to make them more effective?
5. For two weeks, adopt the practice of jotting down each evening three good things that happened that day and why they were good. Do you notice any effect on your mood or outlook after engaging in this reflective practice for two weeks?
6. For two weeks, keep a learning journal. At the end of each day, take just five to ten minutes to write down one thing you learned that day, one question or issue that you found puzzling, and one learning strategy or study technique you used that day. It may well seem to be a bother to set aside the time to keep this journal for two weeks, but at the end of the experiment see whether you don't feel that you learned more during the time you kept the journal than in most other two-week periods.
7. Analyzing each of the following statements critically, identify whether that statement **A) probably constitutes sexual harassment**, **B) probably does not constitute sexual harassment**, or **C) depends on the circumstance**.

- _____ 1. A male professor promises a female student an “A” in his course if she’ll have sex with him.
- _____ 2. In class, a professor uses a term for the female sexual organs that is widely regarded as crude and objectionable.
- _____ 3. A female professor says to a male student, “We need to talk about your project in detail sometime when we won’t be interrupted. Say ... my kids and husband are going to be out of town this weekend. Could you come over to my house on Saturday?”
- _____ 4. A professor tells a group of students at the end of class, “This has been a great discussion. Do you want to continue it over a drink or coffee somewhere?”
- _____ 5. A male professor calls on a female student in class by saying, “Do you have a question, gorgeous? Yeah, sweetie, I’m talking to you, the one with the tight t-shirt in the third row.”
- _____ 6. At a social gathering, a professor tells an obscene joke when students are present.
- _____ 7. A female student remains after class to ask a question, and her female professor makes her feel uncomfortable by standing closer than the student would like.
- _____ 8. A female student goes to the office of a male professor, closes the door, and addresses him in a suggestive and provocative manner.
- _____ 9. During a PowerPoint presentation, an accounting professor includes an image of a naked woman and says, “I just wanted to see if you were paying attention.”
- _____ 10. A professor writes on a student’s paper the comment: “You need to sit in the front row more often.”
- _____ 11. A professor tells one individual student at the end of class, “This has been a great discussion. Do you want to continue it over a drink or coffee somewhere?”

- _____ 12. At a bar, a female professor makes a suggestive remark to a young man that she doesn't know is a student at her college.
- _____ 13. Two unmarried professors have sex in one of their offices.
- _____ 14. A male professor says to a female student, "We need to talk about your project in detail sometime when we won't be interrupted. Say ... my wife and kids are going to be out of town this weekend. Could you come over to my house on Saturday?"
- _____ 15. In a course on ancient Greek art and archaeology, an art history professor shows students a picture of a fifth century vase that contains an explicitly sexual image.
8. Suppose you had a friend who was highly visual in his or her learning preference. What type(s) of graph could you use to illustrate the information contained in the table on page 15 (i.e., the percentage of students who described various issues as important to them) so that it would be easier to visualize?

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RESOURCES

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Unit Three:

Conducting Original Research

Learning Objectives:

1. To explore what research means, particularly at the undergraduate level.
2. To distinguish between acquiring and creating knowledge.
3. To become familiar with quantitative research and learn some of the situations in which its usage is appropriate.
4. To become familiar with qualitative research and learn some of the situations in which its usage it is appropriate.
5. To learn what is meant by proper research protocols and why they're important.

The Nature of Research

When we hear the word “research,” we commonly think of the scientist working in a lab, the archaeologist working at a dig, or the economist running statistical tests on large bodies of data. All those examples are certainly valid forms of research, but the research conducted at a college or university includes many other types as well. In 1990, **Ernest L. Boyer** (1928-1995), Chancellor of the State University of New York and President of the Carnegie Foundation for the Advancement of Teaching, suggested that the type of research typically conducted in higher education can be divided into four categories.

1. The **scholarship of discovery**, Boyer said, lies “closest to what is meant when academics speak of ‘research.’ No tenets in the academy are held in higher regard than the commitment to knowledge for its own sake, to freedom of inquiry and to following, in a disciplined fashion, an investigation wherever it may lead.” Boyer (1990) 17. As we’ll see in the next section, however, even the scholarship of discovery may be divided into two distinct types: detecting a truth that has always existed but that has not yet been uncovered; and creating something new that the world is experiencing for the very first time.

2. The **scholarship of integration** involves “making connections across the disciplines, placing the specialties in larger context, illuminating data in a revealing way, often educating non-specialists, too. ... The scholarship of integration also means interpretation, fitting one’s own research – or the research of others – into larger intellectual patterns.” Boyer (1990) 18, 19. You may encounter the scholarship of integration if you take an interdisciplinary course, such as a class that examines poverty from its social, economic, and political dimensions while also exploring how poverty is commonly depicted in art and literature. In fact, we can divide the scholarship of integration into three similar but distinct forms. Truly **interdisciplinary approaches** are those that combine the methods and perspectives of two or more disciplines to create a genuine synthesis. Thus, **art history** is by its very nature an interdisciplinary pursuit since it fuses the aesthetic criticism of the fine arts with the identification of chronological patterns of cause and effect that fall within the domain of history. **Transdisciplinary approaches** are those that use the sources of information and scholarly methods commonly found in one discipline to bring new light to the sources of information most commonly found in another discipline. For instance, building a historical theory on the basis of perspectives gained from poems or films is an example of a transdisciplinary approach, as is performing a statistical analysis on the novels of various authors in an attempt to quantify aspects of their literary styles. **Multidisciplinary approaches** are those that incorporate the techniques and material of several different disciplines simultaneously but make no attempt to synthesize them in any meaningful way. For instance, a volume that explores the art and economics of ancient China may be considered multidisciplinary if it includes both of these topics but doesn’t attempt to relate them to each other.
3. The **scholarship of application** is also commonly known as “applied research.” “New intellectual understandings can arise out of the very act of application – whether in medical diagnosis, serving clients in psychotherapy, shaping public policy, creating an architectural design, or working with the public schools. In

activities such as these, theory and practice vitally interact, and one renews the other.” Boyer (1990) 23.

4. The **scholarship of teaching** involves not merely instruction itself but also research into new pedagogical approaches and the development of strategies that lead to student success in both mastering disciplines and conducting their own research. “Teaching, at its best, means not only transmitting knowledge, but *transforming* and *extending* it as well.” Boyer (1990) 24.

Following Boyer’s introduction of this new model of research in his book *Scholarship Reconsidered*, many other authors have tried to build on this framework. For example, **Raoul Arreola**, a professor and administrator at the University of Tennessee Health Science Center, adds three additional types of research to Boyer’s original four.

5. The **scholarship of proficiency** involves keeping up to date with the research of others and the latest modes of thought in one’s field.
6. The **scholarship of dissemination** involves publication, presentation, and the explanation of research findings to experts and non-experts alike.
7. The **scholarship of translation** involves “translating research findings into new products, services, or artistic expressions of benefit to either the professional or the larger general society.” Arreola (2007) 27.

Yet even these seven forms do not embrace all the diversity that’s possible in academic research. We might also include the following categories.

8. The **scholarship of creativity** is probably most familiar in the fine and performing arts. For instance, a composer does not “discover” a sonata; he or she creates it. A poet does not “discover” a poem; he or she brings it into being. But originality and innovation appear in all other disciplines as well. The holder of a patent, the entrepreneur who develops an important new business opportunity, and the mathematician who’s responsible for an elegant theorem all have created something entirely new; they haven’t merely discovered something that already existed.
9. The **scholarship of experience** is demonstrated by internships, study abroad experiences, cooperative programs between universities and industry, and community-based learning opportunities. The results derived from the

scholarship of experience can be disseminated through traditional, peer-reviewed publications, such as books and articles, but there's also an essential part of research that occurs during the experience itself. The student who's immersed in another culture while spending a year in a study abroad program is performing research both by promoting cross-cultural awareness and by becoming intimately acquainted with another society and its values.

10. The **scholarship of service** falls somewhere between what Boyer termed the scholarship of application and what we have termed the scholarship of experience. Community service learning occurs commonly at colleges and universities. Yet there's also an important difference between service and service *learning*: Service occurs when you apply a skill you already have; service learning occurs when there's a meaningful development of new concepts, perspectives, or modes of understanding that results from the service contribution. A student who engages in service seeks to help others; a student who engages in service learning seeks to be transformed in some significant way through the experience of helping others. For example, if you clear trash from a nearby park, that's service; if, after clearing the trash, you study best practices adopted by other parks to reduce the amount of litter, examine the impact litter has had on the park's environment, and prepare a report that the park's administration can use to improve its procedures, that's service *learning*. We'll discuss this type of research further in Unit Eleven. But for the moment you should know that service learning has also been referred to by Kelly Ward, who teaches in the Department of Educational Leadership & Counseling Psychology at Washington State University, as "the **scholarship of engagement**." See Ward (2003). See also O'Meara (2002) 57-80.

You may be able to add several other types of research to this list as well. The important thing to understand is that what most schools call "research" is actually just an abbreviated way of saying "scholarship, research, and creative activities" or of encapsulating all ten types of research we've just considered. Some of these types will be more suitable for certain disciplines than others, but you're likely to encounter most, if not all, of these forms at some point during your college career.

When you're choosing a topic for a research project, there are three tests you should always apply to make sure your topic is appropriate.

The issue you're exploring should be *able* to be answered.

“What was the nature of every conceivable alternate universe that could have existed before the Big Bang?” can be an interesting topic of speculation but it's ultimately an impossible question to answer. For this reason, this sort of question is inappropriate as an undergraduate research topic. In a similar manner, it's impossible to answer a question like “What is the cure for cancer?” because the term “cancer” embraces a large variety of conditions that are highly unlikely to respond to a single treatment.

The issue you're exploring should be able to be addressed *by an undergraduate*.

It's possible that the language written in the Cretan script known as Linear A will someday be deciphered. But because of the many false starts already made in this area and the amount of linguistic knowledge that would be required in order to decipher this script, it's highly unlikely that the question “What do the Linear A tablets say?” will one day be answered by an undergraduate

student. In a similar manner, developing a comprehensive plan to address climate change is not beyond the range of human achievement, but it's such a complex issue that addressing it in an undergraduate thesis is probably not going to be successful.

The issue you're exploring should be able to be addressed by an undergraduate with the resources available to you.

Certain topics can only be addressed if you have command of certain languages, access to certain documents, or the right to use certain kinds of equipment. You don't want to attempt to do research on a topic that would require you to have extensive access to a scanning electron microscope, particle collider, or high-field nuclear magnetic resonance (NMR) spectrometer, if your institution does not possess this piece of equipment or restricts its use to graduate students.

Once you find a suitable topic, you'll need to begin investigating it in a suitable way. For most undergraduate research, suitable investigation will involve exploring your topic in one of three ways.

1. A **hypothesis** is a conjecture that's capable of being disproved. While certain hypotheses are impossible to *prove* (because you can't test every single person or animal who ever existed or because you can't experience every possible scenario that could ever occur), it must always be possible to demonstrate

conclusively whether a given hypothesis is incorrect. Suppose you're taking a course in ancient history and wish to conduct some research. A suitable hypothesis might be: *Although Egyptian citizens frequently addressed appeals and petitions to the Roman prefect during the second and third centuries CE, these cases were always handled by lower-level bureaucrats who acted on the prefect's behalf.* In this example, if you can uncover a single instance of a prefect who handled an appeal or petition himself without referring it to a subordinate, the hypothesis would be invalid. You could conduct your research by searching translations of the documents called **the Oxyrhynchus Papyri** (provided that translations of them are readily available in your university's library or through interlibrary loan) and examine the evidence for which officials respond to appeals and petitions. If you never find a single case of a prefect handling the matter alone, that doesn't *prove* your hypothesis, since not all the evidence has survived, and it's possible that our surviving fragments are atypical.

Key Principle

Absence of evidence is not evidence of absence. (This principle is often attributed to the astronomer Carl Sagan, 1934-1996.)

But since the statement you're investigating could be *disproved*, it's a hypothesis.

A hypothesis should always be able to be rephrased in one of the following forms: *If this happens, then that happens* or *When this occurs, then that occurs.*

2. A **model** is a conjecture that accords reasonably well with the facts as they are currently known but that can never decisively be proved or disproved; the conjecture can only be declared more or less likely. In our imaginary ancient history course, you might conduct research around the following model: *The later one goes in the second and third centuries CE, the more likely it is that appeals and petitions addressed to the Roman prefect will be handled by lower-level bureaucrats who acted on the prefect's behalf.* In this case, you could once again go through the Oxyrhynchus Papyri to record instances of appeals or petitions, their dates, and which officer dealt with the request. By plotting the data and drawing a **trend line** or conducting a **linear regression**, you can determine whether your

model seems to adhere to the facts as well as they can be determined. Unlike the situation we encountered when we were considering the hypothesis, a single instance of a prefect handling the matter himself cannot disprove the model. Rather, the model deals only with general *patterns* and *probabilities* instead of clear-cut, yes/no statements. **A model should always be able to be rephrased in one of the following forms: *If this happens, then that becomes more likely or When this occurs, then the probability of that increases.***

3. Asking an **open-ended question** is appropriate when the type of research you're conducting doesn't lend itself to the testing of a hypothesis or the construction of a model. Perhaps it's difficult to structure your conjecture in a yes/no format because there are multiple possible answers. Perhaps the information available is too limited to generate a clear enough model. Perhaps you're less interested in testing an assumption than in obtaining information upon which to *base* an assumption after you conduct further studies. In situations like these, you can ask a more general, open-ended question as long as you have reason to believe that it can be answered from the evidence you have available to you. In our imaginary class, your open-ended question might be: *Although Egyptian citizens frequently addressed appeals and petitions to the Roman prefect during the second and third centuries C.E., which offices and bureaucrats actually responded to these cases?* Once again, you would examine the translations available to you in an attempt to identify the range of officials who dealt with these matters, even though you're not trying to test a hypothesis or determine whether a model adheres sufficiently to the known facts. **An open-ended question should always be able to be rephrased in one of the following forms: *If this happens, then what happens? or When this occurs, what is the result?***

Being Intentional

As you consider the path that you're likely to take in college, what are the areas in which you're interested in performing research? Even if you don't yet know your major, think of areas of study that interest you and explore the types of research projects that are performed in that discipline. Develop at least one hypothesis,

model, and open-ended question that you might like to investigate someday. Do each of the three statements you develop adhere to the requirements mentioned in this unit? In other words, can your research topics be addressed by an undergraduate with the resources available to you? If not, how could you revise your hypothesis, model, and thesis so that they meet these requirements? Then consider what steps you'll need to take in order to be able to perform that study before you graduate. Which courses will you need to take? Which skills will you need to develop?

Acquiring Knowledge versus Creating Knowledge

We saw earlier that certain types of research involve discovering something that was always true but unknown up until now, while others involve innovation that produces something that has never existed or been true before. In 1898, **Pierre (1859-1906) and Marie (1867-1934) Curie** isolated an as-yet undiscovered element and an as-yet unidentified natural property. The element (**polonium**) and the property (**radioactivity**) had always existed; they had simply not been discovered before. The Curies' research differed significantly from that of a team led by **Albert Ghiorso** at University of California's Lawrence Berkeley National Laboratory, which synthesized the element **lawrencium** in 1961. Until the work of that research team, lawrencium had never existed and did not occur naturally in the universe. It didn't exist, therefore, until it was "discovered." The Curies' research was discovery; the Berkeley team's was innovation. Although rare, it sometimes even occurs that what was once believed to be innovation turns out to be discovery after all. For example, the first element to be synthesized in a laboratory, **technetium**, was later found to exist in nature in trace quantities. So, while there is some degree of permeability between the terms "discovery" and "innovation," this distinction is useful when you're seeking to clarify the type of research you're hoping to conduct.

Generally in western societies, people tend to think of natural and social scientists as discovering existing truths, while engineers and artists are seen as creating something entirely new. The western view of science, in other words, is that the

universe operates under a fixed set of principles, which scientists gradually discover by formulating and testing new hypotheses.

People were using the law of gravity before Newton discovered it. ... People were using the law of noncontradiction before Aristotle formulated it. One cannot create or make laws of nature or logic, ... but new applications of them to produce specific results is another matter. When Alexander Graham Bell invented the telephone, he did not create new scientific laws. Instead, he arranged matter so that the laws produced a new result. Similarly, computer programmers do not create new logical laws, but they use them in a way to create a new process and result. Bayles (1987) 98.

Nevertheless, in 1962, the historian and philosopher of science **Thomas Kuhn** (1922-1996) published *The Structure of Scientific Revolutions*, a work that suggested this common view of science is deeply flawed. For one thing, Kuhn argued that western science doesn't develop as a continuous series of new discoveries, each building on previous discoveries in a systematic or straightforward manner. Rather Kuhn suggested that our view of the universe develops through a series of **scientific revolutions** in which a model for how the physical universe operates explains the known facts adequately for some time, accrues more and more observations that can't be explained by the model, and then is suddenly swept away by a new, more satisfactory model. Kuhn referred to this process of radically substituting one interpretation of data for another as a **paradigm shift**. As an example, several paradigm shifts that occurred in the field of physics are illustrated by the diagram included as **Table 3.1**.

Kuhn distinguished between the way in which paradigm shifts occur in the natural sciences and the expectations of multiple simultaneous paradigms that exist in other fields. When a valid new paradigm appears in natural science (for example, when **Antoine-Laurent de Lavoisier** proposed a chemical theory of combustion in opposition to the existing view that inflammable objects contained a fire-producing element known as **phlogiston**), it replaced the old paradigm entirely. No reputable physician today rejects the **germ theory** of disease, and no reputable astronomer continues to describe the heavens using **Ptolemaic principles**. But something quite different occurs in other disciplines. In the social sciences, competing paradigms can

continue for a very long time. **Behaviorism** is still studied in psychology even as other highly regarded academics pursue different approaches, such as **positive psychology**. In the humanities, competing paradigms can co-exist *indefinitely*. Some literary theorist may be **structuralists**, while others are **deconstructionists**, and still others are **Marxists**. In the humanities, having numerous paradigms compete simultaneously is considered a strength; multiple perspectives, it is argued, produce greater understanding of complex human creations. In the natural sciences, having numerous paradigms compete simultaneously is considered a weakness; it simply means that there currently is insufficient data to select the “right” paradigm over the “wrong” one. Another way of expressing this idea is to say that, in the humanities, competing paradigms *create understanding*; in the natural sciences, competing paradigms exist only until the superiority of one model over another is *discovered*.



So, at least, do many scholars view the matter. Others, however, have drawn very different conclusions from Kuhn’s work. Since scientific paradigms are a matter of *acceptance* by a specific culture (for instance, research scientists in industrially developed countries), some have argued that competing scientific paradigms are *equally valid* as long as members of the local culture believe that these paradigms adequately explain their experience. Kuhn himself rejected this type of **scientific relativism**: the belief that one can never speak about any **absolute truth** about the physical universe since human understanding of experience is necessarily subjective, based on one’s

ability to perceive, intellectual point of view, and cultural perspective. Scientific relativism is thus closely related to **moral relativism** (the belief that absolute standards of good and evil don't exist), **historical relativism** (the belief that the truth about the past can never completely be known since "history" changes according to who's telling the story), and **cultural relativism** (the belief that no society's practices are better than any others; they're just different). Although scientific relativism initially strikes many people as a very peculiar concept, it does have its own internal logic: Since, as Kuhn argued, a statement about reality is only deemed true or false according to the model advanced by a widely accepted paradigm, if the paradigm changes — or if a culture accepts a different paradigm — then for these observers the "truth" changes. As the philosopher **Friedrich Nietzsche** (1844-1900) wrote many times in his journal, *Es gibt keine Wahrheit, nur Interpretationen*. ("There are no facts, only interpretations.") Science, the argument continues, can never really explain the universe; it can only propose models that, over time, account for more and more of the phenomena that people observe. In this way, the relativists conclude that all knowledge is created, not discovered, even in the natural sciences.

About two hundred years ago, the idea that truth was made rather than found began to take hold of the imagination of Europe. ... We need to make a distinction between the claim that the world is out there and the claim that the truth is out there. To say that the world is out there, that it is not our creation, is to say, with common sense, that most things in space and time are the effects of causes which do not include human mental states. To say that truth is not out there is simply to say that where there are no sentences there is no truth, that sentences are elements of human languages, and that human languages are human creations. ... Truth cannot be out there — cannot exist independently of the human mind — because sentences cannot so exist, or be out there. The world is out there, but descriptions of the world are not. Only descriptions of the world can be true or false. The world on its own — unaided by the describing activities of human beings — cannot. Rorty (1989) 3, 4-5.

Being Imaginative

In George Orwell's novel *Nineteen Eighty-Four*, the protagonist, Winston Smith, works for a government entity known as the Ministry of Truth. His job is to go back through news articles and "correct" them if the head of the government ("Big Brother") is quoted as making a promise that was not kept or a statement that

turned out to be inaccurate. For example, if Big Brother had said that people would receive a chocolate ration of thirty grams each but only twenty grams per person could be provided, Smith would “correct” all of Big Brother’s speeches so that he was reported as promising only the lower amount. In this way, the government had the power to “change the past.”

Imagine that you are updating *Nineteen Eighty-Four*, creating a work you’re going to call *Twenty Eighty-Four*, which depicts the world as having experienced another century of technological progress. Workers at the Ministry of Truth now have the ability to alter *natural* laws simply by “correcting” them. For instance, if Big Brother’s successor, Big Sister, decides to repeal the law of gravity, in the year 2084 it’s now possible to do so. In your hypothetical novel, movie, or television series, which natural laws would the ruler decide to revoke? Why? What might be the result?

In your college education, you may well encounter strong positions on either side of the issue described by Bayles and Rorty above. You may, for instance, come across ardent **absolutists** in your natural science courses, but meet equally ardent **relativists** in your history, anthropology, or philosophy courses. The goal of this unit isn’t to persuade you that one of these positions is right and the other wrong — just as this course will never try to persuade you of the validity of structuralism, deconstructionism, Marxism, or any other theoretical construct — but rather to prepare you for one of the most important aspects of education at a modern college or university: Different disciplines, different courses, and different professors will all teach you using substantially different paradigms. In your own studies (and particularly in your own research), you will need to identify and then define for others the precise paradigm in which you’re operating and drawing inferences about the truth. Only then will others understand whether you see yourself as having discovered an existing truth or having created an entirely new principle.

No matter whether you’re testing a hypothesis, constructing a model, or asking an open-ended question, the conjecture or ideas you’re exploring should reflect a single paradigm, a consistent theory about how the world works; it shouldn’t just be random

speculation. As Kuhn's work makes clear, unless you're proposing an entirely new paradigm (an accomplishment that doesn't often occur in undergraduate research), your investigation should be based on some aspect of a broad, theoretical view that's found within your discipline. For example, because of the theory that errors in the replication of DNA contribute to the development of cancer, you might propose a hypothesis that will involve a particular stage in DNA replication or that focuses on a particular type of cell in a particular type of animal. This type of investigation would be both sufficiently focused and related to a consistent theory about the relationship of DNA to cancer development. Or, if you were conducting research into Aeschylus' tragedy *The Eumenides*, you might explore whether a specific Athenian law appears to have influenced the values that the author assumes his audience to have. This investigation would be consistent with the common theory that Greek tragedy reflects the worldview and experience of the audience for whom it was performed. In other words, your investigation shouldn't be just a matter of "grasping at straws"; it should be based on an established theory about the world that's widely accepted within your discipline. While your hypothesis may certainly challenge *other* established paradigms, particularly in the humanities and social sciences, it needs to be grounded solidly in *some* comprehensive theory. Merely running a series of linear regressions on randomly selected variables to discover possible correlations rarely results in good research. Rather it can lead to results that are either **tautological** (i.e., meaningless because they are self-proving or redundant, such as "The leading cause of poverty is a lack of money.") or based on **false correlations** (such as common superstitions or some of the fallacies we'll explore in the next unit).

Notice that when we use the word *theory* with regard to research, we're using it in a rather different sense from the way in which it's used in day-to-day conversation. Many people will say things like "Oh, that's just a theory," meaning that the idea expressed is an untested or unproved hypothesis. But this usage is inappropriate when the context involves research conducted at a college or university. In higher education, a **theory** is *a well-established principle that accounts for all (or nearly all) of the data that are known* or, as we defined it in Unit One, *a self-consistent model of interpretation that makes sense out of disparate observations*. In other words, a theory incorporates one or

more hypotheses *after they've been thoroughly tested and found to fit the facts as they are known*. With regard to research, therefore, the term *theory* can incorporate concepts as diverse as the following.

Marxist Theory

The principle that most human decisions are ultimately economic in nature.

Real Business Cycle Theory

The principle that economic cycles are driven by major advances in technology and the availability of resources rather than by monetary policy.

Classical Conditioning Theory

The principle that subjects will respond in the same way to two stimuli if they've been exposed long enough to both of them in close proximity to one another.

Big Bang Theory

The principle that the universe resulted from a major explosion involving a very small volume of matter that had existed at extremely high density and temperature.

Expressionist Theory

The principle that artists attempt to evoke an emotional reaction rather than produce an accurate depiction of reality.

In this way, no matter which discipline you're studying, the concepts you're learning should operate within a self-consistent paradigm or theory, not just a random conjecture or "guess" about how the world works.

Quantitative Research

Quantitative research involves research methods that study *measurable* phenomena. Any research activity that produces numerical results involves some form of quantitative method, such as the interpretation of data through statistical techniques, using instruments to measure changes in empirical evidence, developing **mathematical models** to explain observations, and balancing equations. Quantitative research should be distinguished from **quantitative analysis**, which is a specific technique used in certain disciplines. For example, in chemistry, the term *quantitative analysis* is used to refer to the method of determining the relative abundance or concentration of some substance in a sample. Most people probably associate quantitative research with mathematics and the sciences, but it's an approach that can be used in any discipline. Earlier in this unit, there was a reference to the use of statistical analysis on literary works in order to identify particular aspects of the authors' styles. In a music theory course on form and analysis, determining the harmonic structure of a complex work often includes a quantitative examination of chords, chord progression, and counterpoint. It's even possible to use quantitative methods in the fine arts, determining chemical aspects of the paint and lacquer used by an artist, creating a mathematical model that isolates distinctive features of an artist's style, and measuring minute differences to distinguish forgeries from original works. In other words, while certain disciplines may *prefer* particular research methods because they've historically been fruitful, nearly any method of research can be applied to nearly any discipline. In fact, adopting the methods of another discipline is one of the ways in which academic fields grow and develop. The field of psychology, for instance, made great advances after the Second World War by adopting such research methods as controlled experimentation and statistical analysis from other sciences. The study of marketing evolves as it embraces scholarly practices that have proven useful in other fields. For example, concept testing and test marketing arose as modifications of the scientific method, while **segmentation research** (the study of how various subgroups in society respond differently to the same products and advertising campaigns) draws heavily from the research methods of sociology, psychology, and graphic design.

An important principle at the beginning of this unit was that a hypothesis should always be capable of being phrased in the format “If this happens, then that happens” or “When this occurs, then that occurs.” In quantitative research the “If ...” or “When ...” clause includes your **independent variable**: the factor you’ll be manipulating during your study. The “then” clause identifies your **dependent variable**: the changes you’ll be tracking as your independent variable shifts. Different disciplines use different symbols to represent these variables mathematically. The symbol x is almost always used to represent the independent variable. But in some disciplines, the dependent variable is represented as y , while in others it’s represented as $f(x)$, meaning that the dependent variable operates as a **function** of the independent variable. For instance, let’s suppose you want to explore whether there’s a correlation between the annual income of a household and the SAT or ACT scores of children who live in that household. For this study, annual household income will be your independent variable x , and SAT or ACT scores will be your dependent variable y or $f(x)$.



In some studies, you may want to determine whether the dependent variable has any meaningful relationship at all to the independent variable. One way of pursuing this line of inquiry would be to evaluate the independent variable in two data samples: one for which the independent variable is not significantly present (the **control group**), and one for which the independent variable is significantly present (the **experimental group**). Imagine that you're involved in a study about whether exposure to shocking images of violence has any effect on short-term memory. You might instruct two groups of people to memorize a random list of numbers, which they'll be asked to reproduce 90 minutes later. One group spends that 90 minutes being shown pictures of all kinds (the control group); the other group spends the same amount of time being shown one violent picture after another (the experimental group). You would then test the two groups on their ability to reconstruct the list of numbers you'd given them earlier, in order to determine whether there's any significant difference between the two groups.

In the research project just described, how could you adjust for the fact that individual ability to recall information varies widely?

When addressing highly complex topics, it can be tempting to develop a hypothesis that contains many different variables. For instance, perhaps younger female college-educated observers are more likely to recall the list of random numbers than older male high school dropouts. It's now quite possible to use computers to develop mathematical models that track as many variables as you like. But, at the undergraduate level, conducting a project with too many variables often results in poor research practices. Suppose you have a hypothesis that the factors responsible for how happy people describe themselves to be are income level, age, level of supervisory responsibility, amount of education, size of home, and model of car. There are certainly ways in which such a study can be conducted, but there are also many ways that can generate meaningless results. In general, the size of one's home and the type of car one drives are *themselves* reflective of one's income. Certainly, there are many exceptions to this pattern; we probably all know someone reasonably well off who prefers to drive an old clunker as well as someone of modest means for whom having a

nice car is a very high priority. But *overall*, if you examine the population, as income rises, people generally have larger homes and more expensive cars. In addition, people's income often rises with their age, level of supervisory responsibility, and amount of education. In other words, your independent variables *are not truly independent*; they're **codependent variables**, and they may cause you to see patterns as more pronounced than they actually are. Moreover, within the time frame possible at the undergraduate level, keeping track of multiple variables is extremely challenging and diffuses your effort, producing inconclusive results. So, unless you're specifically instructed otherwise by your professor or the director of your research project, if you find yourself tempted to pursue a hypothesis that involves a large number of variables, it's usually best to focus on the most promising one. A good rule of thumb is that, if someone asks you, "What are you trying to prove here?" and you're unable to answer the question in a sentence or two, you have probably not refined your hypothesis sufficiently.

Being Analytical

Critique each of the following claims.

- a. Three years ago, 27% of the executive positions in a specific sector of the economy were held by members of minority groups. Only two years later, this percentage had decreased to 26%. That change is clear evidence that our policy of increasing the number of minority executives in the workplace has failed.
- b. 39% of the patients taking the prescription drug Imaginaria died of congestive heart failure. That number is unacceptably high and thus Imaginaria should be banned from the marketplace. Moreover, Fictionox and Chimaerib are in the same class of medication as Imaginaria and thus should be banned as well.
- c. In a clinical study of four patients, only one of them developed elevated levels of lead in their blood by eating large quantities of imported kale. Therefore, imported kale should be regarded as safe for human consumption.
- d. Consistently over a fifty-year period, the IQ scores of people tested in Mythberg were an average of three points lower than those of people tested in

- Legendville. This study thus proves that the inhabitants of Legendville are smarter than people born in Mythberg.
- e. For the past century, the average income in the region of Sampletonia doubled every twenty years. That means that the income of any household in this area 100 years from now will be 64 times what it is today.

Finally, in most disciplines, your hypothesis in a quantitative research project should avoid value judgments. You will usually want to explore whether your hypothesis is *true*, and being objective in your interpretation of the data is much more difficult if you're morally convinced that it *should* be true. If you begin the process of collecting data with a preconception that a certain result is *good* or *beneficial* for society, you may see results that an objective person would reject as statistically insignificant. So, although it may be difficult, try not to develop a hypothesis out of the conviction that the world should function in some particular way or that *good people* should behave in a specific manner. It can be extremely disappointing for any hypothesis to be proven wrong, but this disappointment will be even greater if your hypothesis is drawn from one of your core beliefs. In the end, a negative result is far preferable to defending a premise that can't be confirmed or replicated by other scholars. Please notice, however, that this principle is true for *most* disciplines. There are certain fields — such as sociology, social work, and peace studies — that originated not only from a desire to learn more about the world, but also from a commitment to change the world. Your professor, mentor, or project advisor will be your best source of advice about whether or not any specific hypothesis is too value-driven. If you're ever in doubt, it's preferable to err on the side of maximum objectivity.

Qualitative Research

Qualitative research involves the interpretation of words, images, patterns, objects, and anything else that can't easily be quantified. Some of the most common examples of qualitative methods include literary analysis, artistic criticism, the identification of trends found in oral or written histories, philosophical speculation, and identifying historical or cultural influences in a text. Like quantitative research, qualitative

research tends to be associated with particular disciplines (such as literature, philosophy, history, art and music history, anthropology, and the like), even though it is found in every field. For instance, a great deal of research conducted in the natural sciences is quantitative in nature, but **Charles Darwin** (1809-1882) developed the theory of natural selection entirely through qualitative observations. Scientists who study animal behavior may draw conclusions from noticing repeated patterns of behavior, discovering unusual or isolated events, and reporting on the factors that lead to these irregularities. **Biogeographers**, researchers who study the distributions of organisms, may at times develop theories based on a single, extremely rare example of how a species came to occupy a specific environment. One particularly common type of qualitative research practiced in many different disciplines is the **longitudinal study**, an exploration of how phenomena may change over time.

Anytime you trace the development of an image in a work of literature or of a musical theme in a symphony, you're engaging in qualitative research. Although the patterns you notice may not be easily quantified, they have become sufficiently noticeable that you feel that they're significant and can't merely be attributed to random chance. Some people feel that all qualitative research is inherently subjective since it relies on an observer's experience rather than sets of data that can be reproduced and verified by objective observers. To reduce the likelihood of subjectivity, some researchers find it beneficial to test the **inter-rater reliability** of an approach: the degree to which different observers are likely to provide similar results. For example, if a researcher wished to study whether pre-kindergarten children became more or less agitated as time goes by after consuming a sugary snack, the rating instrument may be pilot-tested among many different observers to help determine how it could be improved in order to achieve greater consistency of results. In addition, **rubrics** are commonly developed for observers: a list of definitions and/or examples that interpret precisely what each individual rating is intended to mean. Another common practice is **triangulation**: the practice of using three or more independent observers, with averages being made of their individual results and extreme **outliers** (results that are highly atypical of others) being rejected.

At the undergraduate level, students are likely to encounter qualitative research in several of the following forms.

case study	A detailed account of one individual situation from which, it is hoped, examples may emerge that are relevant to the understanding of other individual situations.
ethnography	The systematic observation, description, and reporting of the practices common to a particular culture.
historical analysis	An interpretation of past events that places them within a broader context of cause and effect.
content analysis	The examination of recorded human communications with an attempt to clarify the impact made by such factors as the author's experience, the intended audience, the medium used to convey the text, and the context or subtext of the communication itself.
form criticism	The study of how a document — or a part of a document — adheres to a particular literary form, such as a parable, proverb, encomium, sonnet, epic, or coming-of-age story.
source criticism	The study of a document to identify the origins of the information that it contains.
hermeneutics or exegesis	The interpretation of written texts in accordance with a specific theory, belief, or set of principles.

Many other types of qualitative analysis also exist, and you should keep in mind that the definitions above are intended for general guidance only. In your actual courses, your professor or textbook may offer a different definition because of the focus or perspectives of that specific discipline.

Both quantitative and qualitative research may further subdivided into their primary and secondary forms. **Primary research** (also known as **independent research**) occurs when you apply the accepted scholarly methods of a discipline to a project and generate conclusions or results that haven't already been made by other researchers.

Secondary research

occurs when you review a number of studies performed by other scholars and either summarize or confirm their results. For instance, suppose you design a survey



instrument to determine whether there's a correlation between a student's high school grade point average and the number of hours he or she spends per week playing a particular video game. The result of your own investigation would be an example of primary or independent research. In this case, it will be important for you to report not only your results, but also the methods you used to obtain them and references to any previous studies that serve as foundations for your own work. This information will allow others to spot any flaws in your methodology, reproduce and verify your conclusions, or build new lines of research based on your discoveries.

But not all primary research has to be quantitative in nature. You're also engaging in primary research when you interpret a poem in a way that critics have not yet discussed, apply an approach to a problem that hasn't yet been adopted, develop an artist's statement that helps viewers understand your own creations, or compose an original work of music. Secondary research occurs when you replicate an experiment

that others have already conducted in order to verify their results, summarize the major approaches scholars have taken in interpreting a work of art or literature, or corroborate the findings of an earlier survey. In these instances, although you're still conducting research, your studies don't result in new or original results.

Being Innovative

Your First Year Experience in college provides you with a great deal of data or raw material for a study. If you were to conduct such a research project, the difficulty would be in focusing the topic sufficiently so that results are achievable and meaningful. How might you design such a study in each of the following areas?

- **THE FINE ARTS, such as drawing, painting, sculpture, pottery, graphic design, and animation.**
- **THE PERFORMING ARTS, such as music, dance, theater, and film.**
- **THE HUMANITIES, such as literature, language, history, philosophy, and religious studies.**
- **THE SOCIAL AND BEHAVIORAL SCIENCES, such as anthropology, sociology, political science, and psychology.**
- **THE NATURAL SCIENCES, such as biology, chemistry, physics, and the health sciences.**
- **THE PROFESSIONS, such as education, business, construction, and engineering.**

One form of secondary research that's very important for undergraduate students to master — particularly if they intend to continue their education in graduate or professional school — is the literature review. A **literature review** is a systematic examination of the discoveries previously made on the topic under consideration, the methods used to make those discoveries, and current thinking about how the topic relates to other findings and research. One useful way to conduct a literature review is to ask the following questions.

- What work related to this topic has been done by other scholars?

- What was missing from their work or different about their approach that makes a new study necessary?
- What previous conclusions or assumptions will my new study incorporate or take for granted?
- What earlier work will my new study challenge or attempt to disprove?

The literature review is a vital step before beginning any primary research because it demonstrates that you're not merely verifying a study that's already occurred and that you've mastered earlier findings relevant to your topic. One added advantage of conducting a literature review is that it can help you understand whether your topic is too broad or too narrow. For example, if you set out to discover which diseases shorten the lifespans of gopher tortoises, your literature review will illustrate just how vast this topic really is. You may then find yourself focusing on one particular respiratory disease found in a specific colony of gopher tortoises in southeastern Florida or possibly some clearly identifiable aspect of that disease. Your results are far more likely to be verifiable and meaningful if you focus your topic based on what you discover during your literature review. Many studies even conclude with suggestions about what future scholars can do in order to advance work on that topic. These suggestions can give you ideas for research topics you may never have generated yourself.

Following Appropriate Research Protocols

In order for the academic community and the wider public to have confidence in the accuracy of research, a number of **research protocols** (guidelines that indicate appropriate practices and procedures) have developed that affect every type of scholarly inquiry that is conducted at a university. The first goal of research protocols is to *maintain the integrity of research data and to allow other scholars to verify its reliability*. Here, for example, is a section from a protocol manual in use at the University of Pittsburgh.

Meticulous record-keeping is a sound scientific practice which provides an accurate contemporaneous account of observations that become a

permanent reference for the researcher, who otherwise might not remember several weeks, months, or years later exactly what had been observed or what methods had been used. An accurate record also serves others who may want to replicate the observation or to apply a method to other situations. In addition, it is an aid in allowing the eventual sharing of information with others and as documentation that might disprove any subsequent allegation of fabrication or falsification of data. In many fields of laboratory research, it is standard practice to record data in ink in an indexed permanently bound laboratory notebook with consecutively numbered pages. Research methods, including statistical treatments, should be either described in the notebook or referenced by citation to some other primary or secondary source. Information on materials used, along with their sources, should be recorded. Entries should not be erased or whited out. If mistakes are to be corrected, a thin line should be drawn through the erroneous entry so as not to obscure it and an initialed dated correction written separately, along with an explanatory note, near the original entry or in the margin. All entries or at least all pages of a notebook should be dated and initialed. Such records may also be important at a later date in establishing scientific priorities or intellectual property claims. *Guidelines for Responsible Conduct of Research*, Office of Research Integrity, University of Pittsburgh, 3-4. Retrieved from <http://www.provost.pitt.edu/documents/GUIDELINES%20FOR%20ETHICAL%20PRACTICES%20IN%20RESEARCH-FINALrevised2-March%202011.pdf>.

By recording “data in ink in an indexed permanently bound laboratory notebook with consecutively numbered pages” and by correcting mistakes by means of “a thin line ... drawn through the erroneous entry so as not to obscure it and an initialed dated correction written separately, along with an explanatory note,” it becomes much more difficult to falsify data. If observations were made in pencil, it would be much easier for an unscrupulous researcher to go back, erase data that didn’t fit his or her theory, and record fabricated data in their place. If the notebook were not permanently bound with consecutively numbered pages, it would not be difficult to remove data that the researcher found inconvenient (for instance, by ripping pages from a spiral notebook) or to insert falsified pages in their place (as might be possible in a ring binder). Dating and initialing entries makes it possible to know which researcher has been responsible for which observation, if there are numerous participants in the project; those who wish to challenge that particular entry will thus know who was responsible for making it and whom to contact.

In a similar way, research protocols frequently specify how long data should be

retained after a project is complete, whether it should be deposited into a larger databank or kept separate, and how the results of the project are to be shared with the public. In disciplines outside the sciences, research protocols are sometimes not outlined as specifically as the examples we've been considering, but they exist nonetheless. In some fields, researchers are expected to identify their **conceptual framework** — the intellectual basis, perspective, or theory that lies behind the assumptions made in the study — as well as the methods that will be used to collect and analyze data. For example, if an historian's conceptual framework were that the events having the greatest impact throughout history are usually those resulting from the choices of a few select but highly influential individuals (Thomas Carlyle: "The history of the world is but the biography of great men."), he or she will conduct research very differently than if that historian's conceptual framework were that the events having the greatest impact throughout history are usually those that result from conflicts and power differentials between economic or social classes (Karl Marx: "Society does not consist of individuals but expresses the sum of interrelations, the relations within which these individuals stand.")

How might an historian answer the following questions? "But why do you decide on your conceptual framework in advance? Why not simply look at the facts and decide whether Carlyle's or Marx's perspective is correct?"

In the fine and performing arts, the humanities, and certain applied or professional disciplines, it's not customary for researchers to state their conceptual frameworks explicitly, although these should always be clear to anyone who is studying the research. Artists and musicians will often reveal their fundamental perspectives in an **artist's statement** or **program notes**, a work intended to guide the audience or observer in understanding their intentions.

Being Reflective

Consider every aspect of your life and the various "protocols" you follow, no matter how trivial they may be. In other words, what protocols do you follow in order to drive a car safely from one place to another? What protocols do you

follow in making sure that you have clean clothing to wear each day? If you're a member of a gym or exercise regularly on your own, what protocols do you follow to make your workout safe and effective? In your daily routine of getting up and getting ready for where you need to go, what protocols do you follow? As you reflect on how we live, you'll discover that we all follow numerous protocols all the time; we're sometimes just not aware of them until we make a conscious effort to reflect on our actions. Have you ever violated a protocol with unfortunate results? Are there any protocols imposed on us by society that you believe are outdated or unnecessary?

The second goal of research protocols is to *reduce the likelihood of plagiarism, academic dishonesty, or the misappropriation of another person's intellectual property.*

Plagiarism may be defined as the use of another person's thoughts or words without acknowledgement of their source. Academic dishonesty and misappropriation of intellectual property, while they may include plagiarism, go much further. They also include concepts like **piracy**, which involves the unauthorized use or distribution of material even if the source is acknowledged. In most of the research that you do, the summaries of your results will include assertions that fall into the following five categories.

1. **Statements that are your own original observations.**
2. **Statements that are the result of your own primary research.**
3. **Statements that are common knowledge.**
4. **Statements that directly quote another author.**
5. **Statements that summarize or paraphrase another author.**

Let's examine each of these types of assertions individually.

Original Observations

An observation is original to you if it's something you thought of independently, without relying on any research you've conducted, the insight of another person, or material you've read in any book. The difficulty is that, simply because you make an observation, you can't be absolutely sure that no one has ever drawn that conclusion

before. Even college professors discover on occasion that insights they believed to be original were actually anticipated by other researchers. One of the reasons for conducting a literature review as part of any research project is to reduce the likelihood of this happening to you. In a survey course, a professor is highly unlikely to regard it as plagiarism if you write a short essay suggesting an interpretation of *Hamlet*, an explanation of the social issues affecting poverty, or a theory about language acquisition among children that has already been proposed by another scholar. You won't be expected to have mastered the scholarly literature in most disciplines for an essay on an exam in a lower-level course or a brief homework assignment in an introductory class. Nevertheless, on longer, polished essays or any writing assignment where citations are expected, any statement without a source indicated should be either an original observation, the result of your independent research, or common knowledge. Even if you paraphrase or summarize the material you've read in a book, article, or online, including that information without a citation suggests that you are *claiming* it as an original observation and thus are guilty of academic dishonesty. For this reason, as you review your written work, always ask yourself what the origin was of any information or statement. Unless you can say for sure that a statement is the result of your independent work or thought, you may well need to cite its source.

Primary Research

As we saw earlier, primary or independent research results from an investigation that you yourself have performed. Even if you're conducting this research as part of a team, it's considered independent if the group is making discoveries that no one has made before or applying ideas in new and creative ways. If your independent research involves the study of some type of document, such as interviews or historical records, you'll be able to cite the location of this source material so that other researchers can verify your results. If, however, your primary research involves experimentation or observation, you may not be able to cite books, articles, or recordings in any traditional manner. Nevertheless, you should always provide clear information about:

- **How you collected the data. YOUR METHODOLOGY.**

- **How you recorded the data. YOUR DOCUMENTATION TECHNIQUES.**
- **How you interpreted the data. YOUR ANALYTICAL APPROACH.**

These three elements will allow others to replicate your study and either substantiate or refute your results.

Common Knowledge

The term *common knowledge* refers to information that any average person may happen to know or could easily find in standard reference works such as dictionaries and encyclopedias. When dealing with a major public figure, for instance, the dates when that person lived, his or her major accomplishments, and the place where that person was born are all considered common knowledge and would not require you to cite a source. Examples of common knowledge that might appear in your research would include the following.

- **William Shakespeare (1564-1616) grew up in the small Warwickshire town of Stratford-on-Avon, about 120 miles from London.**
- **On June 26th, 1963, President John F. Kennedy spoke to a large crowd assembled not far from the Berlin Wall in an address that concluded with the famous proclamation “Ich bin ein Berliner.”**
- **In December, 1879, Thomas Alva Edison (1847-1931) offered the public a demonstration of his incandescent light bulb in Menlo Park, New Jersey.**

In much the same way, common knowledge can be assumed to include the definitions of words, the state or region in which a city is located, and other types of information that a reasonable person would take for granted. For instance, you would not be expected to provide citations for sentences like the following.

- **Hydrolysis may be defined as the process whereby contact with water causes a compound to break down into two or more other substances.**
- **The quaint medieval village of Carcassonne is located in the south of France in the former province of Languedoc, not far from the Pyrenees.**
- **Sulfuric acid, H₂SO₄, is one of the components commonly found in “acid rain.”**

Note the clear distinction between the statements above and sentences like “*The Oxford*

English Dictionary defines 'hydrolysis' as 'Any reaction in which a compound is broken by the agency of water and the hydrogen and hydroxyl of the water become independently attached to the two atoms previously linked. Simpson and Weiner (1989) 538.'" or "In Japan, efforts to reduce the amount of sulfuric acid released from industry to the environment were begun as early as 1911. Wilkening (2004) 88." In the first instance, the author isn't paraphrasing an explanation of the word *hydrolysis* that the average person might be expected to know but actually reporting a published definition. In the second instance, the author is referring, not simply to the composition of sulfuric acid (which most people might recall from a high school chemistry course), but to a specific historical occurrence that very few people would know about without reference to some sort of resource material. It makes little difference that the first instance contains a direct quotation while the second instance contains a **paraphrase**. In both examples, the writer is reporting information that he or she didn't develop as an original observation, discover as a result of primary research, or know previously as a result of common knowledge. In all such situations, you have to cite your source. Of course, the distinction between what is and what is not common knowledge is not always completely clear. When in doubt, seek guidance from your professor or teaching assistant. In cases where this type of consultation isn't possible, it's usually better to include a citation that isn't needed than to omit one that's required. After all, over-citation might cost you a few points on your final grade, but failure to include a *required* citation might result in a charge of plagiarism or the use of improper research methods.

Direct Quotations

Direct quotations occur when you use another person's **words** in your own writings. Since using another person's words without attribution would be a clear case of plagiarism, any type of direct quotation requires a citation. There are several different styles of citation in common use, and you may be asked to use one or the other of these styles because of the discipline for which you are writing or your instructor's preference. The following are among the most commonly encountered styles of citation:

- **APA Style.** This style receives its name from the American Psychological Association (APA), which pioneered its development. The characteristics of the APA Style include listing references and resources by author's last name, followed by abbreviations of first and middle names, then the date of publication in parentheses. Unless otherwise required because it's a proper name, every word in the title of a work, except the first in each phrase (i.e., at the beginning or after a colon), is written in the lower case. **Example:** Berger, P. L. (1967). *The sacred canopy: Elements of a sociological theory of religion*. Garden City, NY: Doubleday.
- **MLA Style.** This format receives its name from the Modern Language Association (MLA), and it is commonly encountered in books and articles dealing with the humanities. The characteristics of the MLA Style include listing bibliographic items by author's last name, followed by full first name and middle initial, then the title of the work. MLA Style also includes a word at the end that illustrates the form in which the work appears, such as *Print*, *Web*, and so on. The name of the work is listed in what is sometimes called "title case": The first letter of each word is capitalized; articles (*a*, *an*, *the*) and prepositions (such as *in*, *over*, and *of*) are not capitalized unless they're the first word in a clause. **Example:** Berger, Peter L. *The Sacred Canopy: Elements of a Sociological Theory of Religion*. Garden City, NY: Doubleday, 1967. *Print*.
- **Chicago Style.** The name of this format is derived from *The Chicago Manual of Style*, first published by the University of Chicago in 1906 and regularly updated ever since. The characteristics of the Chicago Style include listing works cited by author's last name, followed by full first and middle names, then the date of publication ending with a period. Only the first word in each phrase is capitalized. **Example:** Berger, Peter Ludwig, 1967. *The sacred canopy: Elements of a sociological theory of religion*. Garden City, NY: Doubleday.
- **Turabian Style.** This style is named for Kate Turabian (1893-1987), who served for many years supervising the formatting of dissertations at the University of Chicago. In Turabian Style, the first letters of words in the title are capitalized except for prepositions and articles, a semicolon rather than a

colon may be used to separate titles from subtitles, and the copyright date appears at the end. **Example:** Berger, Peter L. *The Sacred Canopy: Elements of a Sociological Theory of Religion*. Garden City, NY: Doubleday, 1967. For an overview of Turabian's life, see "Who was Kate Turabian?" (n.d.).

- **Harvard Style.** This style looks identical to APA Style, except that the author's last name is entirely capitalized. **Example:** BERGER, P. L. (1967). *The sacred canopy: Elements of a sociological theory of religion*. Garden City, NY, Doubleday. The real innovation of the Harvard style was the use of in-text or parenthetical citations instead of footnotes, which began at the end of the nineteenth century and are now common in other citation styles as well.



In-text or parenthetical citations receive their name from the fact that a brief reference appears within the text of your writing itself, rather than in a note that is located somewhere else, and is set off from the rest of your text by being enclosed in parentheses. At times, in-text citations will enclose the entire reference with parentheses, such as (Berger, 1967, pp. 14-25) in APA Style or (Berger, *Sacred Canopy* 14-25) in MLA Style when more than one work by an author is cited. Nevertheless, you only enclose in parentheses the information that doesn't appear elsewhere in your sentence, such as "The sociologist Peter Berger regards culture as both an artificial structure created by human beings and as an essential structure for human beings

since they lack the degree of instinct common in other animals (1967, pp. 14-25).” or “In 1967, the sociologist Peter Berger described culture as both an artificial structure created by human beings and as an essential structure for human beings since they lack the degree of instinct common in other animals (pp. 14-25).” The general rule of thumb is that, for in-text citations, the information following the author’s last name depends on how each citation style treats the information listed *second* in the bibliography or list of works cited. In other words, since MLA Style places the title of the work second (after the author’s name), the in-text citation includes a shortened form of that title. Since APA Style lists the date second in the bibliography, place the date after the author’s name in a parenthetical reference when you are using this citation format, too.

Footnotes and endnotes move the citation from the text itself, either to the bottom of the page (footnotes) or the end of the text but before the bibliography or list of works cited (endnotes). Some professors and editors prefer notes to in-text citations because the notes are less intrusive in this format. Others discourage their use because they compel the reader to look elsewhere for key information and often require more space than is needed for parenthetical citations. Moreover, parenthetical or in-text citation has gradually replaced the use of footnotes and endnotes in a large number of disciplines. From a publisher’s perspective, it is more difficult to produce printed works containing large numbers of footnotes or endnotes than it is to incorporate parenthetical citation into printed material. In online sources, creating hyperlinks for each annotation or reference complicates a process that becomes much more straightforward when in-text citation is used. From your instructor’s perspective, footnotes are often discouraged because they take up space that might be better devoted to the body of your narrative. In a similar way, endnotes require the reader to make frequent jumps between your text and the notes, complicating the process of review. For all these reasons, you may be encouraged to use parenthetical references rather than footnotes or endnotes even though your word processor can generate these annotations quite easily. Nevertheless, when footnotes and endnotes are used in scholarly writing, they should be introduced by Arabic numerals rather than symbols

such as *, †, or ‡, and should be numbered consecutively throughout the paper or chapter, rather than restarting on each page.

Moreover, when formatting the quotation itself, how you place the text on the page will depend on the length of the passage you are quoting. Relatively short quotations should be formatted to fit in with your own writing and should be clearly indicated at the beginning and the end with **double quotation marks**. Longer quotes, particularly those that are four or more lines in length, should be set apart from your own text, indented approximately one-half inch from the left and right margins in the format known as a **block quote**. Block quotes are customarily single-spaced when the rest of the text is double spaced. Quotation marks are *not* used with block quotes.

Paraphrases

Paraphrases occur when we use people's **ideas**, although not their precise words, in our own writings. That is to say, paraphrasing consists of using *our voice* to convey *someone else's thought*. Paraphrasing a passage doesn't simply mean altering a word here and there. It means completely recasting into our own words a statement that someone else has made. Paraphrasing can be extremely important in research because it demonstrates that you've processed and truly understood another author's thoughts rather than simply quoted that person without necessarily comprehending what the passage means. A speech or an article that consists of one quotation after another comes across as insincere and hastily written, giving the impression that the author has merely "stitched together" the thoughts of others without bothering to add his or her own insights. In addition, effective paraphrasing gives your writing a more polished tone. Readers of papers will frequently skip over quotations, particularly long block quotations, but they will pay attention to a clear paraphrase. Nevertheless, despite the great value of paraphrasing, it's a technique that requires a good deal of skill. For instance, it's a common misconception that, simply because we're not using another author's precise words in our writing, we don't need to cite the source of that information or those ideas. As a general rule, the *only* paraphrasing that requires no citation is a summary of common knowledge. Since paraphrasing by its very nature

involves the use of someone else's ideas, academic honesty requires you to cite your sources even when those ideas are being expressed in your own words.

As an example of how paraphrasing works, let's consider the following passage from Martha Nussbaum's *Upheavals of Thought: The Intelligence of Emotions*.

Language differences probably shape emotional life in some ways, but the role of language has often been overestimated, and it is difficult to estimate it correctly. For example, we should not make the common error of supposing that if there is no single term in a language for an experience, that experience must be lacking. This is just as wrong as the idea that if a word is the same the experience is likely to be the same. Nussbaum (2001) 155.

The first illustration we'll consider is an example of an unacceptable paraphrase since, even though it cites the original author, it doesn't sufficiently recast the quotation in original words.

Linguistic differences may shape emotional life. Nevertheless, it is likely the role of language has often been overestimated, even though it is not easy to evaluate that role correctly. There is, for instance, the common error of believing that if there is no one term in a language for an experience, people who speak that language must lack that experience. That idea is just as incorrect as the belief that an experience is likely to be the same simply because a word is the same. See Nussbaum (2001) 155.

Here the writer has merely changed a few words, inverted a few phrases, and has largely left the original phrasing intact. This example would be considered academic dishonesty because, even though Nussbaum is cited as a source, the author has left the impression that the *phrasing* is his or her own even if the concept originated with Nussbaum. Contrast that passage to the following example of an acceptable paraphrase.

Although many earlier philosophers once believed that thoughts and emotions were inextricably tied to the language(s) in which an individual thought, there has been increasing reason to question this assumption. For instance, simply because Greek possesses the terms *eros* (erotic or romantic love), *philia* (the love shared with a friend), and *agapê* (altruistic love or charity), no one would assume that an English-speaker lacks experience of these emotions simply because, in his or her native language, they are all designated by the single term "love." See Nussbaum (2001) 155.

This passage entirely recasts Nussbaum's statement by using different vocabulary, introducing new examples, and complicating the issue by suggesting that a person may think in more than one language. Yet even though the entire passage has been

properly paraphrased, the writer was correct to cite Nussbaum as a source because it was her ideas the writer was conveying. In fact, an even better paraphrase might have begun with the phrase, “As Martha Nussbaum has observed, although many early philosophers ...” and concluded with the citation as above. This type of “bracketing structure” makes it particularly clear to readers precisely which ideas of another author are being paraphrased.



The third goal of a proper research protocol is to protect the safety of anyone involved in the project. In laboratory experiments, proper procedures must be followed for the correct handling and storage of chemicals, the use of protective clothing and eyewear, the venting of potentially harmful fumes, and so on. But even in research projects where the danger to people is unlikely to be physical in nature, it's important that careful procedures be followed. In 1973 it was learned that from 1932 until 1972, the U.S. Public Health Service had been conducting a study in Alabama that utterly ignored the safety and well-being of its test subjects. Known as the **Tuskegee Syphilis Experiment**, the research project allowed syphilis to progress untreated in a group of low income African Americans living in Macon County, Alabama, the county seat of which is Tuskegee. The test subjects were never informed that they had syphilis and, even after the discovery of penicillin in 1947, were neither given any effective treatment for the disease or even told that such treatments were available. Only thirty years before this information became widely known, the Nazis had conducted medical experiments on prisoners in concentration camps that involved freezing them, exposing them to malaria or mustard gas, exposing them to X-rays, and engaging in a range of activities that caused the prisoners excruciating pain and death. Together, the Tuskegee Syphilis Experiment and the Nazi medical experiments led to strong public pressure for the development of a set of ethical standards that would protect the interests of human subjects.

In the United States the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research was established to develop policies that would prevent mistreatment of human subjects from ever occurring again. The Commission's report, known as the **Belmont Report** from the Belmont Conference

Center where the reports were first developed, was issued in an initial form in 1978 and formalized in 1979. The Belmont Report stipulated new standards for the treatment of human subjects based on three ethical principles.

1. **Respect for persons.** “Respect for persons incorporates at least two ethical convictions: first, that individuals should be treated as autonomous agents, and second, that persons with diminished autonomy are entitled to protection. The principle of respect for persons thus divides into two separate moral requirements: the requirement to acknowledge autonomy and the requirement to protect those with diminished autonomy.” <http://ohsr.od.nih.gov/guidelines/belmont.html>.
2. **Beneficence.** “The term ‘beneficence’ is often understood to cover acts of kindness or charity that go beyond strict obligation. In this document, beneficence is understood in a stronger sense, as an obligation. Two general rules have been formulated as complementary expressions of beneficent actions in this sense: (1) do not harm and (2) maximize possible benefits and minimize possible harms.” <http://ohsr.od.nih.gov/guidelines/belmont.html>.
3. **Justice.** “... [T]he selection of research subjects needs to be scrutinized in order to determine whether some classes (e.g., welfare patients, particular racial and ethnic minorities, or persons confined to institutions) are being systematically selected simply because of their easy availability, their compromised position, or their manipulability, rather than for reasons directly related to the problem being studied. Finally, whenever research supported by public funds leads to the development of therapeutic devices and procedures, justice demands both that these not provide advantages only to those who can afford them and that such research should not unduly involve persons from groups unlikely to be among the beneficiaries of subsequent applications of the research.” <http://ohsr.od.nih.gov/guidelines/belmont.html>.

As a result of the Belmont Report, each college or university that was conducting research was required to establish an **Institutional Review Board** or **IRB** to determine

whether research studies were taking appropriate measures to protect human subjects. In addition to protecting the health and safety of subjects, the IRB will also determine whether a study is likely to cause subjects unnecessary embarrassment, invasion of privacy, loss of income or livelihood, or other detriments that outweigh the benefits of the research. For this reason, even if you're engaged in a research project that seems as though it would have minimal effect on the subjects — such as conducting a survey or interviews, observing a focus group, or asking passersby a few questions — it is absolutely critical to ask whether your research protocol has to be reviewed by the IRB. If it does and you omit this step, the institution may compel you to discard your results or not allow you to submit them for credit. Finally, submitting a research proposal to an IRB can also provide a check that your research methods are appropriate. Since IRBs have experienced researchers among their members, they can serve as a useful way of making sure that your results will be as meaningful as possible.

An outgrowth of the concern for the welfare of human subjects has been an intensified level of concern for *all* subjects. Throughout most of the history of scientific research — indeed until nearly the end of the twentieth century — live animals were used in studies with relatively little concern for their pain and suffering. Anatomy was often studied by means of **vivisection**, the dissection of a creature while it is still alive. To test the effects of space travel on the body, the Soviet Union placed a living dog named **Laika** into orbit with no ability or effort to bring about the subject's safe return to earth. In the United States, monkeys were exposed to illegal narcotics in order to study addiction, with the result that several animals went into convulsions or caused themselves physical harm. In response to such instances of abuse, American universities that engage in any type of animal testing have been required since 1986 to establish an **Institutional Animal Care and Use Committee** or **IACUC**, which reviews protocols to determine that procedures are in place to avoid unnecessary animal suffering. Each IACUC must have at least five members, one of whom must be a veterinarian with substantial knowledge of the species being studied. The use of IACUCs has not eliminated the debate about animal testing, however. On one side of the debate, organizations such as **People for the Ethical Treatment of Animals (PETA)** have argued that restrictions on the use of animals in

experimentation should be far more stringent, even forbidden. On the other side of the debate, pharmaceutical companies like Roche have argued that responsible use of animals in research projects is essential for saving human lives and preventing human suffering.

Being Analytical

Below are two statements about animal testing, the first by PETA and the second by Roche Pharmaceuticals.

1. “Regulatory agencies in the U.S.—including the Environmental Protection Agency (EPA) and the Food and Drug Administration—as well as regulatory agencies in the European Union and elsewhere in the world require chemicals, pesticides, pharmaceuticals, and many other products to be tested for toxicity. Animals are forced to ingest or inhale—or are injected with—toxic substances such as gasoline components and mercury. Animals used in these tests suffer extreme pain before they are killed, dissected, and thrown away like garbage. All the more upsetting is that many of these tests could easily be replaced with more sophisticated, more accurate, and less expensive non-animal alternatives.”
<http://www.peta.org/issues/animals-used-for-experimentation/animal-testing-in-depth.aspx>

2. [Regulatory agencies worldwide] “mandate animal studies in order to reduce the risks for people and allow safer creation of new therapies. Thus, due to the lack of accepted, equivalent non-animal alternatives, eliminating the use of laboratory animals in pharmaceutical research would significantly impede or altogether halt efforts by research-based healthcare companies to develop cures and/or more effective treatments for diseases such as cancer, AIDS, and heart disease. Due to animal testing, the likelihood of adverse effects occurring during testing in humans can be significantly reduced. The results of animal tests enable researchers to determine which experimental compounds in advanced development are unsuitable for use in humans (~30-40%) either because the risk of potential toxicity is too great or because they do not have the desired pharmacokinetic profile, thus likely rendering them ineffective. Around 70% of serious adverse effects that occur in humans are identified at the animal testing stage. Therefore, animal testing is extremely beneficial in minimizing the risks to humans in clinical trials.”
www.roche.com/position_on_animal_testing.pdf

Analyze these passages critically to examine how the authors reached such different conclusions. What do you know about PETA and Roche that may cause each of them to adopt the perspective that appears in their statements? (If you feel you don't know enough about PETA or Roche to answer this question, find out

what you can about their mission and guiding principles from the sources available to you. Indeed, which sources *are* available to you?) What can you conclude about the basic standards or values that each author uses to draw his or her conclusions?

The last goal of valid research protocols that we'll consider is that they help maintain the reliability of the information developed during a study. The **peer-review** process occurs when properly trained scholars with appropriate credentials examine the work done by a researcher and decide whether or not it meets the standards of the discipline. All disciplines have some type of peer-review process. In most disciplines, this review takes place before the information is disseminated through publication or at a conference. A panel of experts, called the **referees**, examines what a scholar has submitted and vote as to whether or not it should be released through the journal, organization, or conference that they represent. In certain fields, this peer-review process is impossible to perform prior to dissemination of the research project. For instance, musical performances by members of a university faculty can't be evaluated until they occur, and then they're often reviewed by other musicians, particularly if the performer is being considered for promotion or tenure. (On the concept of tenure, see Appendix B.) As a student, however, if you're going to perform in public, you may need to get the approval of your instructor(s) by first performing at a **jury or recital hearing**. While you're still a student, your musical performances represent not only you but also the standards of your institution and teacher. Since your teacher's "name is on you" at your concert or recital, prior approval of your repertoire and performance is needed. Plays, too, cannot be peer-reviewed until they're performed, so the work of actors, directors, and other scholars in the field of theater is often reviewed by an **adjudicator** who critiques the level of achievement that the various participants in the production have attained. Some disciplines have still other means for peer review, but it is a central feature of all advanced research, scholarship, and creative activity.

The importance of peer review also indicates why your instructors will not allow you to cite information from Wikipedia and other sources that have not been vetted by scholars in the field. The very definition of a **wiki** is a website that is developed, edited, and expanded by the users themselves. You have no way of guaranteeing that the information included in a wiki has been provided by someone

with the appropriate academic credentials, and you may not be able to verify the accuracy of any listing you find. For the same reason, professors may forbid you from citing websites that are sponsored by corporations (since they have a vested interest in the information they're distributing and thus cannot be impartial), anonymous sources, or organizations with a strong predisposition to support one version of the facts over another. (Consider the statements on animal testing by PETA and Roche Pharmaceuticals that we saw earlier.) Even if the information such websites contain was accurate when it was posted, it may now be out of date and thus not reliable. Finally, at the college level and beyond, you should never use encyclopedias, either online or in print form, as sources. Not only do these works lack a thorough peer review but they're also written at a far more basic level than you should be addressing in your studies now.

EXERCISES

1. Brainstorm a list of three topics about which you'd be interested in learning more. Choose topics that you wouldn't be able to cover sufficiently simply by looking in a single resource or finding a single answer. Let your imagination run wild. Don't choose topics that are related only to the classes you've taken or the major you are likely to pursue. What are three of the topics that, right now, you feel you could spend two or three months studying intensely without feeling bored? If you find that all three of these topics fall in the same general area (such as the fine or performing arts, literature and the other humanities, the social and behavioral sciences, or mathematics and the natural sciences), force yourself to find at least one topic of interest in a different area.
2. Meet with an advanced undergraduate student, a graduate student, or one of your professors and interview that person about his or her current research project. How did that person decide to pursue this particular topic? Has the research process yielded any unexpected results? What areas of research does the person imagine pursuing over the next five to ten years?
3. Consider the following alternative positions.

- a. The biographer **James Boswell** (1740-1795) describes how the essayist and polymath **Samuel Johnson** (1709-1784) sought to disprove the arguments of those who said that the laws of the universe were created in the human mind rather than existing independently.

After we came out of the church, we stood talking for some time together of Bishop Berkeley's ingenious sophistry to prove the nonexistence of matter, and that every thing in the universe is merely ideal. I observed, that though we are satisfied his doctrine is not true, it is impossible to refute it. I never shall forget the alacrity with which Johnson answered, striking his foot with mighty force against a large stone, till he rebounded from it — "I refute it *thus*." Boswell (199) 238.

- b. The philosopher **Nelson Goodman** (1906-1998) argued that the world we encounter is made in our minds rather than given to us as an absolute. In his words, there is no "perception" of reality "without conception." For this reason, it's misleading to speak of unchanging "truth"; rather we should speak of "rightness" in terms of whether an observation fits our fundamental assumptions or unyielding beliefs. What we traditionally call "the truth" is inevitably a statement that has been filtered and ordered by the human mind.

Truth, far from being a solemn and severe master, is a docile and obedient servant. The scientist who supposes that he is single-mindedly dedicated to the search for truth deceives himself. He is unconcerned with the trivial truths he could grind out endlessly; and he looks to the multifaceted and irregular results of observations for little more than suggestions of overall structures and significant generalizations. He seeks system, simplicity, scope; and when satisfied on these scores he tailors truth to fit He as much decrees as discovers the laws he sets forth, as much designs as discerns the patterns he delineates. ... "The truth, the whole truth, and nothing but the truth" would thus be a perverse and paralyzing policy for any world-maker. The whole truth would be too much; it is too vast, variable, and clogged with trivia. The truth alone would be too little, for some right versions are not true — being either false or neither true nor false — and even for true versions rightness may matter more. Goodman (1978) 18, 19.

Describe the reasoning process that each speaker used to his conclusions. What are the premises or underlying assumptions which each speaker is taking for granted?

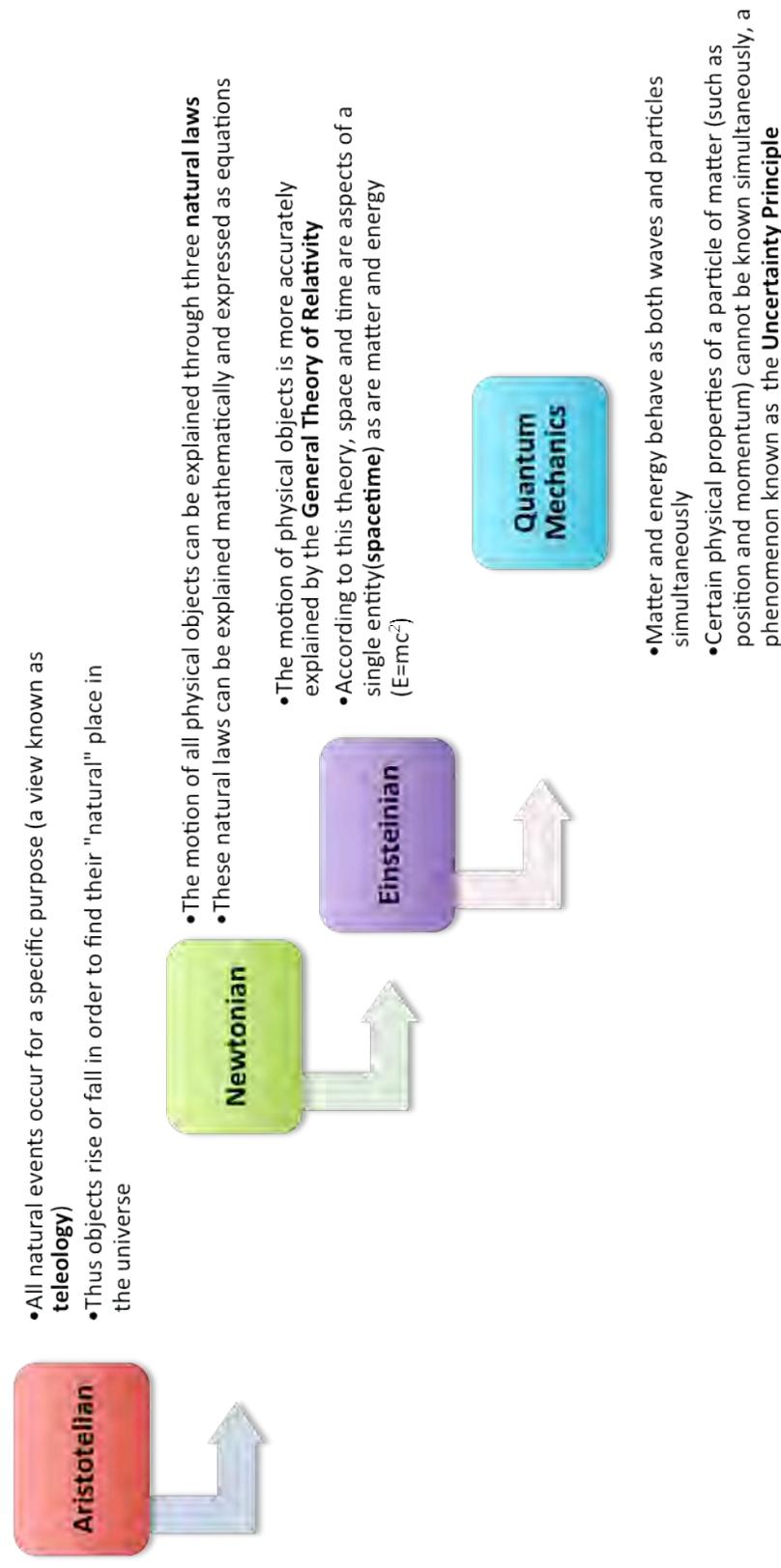
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RESOURCES

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Table 3.1. Paradigm Shifts in Physics



Unit Four:

Creative and Critical Thinking

Learning Objectives:

1. To examine what creative thinking entails and how people can become more innovative in their approach to various challenges.
2. To understand what critical thinking means and become familiar with some important aspects of critical thought.
3. To learn how creative and critical thinking can be combined in performing college-level academic work, including undergraduate research.
4. To become familiar with how creative and critical thinking can provide not only the methods, but also the subjects for undergraduate research.
5. To apply creative and critical thinking to an important topic at colleges and universities: honor codes and their effectiveness.

Creative Thinking

The term **creative thinking** is used to describe the process that leads to the development of new ideas, approaches, or methods of understanding that are both innovative and positive. The last word in this definition is particularly important: Creative thinking always results in something *positive*. In other words, it's not very difficult to generate ideas no one has thought of before. But there's little value in developing concepts that are illogical, destructive, unproductive, inconsistent, or simply too outlandish for anyone to comprehend. In other words, being unique is not *necessarily* the same thing as being creative. Creativity also implies that the fruit of the imaginative effort is desirable or beneficial in some way. So, we can regard creative thinking as the process by which we invent new ideas, arguments, and objects, while critical thinking is the process by which we evaluate, assess, or appraise what others have created. These skills are not the province of any one major or academic field. As we saw in the last unit, most people associate creativity only with the fine and performing arts. Those fields certainly thrive on creativity, and one of the benefits of

studying those disciplines is the improvement of our own creative processes. Nevertheless, *all* academic areas require a degree of creativity. Entrepreneurs must be creative in order to enter a new field or start a new business. Scientists must be creative in developing hypotheses that can be tested and in assembling evidence into self-consistent theories. Doctors must be creative in finding new ways to fight disease or repair an injury. Architects must be creative in combining sound principles of engineering with a highly developed aesthetic sense. For this reason, in order to succeed in whichever disciplines interest you the most, it's important to pay attention to how you can become more creative in the ways that are appropriate for those fields.

Creative thinking can be contrasted with **derivative thinking**: acceptance of the *status quo* without challenge or questioning. In other words, we're not thinking creatively when we blindly assume that there's only one way of doing or seeing something and one way of responding to our environment. A potential solution to derivative thinking is the process known as **lateral thinking**: breaking free from the assumption that things can only occur in a vertical series of one cause to one effect and approaching the issue from an entirely different perspective. If the new "lateral" approach to the problem is sufficiently innovative and positive, the result can be revolutionary. Paul Sloane, the founder of Destination Innovation, cites the example of **Michael J. Cullen** (1884–1936) as a lateral thinker who changed an entire sector of the economy.

In the early part of the 20th century all shops were places where the assistant served the customer. The customer would come to the counter and the assistant would fetch the items that the customer required. In the 1920s a man called Michael Cullen took a different view. He asked the question, "What would happen if we turned the shop around and let the customer help themselves to the goods they wanted and then they paid at the end?" There were doubtless many who objected to this notion. "Customers want service, they do not want to do all the work themselves." "All the goods will have to be priced." "People will get confused if there is no assistant to help them." "What, you mean let people wander round the back of the store?" and so on. But Cullen persisted and created the world's first supermarket Sloane (2003) 8-9.

Even more, Cullen's use of low overhead, warehouse-like facilities with a high volume of goods and low prices can be regarded as the forerunner of the modern supercenter or big-box store, such as Walmart, Costco, and Home Depot.



Not every creative idea will, of course, be as revolutionary as Michael Cullen’s development of the supermarket, but his use of lateral thinking does offer important insight into how you can incorporate more creative thinking into your college work. Repeatedly ask yourself or your instructor, “Why are we doing it this way?” and try to imagine a safe, effective, and innovative alternative to the various procedures and academic approaches you encounter. A famous statement made by **Robert Kennedy** (1925-1968), quoted in his eulogy by his brother Edward, declares, “Some men see things as they are and say why. I dream things that never were and say why not?” It’s that willingness not merely to accept “things as they are” that leads us to our most creative thoughts. For this reason, when we’re not feeling particularly creative, we can sometimes stimulate our innovation by forcing ourselves to “Think Different” (in the slogan used by Apple Computers from 1997-2002). Perhaps the simplest way to effect this change is to break our routine.

Having a system for doing things is efficient. We don’t waste time trying to figure out insignificant tasks every time we do them. But these routines can also leave us in a rut. We may overlook innovative solutions to problems simply because we’re so used to approaching our work in one particular way. When we break our routines, we

free ourselves from the restrictions of the familiar, opening ourselves to new possibilities. Try doing things differently the next time you face a complex task that could use some innovative ideas. Instead of working on a project straight through, interrupt your work, go for a walk, and get some fresh air. Take a swim or work out in the gym. If you've been working in your room, go to the library. If you've been working in the library, go back to your room. Change anything you can. If you've been writing drafts on paper, then entering the text into your computer, force yourself to begin writing on the computer. If you are used to writing everything on the computer, try jotting down some ideas on paper first or at least switching from a desktop to a laptop computer. Think of anything you can to change your environment so that you can have different sensations and different thoughts. Write in the morning if you usually write at night. Write in silence if you usually write with music in the background. Ask your roommate to switch desks with you. Find *some* way to break your routine, and you'll probably find that you will approach your work from an entirely new perspective.

In your college coursework, you may find it easier to bring fresh perspectives to your assignments if you view the class, not as just another course you have to take in order to earn your degree, but as something more exciting. Some courses can be viewed as a pilgrimage or quest that leads you from one point to another. Picture others as mysteries, with the students serving as detectives who must try to solve a baffling case. Still other courses could be seen as expeditions, buffets with many choice dishes to choose from, sitcoms, romantic comedies, talk shows, boot camp, therapy sessions, or archaeological digs. If you don't find viewing your courses in this way as particularly helpful, see if you can approach them differently by reorganizing the type of classes you're taking. In other words, we're all familiar with art studios, chemistry labs, historical investigations, business case studies, and poetry reviews. But how might you approach your work differently if you thought of yourself as enrolled in a poetry lab, an historical experiment, a chemistry studio, a literature simulation, an accounting critique, a math case study, or an engineering rehearsal? If you begin to look at what's around you through different "lenses," you may soon find yourself seeing things in new and innovative ways.

You can also begin to see things differently by performing a “What If?” exercise. This type of exercise is a thought experiment where you consider what the world would be like if you could “waive” or suspend a certain historical event, natural law, or social constraint. Examples of “What If?” questions are:

- **What would have been the consequences if the French rather than the English had made extensive use of the longbow at the Battle of Agincourt?**
- **What would the physical world be like if there were no Second Law of Thermodynamics?**
- **What implications would result if the verification principle of the logical positivists were to be regarded as invalid?**

By imagining this type of alternate universe, you not only engage in creative speculation in order to begin thinking about things differently, but you also reinforce for yourself what the actual consequences of the given event, law, or constraint have proved to be. For representative historical examples of this exercise, see Cowley (2000) and Cowley (2002).

A variant of “What If” exercises is what we might call “The World Turned Upside Down.” In this exercise, you try to come up with arguments to support an unpopular or untenable position on an issue. For example, you might support the idea that the discovery of antibiotics was a disaster for modern civilization, the marketing of the Edsel and New Coke were the greatest advertising triumphs of the twentieth century, or the adoption of the Bill of Rights in 1791 was a great American tragedy. Keep in mind that you don’t actually have to believe the point of view you’re defending. In fact, there’s an inverse relationship between the values of this exercise and how much you believe what you’re saying. Instead, adopt a perspective unlike your own so that you can begin seeing matters in a more creative or innovative manner.

Being Imaginative

Develop your own “What If” scenario. Remember that this type of exercise can be done in any discipline. Be sure to select a topic that doesn’t cause you to provide a quick and obvious answer — “What if the earth had no atmosphere? We wouldn’t

be around to engage in this exercise.” — but that causes you to explore in some detail the impact and consequences of the event, law, or constraint. A very common “What If?” scenario (about which entire books, even novels, have been written) is “What if Adolf Hitler had won the Second World War?”

Another technique that can be used to stimulate creative thinking is to engage in a brief creativity exercise. Spark Publishing has a series that it calls *The Daily Spark* where you can find a number of exercises for such subjects as poetry, critical thinking, Shakespeare, U.S. History, and writing. Here are a few examples.

Metaphor Mishaps

All writers use **figurative language** to describe things that are otherwise difficult to describe. But **metaphors** and **similes** can be dangerous when misused, as you’ll see from these examples:

Her face was a perfect oval, like a circle that had its two sides gently compressed by a Thigh Master.

His thoughts tumbled in his head, making and breaking alliances like underpants in a dryer without Cling Free™.

The little boat gently drifted across the pond exactly the way a bowling ball wouldn’t.

Come up with three humorous metaphors of your own. Clavel (2004) 137.

Great Books Brainstorm

Brainstorming means listing all of the ideas related to a topic. When writers brainstorm, they don’t worry about whether the ideas are plausible or even interesting. Instead, they just list everything they can possibly think of that might be relevant.

When brainstorming, write down everything that comes to mind, even if it seems silly or stupid. You never know which ideas might actually work.

Imagine you’ve been charged with coming up with a list of must-read, great books for [a] high school English class. What would be on your list? Don’t worry about defending your choices — just list them. Crowther and Allen (2006) 155.

And for the Entree, We Have ...

Imagine you're cooking dinner for your family. You'll need to go to the supermarket and pick up the ingredients. Write a shopping list in Spanish of food items you'll need for your meal.

Here's some vocabulary:

un poco de (*a little*)

unos / as (*some*)

una libra de (*a pound of*)

un kilo de (*a kilogram of*) Ortman (2006) 65.

Many times our most creative ideas arise because we're able to see patterns where others can only detect chaos. Think of the last time you had one of those "aha!" moments. It probably wasn't because you learned a new fact or formula, but because you suddenly detected a familiar pattern where you hadn't been seeing it before. "Oh, I get it now!" we might say. "*This* works in much the same ways as *that*. I see the connection." The multimedia artist Todd Siler describes this aspect of creativity in the following way.

We often form new ideas by looking at old ones and seeing new things. If we compare two things that seem unlike, such as a human being and a clock, we may see something — whether in their physical form or the way they work — that is similar. For example, they both mark the physical progression of time and they're both mechanically precise. This act of creative seeing can lead to the creation or discovery of new meaning. The depth of the meaning depends on the depth to which we consciously and purposely explore the connections we make. Siler (1997) 8.

Siler is saying that three of the five essential tools we're exploring in this course — **Being Reflective**, **Being Innovative**, and **Being Imaginative** — can work together to stimulate our creative thinking. Our imagination allows us to view familiar things from a new perspective. Our innovation allows us to apply that perspective to solving problems and taking advantage of opportunities. And being reflective allows us, in Siler's words, *to explore the connections we make consciously and purposely*. But it's also important to be able to analyze the creative ideas we develop, and so we need to turn next to a discussion of critical thinking.

Critical Thinking

The expression **critical thinking** refers to our ability to **analyze** an argument — to break it down into its component parts — and then to **synthesize** or reassemble the parts of that argument to see whether they add up to a logical and consistent whole. People use critical thinking when they:

- Verify whether an argument adheres to the principles of logic.
- Identify the assumptions or premises that lie behind a line of reasoning.
- Recognize how speakers and writers are defining their terms.
- Examine the qualities that indicate whether a source of information is likely to be reliable.
- Recognize the merits of a claim independent of the authority of the person making that claim.
- Distinguish statements of opinion from statements of fact.
- Detect logical fallacies and other types of flawed argumentation.
- And extrapolate the likely implications of a given assumption.

Many colleges and universities offer workshops and even entire courses in critical thinking, as well as separate courses in various types of logic. These opportunities are extremely valuable; however, few people become proficient in critical thinking by taking a single workshop or course. In fact, many people you'll meet who are skilled critical thinkers have not formally studied this discipline *per se*. Rather, they've developed their ability throughout their entire intellectual experience. In other words, proficiency at critical thought is often developed by encountering different types of challenges, examining them logically and holistically, and determining how an argument works. And that goal can be achieved in a wide variety of disciplines.

One of the values of a college education is that it helps you build intellectual strengths from course to course, regardless of your major or individual interests. Consider the following example. Every math teacher in the world is continually asked questions like “Why do we have to learn algebra anyway?” or “When will I ever use calculus?” Many teachers respond to these questions by quoting the mathematician **Euclid** (ca. 300 BCE) who was once asked by a student what benefit could be derived

from the study of geometry. Euclid turned to a servant and said, “Go get this man a coin because he needs to profit from everything he learns.” Or the teacher might talk about how mathematics can be used in ways as diverse as determining where to center a group of pictures on a wall, how to construct a personal budget, and why one design for a new spacecraft is superior to another. But another potential answer to this question comes in the form of a metaphor suggested by **Steven Johnson**.

Learning algebra isn’t about acquiring a specific tool; it’s about building up a mental muscle that will come in handy elsewhere. You don’t go to the gym because you’re interested in learning how to operate a StairMaster; you go to the gym because operating a StairMaster does something laudable to your body, the benefits of which you enjoy during the many hours of the week when you’re not on a StairMaster. Johnson (2005) 40.

What Johnson is saying is that algebra is an essential part of an educated person’s “mental training.” Your high school math teachers were your “personal trainers” in critical thinking and analysis. They were there to say, “Keep trying. You can *do* this.” even when you thought you couldn’t, in much the same way that a good personal trainer will get those extra “reps” out of you even when you *know* you can’t do them. The personal trainer teaches you how to use the equipment in the gym in order to become physically fit. The math teacher teaches you how to use intellectual processes in order to make you more *mentally* fit. You can measure your physical fitness through



your increased stamina, better muscle tone, and improved weight management. You can measure your mental fitness through your increased ability to perform critical and creative thinking.

The Syllogism

A fundamental element of critical thinking is the logical structure known as the **syllogism**. Syllogisms are logical structures in the type of thinking known as **deductive reasoning**: the application of general principles to specific cases. Now, in order to understand how syllogisms work — and appreciate their application to every single course you'll take in college — we must first introduce a number of terms.

conclusion	a deduction reached by logical reasoning
premise	a general principle that the speaker or writer takes for granted as true
predicate	the part of a sentence that includes the verb and everything that depends on the verb (such as adverbs, direct objects, and predicate nouns)
minor term	the subject of the sentence that serves as the conclusion of an argument
major term	the predicate of the sentence that serves as the conclusion of an argument
middle term	an expression that appears in both premises but not in the conclusion
minor premise	a premise in which the minor term is the subject
major premise	a premise in which the major term is the predicate

Now that may seem like a lot of words for a concept that's going to seem quite easy and intuitive, but if you master them, they'll help you to identify logical flaws in the reasoning you encounter in books, newspapers, speeches, and your own statements. Here's an example of how a syllogism works.

All people are mortal.	MAJOR PREMISE
All students are people.	MINOR PREMISE
All students are mortal.	CONCLUSION
people	MIDDLE TERM
are mortal	MAJOR TERM
All students	MINOR TERM

According to the principles of logic, if both the major premise and minor premise of a syllogism are true, then the conclusion must be true as well. But note that if either or both the premises are *not* true, then we have no way of knowing whether the conclusion is true or false. Consider the following two examples.

A. All people are named Roger.	MAJOR PREMISE
All aardvarks are people.	MINOR PREMISE
All aardvarks are named Roger.	CONCLUSION
B. Every baseball team is in the NFL.	MAJOR PREMISE
The Chicago Bears are a baseball team.	MINOR PREMISE
The Chicago Bears are in the NFL.	CONCLUSION

In both syllogisms, the premises aren't true. But in syllogism A, the conclusion is false, while in syllogism B the conclusion is true. In other words, you can't argue that if a speaker or writer has based an argument on a false premise, then his or her conclusion *must* be false. All you can tell is that the argument doesn't *prove* that the conclusion is true.

Being Analytical

Find an editorial in a book, journal, or publication that you can analyze according to the principles discussed in this unit. Be sure to examine it in terms of each of the following.

- Identify several stated or unstated assumptions and premises.
- Research what you may be able to discover about the author that suggests there may exist additional unstated premises because of his or her worldview.

- Detect any statements of opinion that the author presents as though they were statements of fact.
- Clarify any terms that the author appears to be defining in an unusual or unorthodox manner.
- If the author uses any deductive reasoning, restructure his or her premises and conclusion in the form of a syllogism.
- Distinguish any logical fallacies that you observe.

So, where do premises come from? Premises can be the conclusions of other syllogisms, or they can be the result of a type of reasoning that moves from specific cases to general principles known as **inductive reasoning**. According to Aristotle, whose *Nicomachean Ethics* was mentioned in Unit One, there are four steps to inductive reasoning.

- First, there's simply the level of sensation or observation. **Example:** *I see a black crow.*
- Then, we remember that experience and are able to recall it for comparison to other experiences. **Example:** *The crow that I saw was black.*
- Third, we have further sensations or observations that appear similar to our earlier memories. **Example:** *This crow is black just like the other one. In fact, every crow I can recall seeing was black.*
- Finally, if our sensation is confirmed sufficiently often (without contradictory cases), we extrapolate a general principle from the specific memories. **Example:** *All crows are black.*

Aristotle discusses these ideas in his work known as the *Posterior Analytics*. Now, as you go through these examples, you'll notice that there's one big difference between inductive and deductive reasoning. As we saw, in deductive reasoning, if both premises are true, then the conclusion must be true; if at least one premise is false, we can't tell anything about the truth of the conclusion. In inductive reasoning, however, even if our observation, memory, and further observations are all true, we still can't verify that our conclusion *must* be true. But if even one observation runs counter to the others, we can be absolutely certain that our general principle must *not* be true. In other words, if I ever observe even

one crow that's not black, I can't conclude, "*All* crows are black." But if all I ever see are black crows, I still can never be 100% sure that there isn't a red, blue, or green crow lurking out in the world somewhere. That eventuality seems highly unlikely, however, and the longer we go without encountering a non-black crow, the less likely it becomes. Nevertheless, in according with the key principle we saw in the last unit, we always have to remember that **absence of evidence is not evidence of absence**. In fact, we can't ever *really* be certain that *all people are mortal* and *all students are people* either, even though the consistent experience of everyone who ever lived suggests they are.

There's another logical principle first enunciated by Aristotle that's also important for our understanding of critical thinking. In Unit Three, we saw that the essayist and philosopher of law, Michael Bayles, spoke about Aristotle's "law of noncontradiction." This principle is outlined by the philosopher in *Metaphysics* 1011b13-20 where he states that "opposite arguments cannot both be true at the same time." In other words, an object can't be here and not here simultaneously. Once again, this assertion may seem so intuitive that it hardly seems worth mentioning, but the closer you examine it, the more complex the issue becomes. For instance, if I say, "A wooden cube can't be both solid and



hollow at the same time," we immediately have a problem. In everyday usage, it certainly seems true that if a wooden block is solid all the way through, the average person on the street wouldn't say it was hollow. But if you were to pose this question to a group of physicists, they might say, "Well, it depends. On the level of ordinary sense perception, this cube is solid. But on the atomic level, things are quite different. Since atoms are mostly empty space, this cube is really hollow. So, I would say that it's both solid and hollow simultaneously."

Moreover, it's not just scientists who might approach a matter in this way. If you were to say, "You can't be both rich and poor simultaneously," someone might disagree, "That's simply not true.

You certainly can be rich in terms of wealth and possessions, but poor in friends, health, and the quality of your life.” If you were then to revise your statement and say, “What I mean is that you can’t be rich in terms of wealth and possessions, but also poor in terms of wealth and possessions simultaneously,” an economist might disagree. “Well, keep in mind that the concepts of wealth and possessions are rather complex. We can speak of net worth, cash flow, liquid assets, real versus nominal value, current value as affected by opportunity costs and other factors, and so on. So, it’s perfectly possible for someone to be rich and poor simultaneously, even if you specify that you’re speaking in terms of wealth and possessions.” You’re likely to encounter situations like these in your college work when you discuss concepts like poverty, death, progress, civilization, leadership, and excellence that may have very different connotations in an English course as opposed to a sociology course, a chemistry course as opposed to an art course, an engineering course as opposed to a law course, and so on.

Critical thinking thus involves not only tracing the pattern of logic that leads someone from premises to a conclusion, but also understanding how that person is defining terms. If someone isn’t careful and changes from one definition to another in different premises, his or her conclusion can be challenged *even if outwardly the logic process seems reasonable*. Consider the following example.

People who live in very large families are often rich.

If we look only at the United States and define the expressions “very large families” as meaning five or more children (large for the US) who may or may not all live together, “often” as meaning more common than rarely or never, and “rich” in terms of the personal support systems their families can provide.

Those who live in developing countries tend to be people who live in very large families.

If we define the expressions “developing countries” as nations where the vast majority of the population live in impoverished agricultural communities, and “very large families” as extended families of twelve or more people, all of whom share a dwelling.

Therefore, those who live in developing countries are often rich.

This error in logic, known as **equivocation**, is extremely easy to spot when the statements are grouped together in a syllogism, but remember that in actual practice a person's argument may well develop over the course of a long speech (or even multiple speeches), a 400-page book, or an article that's dense with technical terms. As you examine someone's argument, therefore, it's always important to ask: **Are the terms here defined in a manner that seems correct and justifiable? Is the person using those definitions consistently throughout the argument?**

We can sometimes gain insight into how people are using terms by understanding who they are and what premises they're likely to leave unstated in their arguments. For instance, consider the following two arguments.

When anti-hunting groups speak out against hunting, they conveniently neglect all of the contributions hunters make for wildlife and habitat. One of the best examples of hunters giving back to wildlife is the federal Duck Stamp, which has generated more than \$750 million for wetlands purchases since 1934. Required of all waterfowl hunters age 16 and up, Duck Stamp sales raise about \$25 million each year—money that helps conserve wetlands within the National Wildlife Refuge System for the benefit of wildlife and the enjoyment of all people. To date, Duck Stamp funds have been used to acquire nearly six million acres of wildlife habitat at hundreds of refuges in nearly every state. There are 555 national wildlife refuges spread across all 50 states and U.S. territories.

Hunters claim that they pay for “conservation” by buying hunting licenses, duck stamps, etc. But the relatively small amount each hunter pays does not cover the cost of hunting programs or game warden salaries. The public lands many hunters use are supported by taxpayers. U.S. Fish and Wildlife Service programs, which benefit hunters, get most of their funds from general tax revenues, not hunting fees. Funds benefiting “non-game” species are scarce. Hunters kill more animals than recorded tallies indicate. It is estimated that, for every animal a hunter kills and recovers, at least two wounded but unrecovered animals die slowly and painfully of blood loss, infection, or starvation. Those who don't die often suffer from disabling injuries. Because of carelessness or the effects of alcohol, scores of horses, cows, dogs, cats, hikers, and others are wounded or killed each year by hunters. In 1988, 177 people were killed and 1,719 injured by hunters while walking through the woods or on their own property.

Both statements contain facts and figures to back up their central arguments. Both statements base their conclusions on a series of sentences that flow logically from one

to another. And yet the two statements reach completely different conclusions because their perspectives on those facts, figures, and logic are so dissimilar.

The first statement points out that duck stamps have contributed more than \$750 million to conservation efforts, which is certainly a great deal of money. But if you read the statement carefully and critically you'll notice that this amount has been stretched out over many, many years (since 1934, in fact) and that these funds only *help* to conserve wetlands, even though the overall impression the reader might receive is that duck stamps are wholly responsible for the massive environmental projects that are mentioned. The second statement picks up on these discrepancies by noting that each hunter only contributes a small amount to conservation efforts and that a great deal of taxpayer money also funds these projects. But if you read the statement carefully and critically you'll realize that "general tax revenues" also includes money paid by the hunters themselves, since they're also taxpayers, and that small individual expenditures on duck stamps can add up to a great deal of money in light of the number of hunters who pay that fee each year.

When we see these statements in isolation, as they're presented here, we probably just end up agreeing with whichever point of view is most similar to our own opinions. But, when we identify their sources, we might approach each statement a bit more warily and objectively since we'll expect that each author is likely to emphasize only those facts that buttress a particular point of view. Selecting certain facts, while ignoring others, is a rhetorical approach known as **cherry picking**. The more you know about the person who makes a particular argument, the more you can be on your guard for the way in which he or she might cherry pick certain facts in order to slant an argument. For instance, the first passage above appears on the website of the **National Rifle Association** (<http://www.nrahuntersrights.org/Article.aspx?id=5681>), while the second passage appears on the website of **In Defense of Animals** (<http://www.idausa.org/facts/hunting.html>). Since both of these organizations have a very definite stance on the issue of hunting, knowing the source of the statements alerts you to exert extra care in determining the underlying (and often unexpressed) premises on which an argument is based.

One convenient resource you should know about when exploring the arguments in favor of and against a controversial issue is the website ProCon.org. Issues are organized by their subject, and the major arguments on each side of the issue are presented in a balanced and objective manner. Links also provide insights into related issues and sources of data. For example, on the topic of the death penalty, ProCon.org not only summarizes the arguments for and against execution of criminals, but also offers links to subsidiary pages related to questions like “Has DNA testing led to significant improvements in the criminal justice system?” and “What are considered capital crimes in the United States?”

Fallacies

Cherry picking is an example of a **fallacy**, a misconception or departure from logic that can lead someone to an incorrect conclusion. Fallacies appear in what we hear and read all the time, from the speeches of politicians to news broadcasts to the textbooks used in college courses. Entire books have been written about common fallacies — see, for instance, Gula (2007) and Damer (2005) — but the following is an alphabetized list of some of the most important fallacies you should watch for throughout your college education.

- *Ad hominem* (Latin: “against the person”): attacking the person, not his or her argument. An example would be an attempt to refute the truth of a statement because it was made by someone who committed a crime. “Are we to believe the word of a mass murderer?” Mass murder is terrible, of course, but it has nothing to do with whether any given statement is true or false.
- **Begging the question:** a circular argument in which the point a speaker or writer is trying to make is already assumed by one of his or her premises. A well-known example of begging the question is the **ontological argument for the existence of God**, as proposed by the Benedictine monk **St. Anselm** (eighth century C.E.). This argument suggests that God is by definition the most perfect being that can be imagined. Since a being that exists is more perfect than one that does not exist, Anselm claimed that God must necessarily

- exist. But this argument begs several questions: Do completely perfect beings exist all? Must God be inherently perfect in every respect? Is existence necessarily more perfect than non-existence (a point often challenged by eastern philosophy)? and so on.
- ***Dicto simpliciter*** (Latin: “by means of a statement made in a summary manner”): a sweeping generalization. Perhaps three of your friends lied to you at one time or another. All of these friends happened to be redheads. It would be the fallacy of *dicto simpliciter* to assume, on the basis of this extremely small sample (three redheads out of many millions all over the world), that no one with red hair can be trusted.
 - **False analogy**: a comparison suggesting that, since two things are similar in one way, they must be similar in other ways as well. For instance, many people argue that Hitler’s rise to power was facilitated by the policy of appeasement followed by other governments at the time. To suggest that whenever someone is appeased “another Hitler will inevitably result” is to engage in a false analogy.
 - **False dilemma**: the depiction of a situation as a choice between a limited number of options when other possibilities exist. For instance, it’s a false dilemma to suggest that greater national security can only be achieved through widespread restrictions on civil liberties. Such an argument ignores the ways in which freedom of speech and association can actually *enhance* national security.
 - **Half-truth**: an attempt to bolster an argument by not telling the entire story. A person who claims to be generous because he or she lent a friend \$10,000, but doesn’t reveal that he or she regretted that decision almost immediately and demanded the money back the same day, is guilty of telling a half-truth.
 - ***Ipse dixit*** (Latin: “he said [it] himself”): an argument from authority. The fallacy of *ipse dixit* occurs when someone argues that something is true simply because an important person said it or because it appeared in print. For instance, claiming that budget deficits don’t matter because Ronald Reagan said they didn’t commits the fallacy of *ipse dixit*.

- ***Post hoc, ergo propter hoc*** (Latin: “after this, therefore because of this”): drawing false correlations. An example of this fallacy would be concluding that, since more students in honors programs go on to graduate school than other students, the honors program made their further post-baccalaureate study more likely. While that conclusion *may* be true, it’s also possible (and far more likely) that honors programs attract the type of high ability, highly motivated students who would’ve gone on to graduate school anyway. A related error in logic occurs when we assume that, simply because two variables are correlated, one must be the cause of the other.

Key Principle

Correlation does not guarantee causality. Simply because two variables share a relationship, you can’t assume that one of them triggers the other.

- **Red herring:** a distracting statement that has no relevance to the topic at hand. An example would be to argue that the United Nations can’t be trusted with UNICEF funds because, in the speaker’s view, that organization did not support the American invasion of Iraq strongly enough.
- **Regressive fallacy:** the false assumption that, when fluctuations follow a similar pattern, one fluctuation must have caused the other. For example, stock prices rise and fall. Hemlines rise and fall. Coincidentally, stock prices and hemlines may rise and fall in a similar pattern, but you cannot conclude from this occurrence that one of these phenomena is the cause of the other.
- **Self-fulfilling prophecy:** a term coined by the sociologist **Robert K. Merton** (1910-2003), in which the strength of a statement leads to its own fulfillment. The classic example of a self-fulfilling prophecy is the claim that a bank (which is financially sound when the statement is made) is going to go out of business. If enough people believe this statement, it can result in a run on the bank, which then indeed goes out of business.
- **Straw man:** an argument made because you have a handy refutation, not because your opponent has made it. A straw man argument seeks to discredit everything a person of an opposing view has said. By attacking this false

argument, the speaker wants to make the opponent's claims seem weak or insignificant. In the statements about hunting that we considered earlier, In Defense of Animals stated, "Funds benefiting 'non-game' species are scarce." Unless someone has stated that duck stamps are useful because they provide funding to benefit *all* animals, this statement is a straw man. After all, isn't it better to benefit some types of animals rather than none at all?

For further examples of logical fallacies, see McInerny (2005).

Critical and Creative Analysis of College-Level Material

Being able to recognize fallacies in your own thinking is important because they can weaken your arguments in papers or presentations. Like a syllogism based on false premises, logical fallacies don't prove that a conclusion can't be true, but they always undermine your claim that the argument *must* be true. In a similar way, we fail to use proper skills of critical and creative thinking in our work when we reduce complex ideas to overly simple (even simplistic) ideas. Any course in which you're challenged to propose innovative solutions, identify unexpected patterns, develop new ideas, critique the contributions of others, or defend an interpretation of a multifaceted work requires you to pay this challenge the respect it deserves. One of the most common ways in which college professors try challenge students to apply sophisticated critical and creative thinking skills is to assign an extended essay or paper. The value of this type of composition comes, not just from the writing itself, but from the way the activity forces you to think about complex material. For instance, by being asked repeatedly to organize their ideas into specific expository forms like a **five-paragraph essay** or an extended **research paper** (see Unit Five), students develop a more refined way of structuring ideas that the folklorist and professor **Robert C. Cosbey** called **thinking in paragraphs**. See Cosbey (1966) 35-53. In other words, as we write extended passages, we begin to see ideas, not as isolated observations, premises, or claims, but as elements in a more advanced web of thoughts and concepts.

Early in our lives, most of our writing, like most of our thoughts, tends to be **paratactic** in nature: We present ideas in an unconnected manner, simply introducing one thought after another without exploring their inter-relationships. But in order for

the paragraphs of an essay or an extended research project to be comprehensible, the possible connections that exist among their ideas or observations must be clear. At the simplest level, these connections might arise through **conjunctions** (expressions that connect two ideas of roughly equal importance, such as “and,” “also,” “moreover,” “in addition,” or “as well as”), **disjunctions** (expressions that contrast two opposing ideas, such as “but,” “however,” “nevertheless,” “although,” “whereas,” “on the other hand,” and “notwithstanding”), and **subordinate conjunctions of cause** (expressions implying that one fact results from another, such as “since,” “because,” “in order that,” “if,” and “so that”). But what Cosbey had in mind goes beyond the mere logical linking of separate thoughts. His phrase “thinking in paragraphs” referred to a habit of the mind in which a person is constantly aware of possible relationships among the ideas, facts, concepts, and observations that he or she encounters. An example will make this notion clearer. Suppose you meet someone who enjoys reading romantic novels and also claims to fall in love with one person after another. Instead of seeing these occurrences as merely two isolated phenomena, the intellectual practice of “thinking in paragraphs” might cause you to consider several possible associations among these ideas.

- Perhaps the reading of romantic novels causes the person to approach the world from an idealistic perspective, and thus the person assumes that he or she is deeply in love with people whom others might regard as mere acquaintances or the objects of a passing crush.
- Perhaps the person’s natural inclination to fall in love quickly, though not deeply, leads this person to seek out the type of books that reflect his or her outlook on life.
- Perhaps both of these statements are true simultaneously, and the person is engaging in a “feedback loop” or “vicious cycle.” The novels cause the person to believe that he or she is in love; the sense of being in love causes the person to read even more romantic novels.
- Perhaps it’s a mere coincidence that these two occurrences happened simultaneously. It may be that person is the type of individual who falls in love easily but actually dislikes the false view of love presented in romantic novels.

He or she only enjoys reading them to mock their silly conventions or because he or she enjoys discussing how awful they are with friends.

In other words, by being both creative and critical in the way we explore possible relations between events and observations, we develop a more nuanced view of the world, propose alternative explanations for the same event, and examine evidence that supports or refutes the different explanations we've proposed. We become more aware of the world's complexity and more curious about answering the type of questions that tend to arise in such a world.

Key Principle

There are rarely simple answers to complex questions, just as there are rarely simple solutions to complex problems.

Moreover, even though we've been focusing on the way in which critical and creative thinking can be strengthened through exercises in writing prose, we have to remember that these same skills are also advanced by writing and interpreting poetry. The discipline required to organize ideas into specific artistic units like sonnets or haiku helps us look at the world in new ways, finding connections through similes and metaphors that we might not otherwise have recognized. Furthermore, the structural requirements of these forms compels us to analyze our thoughts, pare them down, express them in alternative ways, and adhere to the rules of a given literary form. Many types of writing that are encountered in college — such as lab reports, business plans, case studies, and character analyses — also have their own rules (or at least expectations) that will force you to structure your thoughts in a particular way. Any time we have to operate within rules like these, we become more skilled in finding alternative ways of structuring, expressing, and critiquing our ideas.

Being Intentional

As you consider the courses you're likely to take in college, does it appear to you that you'll have a greater use for critical thinking or creative thinking? What steps could you take right now in order to improve your skills in that area so that you'll derive the greatest benefit from those classes? If you wanted to take a few more

courses to help you become more analytical, which academic discipline(s) would be most likely to offer them? If you wanted to take a few more courses to help you become more imaginative, which academic discipline(s) would be most likely to offer them?

Applying Creative and Critical Thinking to the Work of Others

Of course, it's not only in our own work where we need to apply critical and creative thinking. We're also constantly being exposed to the thoughts and opinions of others in the texts we read and the speeches we hear. Accepting everything you read at face value is just as much a lapse in reasoning as simply objecting to something you hear because it offends you or conflicts with your own preconceived notions. But applying critical and creative thinking to the works of others isn't simply a matter of spotting fallacies and checking the flow of syllogisms. As in the case of the two passages on hunting that we saw earlier, it involves finding out what you can about the perspectives of a writer or speaker and treating those perspectives as tacit premises. It involves thinking in paragraphs — considering someone's contention as a whole — not simply examining individual sentences. And it involves exploring the context in which an argument appears. As an example, let's consider the opening words of Bill Ong Hing's *Departing Our Souls*, the type of work you might encounter in a college class.

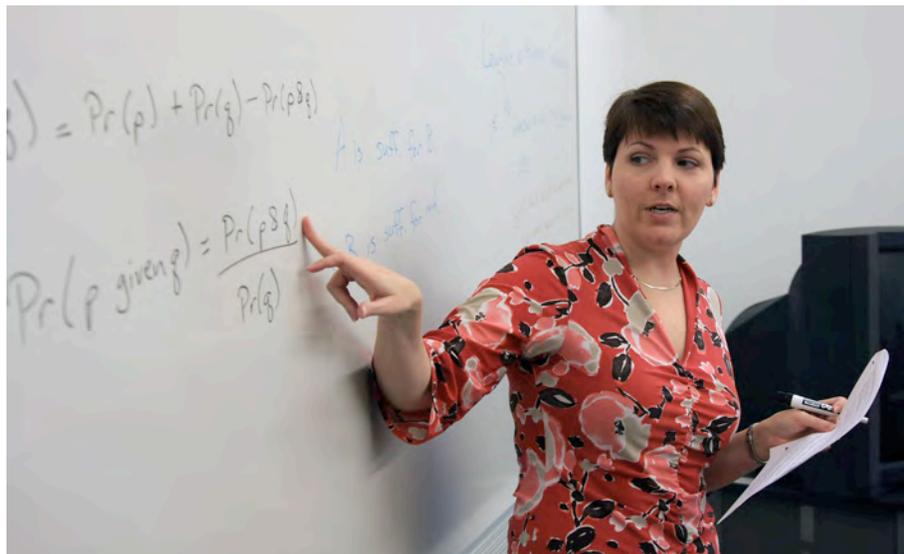
The furor over illegal immigration is palpable. Things are out of control. We are being overrun. They have broken the law. They take jobs away from native workers. They use our resources. They don't share our values. They don't speak English. Simply put, this is a crisis! My solution is simple. Calm down. Welcome undocumented workers. We have recruited and relied on them for generations. They have contributed to the economic greatness of our country. Welcome their families. Their children have become part of the social fabric of the nation. Like newcomers of the past, they are here to seek a better life through hard work and dedication to their families. To welcome them is to do the right thing. In fact, let's give them a parade. Hing (2006) 8.

Despite the clarity of its sentences, this passage actually doesn't tell you very much. After all, does the author mean these words to be taken seriously and is simply presenting his case through the use of **hyperbole** (exaggeration) in order to make his argument more memorable? Is he being satirical — or perhaps sarcastic — and

ridiculing ideas that stand in direct opposition to what he truly believes? Or is there another reason for starting his book in this way? Since we only have the printed words and can't hear his tone of voice or see his facial expressions, how do we go about determining the true intent of these words?

In an assigned book, where you have access to the entire text, the context itself may be enough to answer these questions. You have the entire rest of the book to see what Hing really believes. But suppose for a moment that this passage is cited by another author, as I have done, without that context. Suppose, too, that you have no way of getting access to the book as a whole. We'll assume that our hypothetical author takes this passage literally and states, "The sheer ridiculousness of these statements indicates how foolish the arguments made by pro-immigration authors are. Not only do these views run contrary to those of the vast majority of American citizens, but they also ignore the obvious economic impact that a large influx will have on public services like education, the fire department, and police protection." If our hypothetical author has misunderstood Hing's central premise, then there's a gaping hole in this argument. It would be as though someone had read *A Modest Proposal* by **Jonathan Swift** (1666-1745), the author of *Gulliver's Travels*, and concluded that Swift was serious in his argument that the Irish should eat their own children. How would you go about determining whether Hing meant the opening of his book to be taken literally if you can't get a hold of the entire work?

Questions of this sort will arise all the time in your college work. Your professors will expect you to come to class with the assigned reading not only complete but also examined critically in terms of its premises and conclusions, and



considered creatively to determine whether other conclusions may be possible. The keys will always be to see whether you can identify any unproven assumptions or unstated premises that affect the issue, follow the author's argument to determine whether any lapses occur in his or her reasoning, identify the likely implications of any proposals made by the author (including any unintended but likely consequences), and observe whether any crucial data have been overlooked by the author. Although you will certainly have your own beliefs about the issue, step back a bit and try to view the matter as objectively as you can. If you could put yourself in that person's position, how might the way in which you look at the world be different?

Conducting Original Research into Critical and Creative Thinking

Until this point, we've been looking at why critical and creative thinking are important for your own learning and research. Yet it's also possible to develop undergraduate research topics that *explore* such phenomena as critical and creative thinking. These topics offer many interesting areas for research since they span so many academic disciplines. Here are just a few examples.

Discipline	Creative thinking	Critical thinking
BIOLOGY	DOES THE BRAIN RESPOND IN EXACTLY THE SAME WAY WHEN SOMEONE IS ENGAGING IN VERY DIFFERENT CREATIVE ACTIVITIES, SUCH AS PLAYING THE PIANO, RECITING A POEM, VIEWING A PAINTING, AND EXPLORING AN INNOVATIVE IDEA?	WHICH TYPES OF TRAUMATIC BRAIN INJURY MOST INTERFERE WITH A PERSON'S ABILITY TO THINK CRITICALLY? WHAT OTHER IMPAIRMENTS TEND TO RESULT FROM THOSE SAME INJURIES?
PSYCHOLOGY	WHAT IS THE CORRELATION (IF ANY) BETWEEN MEMORY (EITHER SHORT-TERM OR LONG-TERM) AND THE ABILITY TO ENGAGE IN CREATIVE ACTIVITIES SUCH AS DRAWING, THE WRITING OF POEMS OR SHORT STORIES, THE	DOES THE ABILITY TO THINK CRITICALLY IN ONE TYPE OF ENVIRONMENT (SUCH AS SOLVING SUDOKU PUZZLES OR DEVELOPING GEOMETRIC PROOFS) TRANSFER TO SIMILAR ABILITIES IN OTHER TYPES OF CRITICAL THINKING (SUCH AS

	<p>IDENTIFICATION OF NEW PATTERNS, AND SO ON?</p>	<p>DEVELOPING THE MOST EFFICIENT WAY TO PERFORM A COMPLEX TASK OR DECODING ENCRYPTED MESSAGES)?</p>
<p>SOCIOLOGY</p>	<p>WHAT IS THE RELATIONSHIP (IF ANY) BETWEEN FAMILY INCOME AND/OR PARENTS' LEVEL OF EDUCATION AND SOMEONE'S LEVEL OF SKILL IN VARIOUS CREATIVE ACTIVITIES?</p>	<p>DO SPECIFIC TYPES OF LOGICAL CHALLENGES BECOME EASIER OR MORE DIFFICULT FOR MOST PEOPLE WHEN THEY ATTEMPT TO SOLVE THEM IN A GROUP VERSUS ON THEIR OWN? IF THEY BECOME EASIER, WHAT SIZE GROUP APPEARS TO BE OPTIMAL?</p>
<p>ANTHROPOLOGY</p>	<p>WHEN CULTURES THAT WERE ORIGINALLY INDEPENDENT BECOME SUBCULTURES WITHIN A LARGER UNIT (FOR EXAMPLE, A TRIBE THAT IS FORCIBLY ABSORBED BY A STATE), WHAT DETERMINES WHETHER THE SUBCULTURE ADOPTS THE STYLE OF ARTISTIC EXPRESSION DEMONSTRATED BY THE MAIN CULTURE? WHAT DETERMINES WHETHER THE SUBCULTURE ACTIVELY STRIVES TO PRESERVE ITS OWN HERITAGE?</p>	<p>ARE THERE DIFFERENT TYPES OF LOGIC FOUND IN DIFFERENT CULTURES? MOST PEOPLE READING THIS BOOK WILL BE FAMILIAR WITH WESTERN OR EUROPEAN LOGIC AS DEVELOPED BY ARISTOTLE AND LATER AUTHORS, BUT ARE THERE ALTERNATIVE METHODS OF REACHING CONCLUSIONS SYSTEMATICALLY THAT APPEAR IN OTHER CULTURES? IF SO, CAN WE LEARN ANYTHING FROM THESE ALTERNATIVE APPROACHES?</p>
<p>LITERATURE</p>	<p>WHICH METHODS OF LITERARY CRITICISM ARE MOST EFFECTIVE FOR YOU IN ANALYZING WORKS OF LITERATURE, THEATER, OR ART ABOUT AUTHORS, PAINTERS, OR POETS?</p>	<p>MOST WORKS OF LITERATURE HAVE STRUCTURES THAT CAN BE EXAMINED THROUGH THE TECHNIQUES OF CRITICAL THINKING. YET SINCE SO MUCH OF OUR REACTION TO LITERATURE IS SUBJECTIVE, MULTIPLE READERS ARE UNLIKELY TO IDENTIFY THE STRUCTURE OF A WORK IN THE SAME WAY. HOW MIGHT SOMEONE GO ABOUT DEVELOPING A CRITICAL APPROACH TO A PARTICULAR GENRE THAT HAS A HIGH LEVEL OF INTER-RATER RELIABILITY (ON THIS CONCEPT, SEE THE LAST UNIT)?</p>

<p>BUSINESS</p>	<p>MANY COMPANIES ARE SUCCESSFUL BECAUSE THEY'RE HIGHLY INNOVATIVE IN DEVELOPING A NEW PRODUCT OR SERVICE. WRITE A COMPREHENSIVE BUSINESS PLAN FOR A PRODUCT OR SERVICE THAT IS ABSOLUTELY UNLIKE ANYTHING ELSE AVAILABLE ON THE MARKET TODAY.</p>	<p>THE TERM <i>FUNDAMENTAL ANALYSIS</i> IS APPLIED TO EXAMINATION OF SECURITIES (SUCH AS STOCKS) FROM A DATA-DRIVEN PERSPECTIVE SUCH AS RETURN ON INVESTMENT (ROI), MACROECONOMIC FACTORS, AND REVENUE TRENDS. DEVELOP A NEW MATHEMATICAL MODEL OF FUNDAMENTAL ANALYSIS THAT CAN TAKE MASSIVE AMOUNTS OF DATA INTO ACCOUNT AND TELL YOU THE CURRENT STOCKS MOST LIKELY TO RISE OR FALL IN VALUE.</p>
<p>ART</p>	<p>NEARLY ANY SCHOLARLY ENDEAVOR IN THE FINE AND PERFORMING ARTS THAT RESULTS IN A NEW PRODUCT, LIKE A PAINTING OR A RECITAL, INVOLVES CREATIVE THINKING SKILLS. WHAT TYPE OF ARTISTIC CREATION COULD YOU DEVELOP THAT WOULD BE COMPARABLE IN CHALLENGE AND EDUCATIONAL VALUE TO THE WRITING OF, SAY, A THESIS IN HISTORY OR PUBLISHING THE RESULTS OF AN INNOVATIVE SERIES OF EXPERIMENTS IN THE NATURAL SCIENCES?</p>	<p>PROFESSIONALS IN THE FINE AND PERFORMING ARTS SOMETIMES SAY THAT THEIR PURSUITS HELP PEOPLE DEVELOP CRITICAL THINKING SKILLS. HOW WOULD YOU DESIGN AN OBJECTIVE EXPERIMENT TO TEST THIS HYPOTHESIS?</p>
<p>PHILOSOPHY</p>	<p>EXAMINE SOME OF THE MAJOR PHILOSOPHICAL PERSPECTIVES ON THE SUBJECT OF CREATIVITY AS A FOUNDATION FOR YOUR DEVELOPMENT OF A NEW, ORIGINAL PERSPECTIVE.</p>	<p>SYMBOLIC LOGIC ALLOWS PHILOSOPHERS TO REPRESENT COMPLEX ARGUMENTS IN TERMS OF SHORTHAND EXPRESSIONS FOR CONCEPTS AND THEIR RELATIONSHIPS. USING THE TECHNIQUES OF SYMBOLIC LOGIC, DEMONSTRATE WHY THE REASONING OF A CURRENT POLITICIAN, ECONOMIST, OR PHILOSOPHER IS FLAWED.</p>

<p>HISTORY</p>	<p>AESTHETIC PREFERS CHANGE OVER TIME. IN FACT, EVEN THE NOTION OF WHAT CONSTITUTES CREATIVITY EVOLVES IN A SOCIETY. TAKING A SPECIFIC AREA AS THE FOCUS OF YOUR STUDY, WHAT FACTORS SHAPE THAT PEOPLE’S APPROACHES TO ART, MUSIC, THEATER, AND DANCE OVER TIME?</p>	<p>MANY PEOPLE REGARD THE DEVELOPMENT OF CRITICAL THINKING AS AN IDENTIFIABLE CONCEPT AS BEGINNING WITH SOCRATES IN THE FIFTH CENTURY BCE. USING HISTORICAL METHODS, DEMONSTRATE EITHER THAT THIS COMMON ASSUMPTION IS FALSE OR IDENTIFY THE THREE MOST CRUCIAL TURNING POINTS IN THE WESTERN IDEA OF LOGIC OR CRITICAL THINKING FROM SOCRATES TO THE MODERN DAY.</p>
<p>EDUCATION</p>	<p>AT WHAT POINT IN THE LIVES OF MOST CHILDREN DO THEY BECOME TRULY CREATIVE IF WE DEFINE CREATIVITY AS “DEVELOPING AN IMAGE, SOUND, CONCEPT, OR ACTIVITY THAT IS TRULY INNOVATIVE AND HAS NO PARALLELS OR PREDECESSORS?</p>	<p>WHAT ARE EFFECTIVE STRATEGIES IN TEACHING YOUNGER STUDENTS TO DEVELOP THEIR ABILITY TO SOLVE PROBLEMS LOGICALLY?</p>
<p>HEALTH FIELDS</p>	<p>FOR WHICH TYPES OF ILLNESSES OR INJURIES DO ART THERAPY, MUSIC THERAPY, AND DANCE THERAPY SEEM MOST EFFECTIVE?</p>	<p>DIAGNOSING ILLNESSES IS FREQUENTLY A COMBINATION OF INTUITION AND LOGIC. WHAT MIGHT BE SOME MORE EFFECTIVE WAYS OF CAPTURING THE CRITICAL PROCESSES THAT LIE BEHIND THIS INTUITION SO AS TO MAKE COMPUTER-BASED DIAGNOSES MORE ACCURATE?</p>
<p>ENGINEERING</p>	<p>DEVELOP A DEVICE THAT ALLOWS A SEVERELY HANDICAPPED INDIVIDUAL TO ENGAGE IN A CREATIVE ACTIVITY, SUCH AS PAINTING, COMPOSING MUSIC, OR CRAFTING DIGITAL FILMS.</p>	<p>RICHARD PAUL, ROBERT NIEWOEHNER, AND LINDA ELDER DEVELOPED A USEFUL MODEL THAT ADDRESSED THE WAY IN WHICH CRITICAL THINKING IS USED IN ENGINEERING. SEE PAUL, NIEWOEHNER, AND ELDER (2006). STUDY THEIR APPROACH AND THEN PROPOSE AN ALTERNATIVE MODEL</p>



THAT YOU BELIEVE TO REFLECT
CURRENT PRACTICES MORE
COMPLETELY.

Even more importantly, topics related to critical and creative thinking can be approached in an **interdisciplinary** fashion, combining the research methods of biology and psychology, art and philosophy, literature and anthropology, and so on. It's even possible to develop research topics that combine three or more of these disciplines in order to look at issues in new and unexpected ways.

- As an exercise in **creative thinking**, can you think of a possible research topic that would involve biology, health fields, psychology, education, and engineering?
- As an exercise in **critical thinking**, can you develop a definition of *being creative* that, in a research project, involves behaviors than can be objectively observed or measured? In the case of behaviors that you can observe, think of activities where you could respond definitely *yes* or *no* to the question, "Is this behavior present?" For measurable behaviors, think of activities that can be quantified or objectively classified in some way.

Being Reflective

As you consider your experience in college so far, identify the most creative person you've met so far. In a similar way, identify the person you regard as having the best critical thinking skills. Choose these two people from those you have met only since you've been a college student; don't select a member of your family or a friend you've known for a long time. What *behaviors* have you observed that caused you to identify the people you selected? What *personality traits* did you observe in them? Do you share any of those personality traits?

Once you've developed your research topic, it's then time to begin considering how you could pursue that study effectively. In other words, how do you go about learning what research may already have been done on this topic or something similar? How



would you develop your hypothesis, model, or open-ended question? How would you learn about which faculty member (or group of faculty members) at your

school would be most appropriate to mentor you in your project? Although we'll explore systematic ways of answering these questions elsewhere in this book, it's helpful for you to begin thinking about them now. After all, the goal of a college education isn't simply to conduct this or that particular study, but rather to develop the tools and habit of approaching each interesting question you encounter in a spirit of inquiry and exploration. When you achieve that goal, you will have entered what we might call a **culture of inquiry**: the practice of regularly approaching questions and problems with a desire to discover innovative answers and solutions.

Critical and Creative Thinking about Campus Codes

Before we end this discussion of critical and creative thinking, it's important to realize that these skills aren't just useful on the *academic* side of your college life; they're just as important in your social, co-curricular, and extracurricular activities as well. Let's examine how we might apply these skills to some of the codes commonly found at colleges and universities: honor codes, conduct codes, and campus creeds. While all three of these ideas have certain features in common, there can be several distinctions among them.

- An **honor code** is usually a *self-imposed* standard of behavior. It asserts that the members of a community will neither engage in certain types of activity nor tolerate violations of these standards by their peers. Schools with honor codes frequently have a community council that enforces the code, recommending

sanctions for its violation and sometimes operating independently of the institution's own administrative structure.

- A **conduct code** *may* be self-imposed but it's often *externally* developed by some supervisory group or authority. For instance, while student government may develop an honor code itself, it's not uncommon for a conduct code to be created by faculty members, student life personnel, administrators in residence life, or staff members in the dean of students' office. Broader than most honor codes, many conduct codes — and similar codes that relate to *faculty* conduct — impose sanctions on behavior that disrupts the order of the community, interferes with the educational mission of the institution, or puts the community at risk.
- A **campus creed** has many features in common with an honor or conduct code, but it focuses on the type of behavior that a community wishes to *encourage* rather than what it's trying to prohibit. In other words, much of the language in both honor codes and conduct codes tells the reader what *not to do*, but provides relatively little guidance about what its target audience is expected to *do*. Since many campus creeds present an ideal that can be challenging to achieve, they usually don't suggest penalties for those who fail to live up to these standards.

Academic honor codes were first developed at the suggestion of **Thomas Jefferson** (1743-1826), the third president of the United States, second governor of the Commonwealth of Virginia, and primary author of the Declaration of Independence. Jefferson believed that the **College of William and Mary**, from which he had graduated, and the **University of Virginia**, which he founded, would operate more collegially if students themselves monitored their standards of behavior rather than being supervised by the faculty or governing board. When a professor was murdered by a student at the University of Virginia in 1840, the institution's honor code was then reinforced, establishing the basic elements still found in most university honor codes today:

- A high standard of expected behavior.
- A pledge that all students take upon enrolling.

- Language within the pledge stating that each student agrees to refrain from certain actions and to report all known infractions of the code.
- A process that allows alleged violations of the code to be reviewed by a court of the defendant's peers.

See Code of Honor (2008), Honor Code (2005), and Hitchcock (1999) 50. At certain institutions, all students are

asked to sign brief statements on each quiz, exam, or assignment reaffirming that the work was performed in accordance with the school's honor code. At other schools, all students are regarded as subject to the code as a condition of matriculation, and so



reaffirmation of the code on individual exams or assignments is deemed unnecessary. Some institutions, too, require new students to sign an honor pledge as part of their orientation activities and regard that signature as binding for as long as that student is enrolled at the school.

Conduct codes tend to embrace a far broader set of behaviors than do honor codes. For instance, while honor codes prohibit misrepresentation of oneself or one's work and are sometimes limited specifically to issues of cheating and plagiarism, conduct codes address any activity that could be harmful to the community or its members. Among the behaviors commonly prohibited by conduct codes are drug use, underage drinking, excessive noise, incivility, destruction of property, assault or physical abuse, coercive sexual activity, harassment, hazing, stalking, the possession of dangerous or combustible materials, recklessness, and willful disruption of campus activities. In addition, many conduct codes specify that students must obey all state and federal laws, parking and traffic regulations, and the ethical standards and protocols appropriate to the student's academic field. Finally, in the case of certain

private colleges, specific religious traditions may also be required of students. Due to the complex range of issues that they address, conduct codes are frequently much longer than honor codes, often filling an entire volume with regulations and clarifications. Some schools ask students to pledge support of both the honor code and the institutional code of conduct at a special ceremony where the students enter their names into a formal document, agreeing to the terms of the two codes.

Campus creeds are even broader efforts to promote desired patterns of behavior, usually tying their aspirations to the institution's mission and core values. Here, for instance, is the creed of Gordon College, a four-year public college located in Barnesville, Georgia.

The Gordon College Creed

I believe in education centered on the principles of empowerment, excellence and personal growth. I believe in intellectual and academic honesty and integrity without which I cannot earn the respect of those with whom I interact. I believe in developing a sound mind, a sound body and a spirit that is not afraid. I believe in serving my country and my community by seeking justice, respecting diversity and living courageously. I believe that these goals can only be achieved through hard work, open-minded inquiry and responsible living. Gordon College Creed (2008).

The Gordon College Creed was developed by Dr. **Chad L. Davies** of the Division of Mathematics and Natural Sciences and Dr. **Marvin Thomas** of the Division of Business and Social Science. Like all well-constructed campus creeds, it establishes a very ambitious goal for members of the community to pursue, reflects the mission and values of the institution, and commits the community, not merely to refraining from actions that are injurious, but also to performing actions that are beneficial. Creeds tend to be rich in words that are value-laden, such as **excellence, personal growth, integrity, justice, hard work, open-minded inquiry, and responsible living**. They

make it clear that the institution is devoted not only to training the mind but also to addressing issues of character and citizenship.

Being Innovative

McCabe, Trevino, and Butterfield (1999) argue that students at institutions with well-established honor codes tend to view academic dishonesty differently from students at institutions where no honor code exists. How might you design a study in which you use *quantitative* analysis to either confirm or disprove the findings reached by McCabe, Trevino, and Butterfield in their *qualitative* study? [See McCabe, Trevino, and Butterfield (1999).]

- Because the academic performance of individual students is confidential and highly protected information, what steps could you take to eliminate the need for you to have inappropriate access to privileged information?
- What issues of privacy and the use of human subjects would you need to address in order to complete your study?
- In this study, what would your dependent variable be? What would your independent variable(s) be?
- How might you then expand your study in order to determine whether schools with honor codes have significantly fewer instances of cheating than do schools lacking honor codes?
- Would you find it important in your study to distinguish between schools that have had honor codes for fifty years or more, five to fifty years, and fewer than five years? What differences may occur in the role of honor codes over time?

The Relationship of Critical and Creative Thinking to Honor Codes

At this point, you may be wondering what honor codes, conduct codes, and campus creeds have to do with the primary subject of this unit: enhancing your critical and creative thinking. The fact is that all three of these approaches to community behavior place students in situations where they have to make ethical choices and, when those choices are sufficiently complex, they require an advanced level of critical and creative

thinking. Let's begin by exploring how critical thinking may be involved in making ethical choices. Imagine for a moment that you are a student at an institution where you have pledged to adhere to the following code of behavior.

Recognizing that honor among students is one of our community's core values, I pledge not to lie, cheat, steal, or plagiarize the words or ideas of others. I also agree to report any infractions of this code by my fellow students to the Honor Council.

Having sworn to uphold this code *as a condition for your enrollment at this institution*, how would you handle each of the following situations?

1. A professor assigns you an essay that's supposed to contain only your own insights and ideas. Over lunch, you happen to discuss the topic of this essay with a fellow student and, in the course of your conversation, your friend says several things that cause you to reconsider your whole approach to this issue, eventually adopting a perspective closer to what your friend suggested than to your own thoughts before lunch. In light of the code you have sworn to uphold and your professor's instructions, how do you handle this situation?
2. One of your friends has a paper due at 5:00 pm on a certain day. You witness your friend slip the paper under the professor's door at 5:12 pm on the day it is due. The professor didn't return to the office to collect the papers until the next morning and so doesn't know which papers arrived before the deadline and which arrived after. Since the paper was twelve minutes late, are you required to turn in your friend for a violation of the Honor Code?
3. Someone you know from one of your classes is extremely sensitive and continually suffers from bouts of severe depression. You have even heard that this student has attempted suicide on more than one occasion. One day you overhear a conversation between this student and one of your friends. Your friend returns the rough draft of a paper the other student has written and says, "I looked over that paper you wanted me to read. I corrected a few typos for you, but otherwise I think it's great as it is. I just wish I wrote as well as you do." These comments please the student who takes the draft and leaves. Your

friend then says to you, "I just didn't have the heart to say how awful that paper really is. It rambles all over the place and never gets around to making a point. But in light of what that student's been through recently, I think too much honesty would've just been cruel. I just hope the professor agrees." The code that you accepted requires you neither to lie nor to tolerate those who do. Are you under an obligation to report your friend?

4. A professor assigns you an essay topic for the next class that's almost identical to a topic you were assigned in a previous course. As you read over your earlier essay, you realize that you have nothing new to say on this topic and that, slightly revised for style rather than content, your previous essay will fully satisfy the professor's requirements. Although you try several times to stop by the professor's office to ask for permission or guidance on this assignment, the faculty member is never in when you are there. At the very beginning of the next class, the professor says, "Pass in those essays I had you write." Do you turn in your slight revision of your earlier essay?
5. On a test, you're completely stumped by one particular problem. You are on the verge of leaving that answer blank when another student asks the professor, aloud and in front of all the students taking the test, a question that inadvertently contains the precise information you need in order to solve the problem. Since you were put on the right track by another student's mistake, do you use the information you learned in this way to solve the problem? Do you leave it blank? Do you take some other approach? Would you regard it as cheating if another student was able to solve the problem in this way when you knew the right answer all along?
6. One of your professors spends a great deal of time in class talking about proper citation methods. In fact, you are somewhat surprised that the professor devotes an entire class period to the importance of placing short quotes within quotation marks and using block indentation for quotes that are four lines or longer, reviewing things you already know about how to cite the source in each case. Later in that same course, one of your fellow students submits a paper in which a source is properly cited but the student neglected to place quotation

marks around this two-line quote. The professor then cites the honor code and charges the student with plagiarism. If the charge is upheld, the student can be expelled. Do you believe the professor was justified in making this charge, given the amount of time devoted to this issue in class, or was this a “teachable moment” that the professor should have addressed less formally?

7. You are taking a course for which you have to write a significant paper. In an entirely different course, a student makes an observation that strikes you as a perfect way of providing a theme and focus for your paper in the other course. Are you able to use the concept or idea introduced by that other student in your other course?
8. Whom does a violation of this school’s honor code hurt? Are there any other individuals or groups who are also harmed in some way by a violation of the honor code as it is written?

As you reflect on these questions, it can be helpful to consider both the specific issues involved in the case you’re addressing and the general critical processes you are using to make your decision.

- For instance, do you try to imagine the long-term consequences of your potential decision?
- Do you consider what might occur if your decision were cited by others as a precedent?
- Do you find yourself more inclined towards a **universalist** perspective (where the same rule applies to all people in all circumstances) or a **situational** perspective (where nearly all rules must be modified depending on the particular circumstance or context)? In other words, do you find yourself attempting to distinguish between the **letter of the law** and the **spirit of the law**?
- Do you find that you subscribe to certain core values that supersede your adherence to the code of conduct you have agreed to uphold in this exercise?
- What do all of these considerations reveal to you about your thought processes when you are confronted with complex or ambiguous questions?

You may discover that a question you thought had an obvious and clear answer was approached quite differently by other students in your class. If this situation occurs, don't regard it as an instance where one of you must be right and the other must be wrong. As we've already seen, even though there will be many cases throughout your college career where a specific answer will be either right or wrong, there will also be many others where no one answer is correct or where many answers are all equally correct. Value these differences in opinion as opportunities to expand your understanding of the world and how people approach complex issues.

So far, you've been using a **critical or analytical approach** in exploring these ethical issues. You've been breaking complex arguments down into smaller premises, evaluating the implications of these premises, and considering how each aspect of the argument corresponds to the others. Now it's time to adopt a more **creative or synthetic approach** and develop a new solution to the problem that our hypothetical code of conduct was intended to solve. Think over the issues that seemed most difficult or uncomfortable as you tried to apply the code of conduct to the imaginary cases that were suggested. In what type of situations did you find yourself encountering dilemmas, instances where a strict reading of the code may have resulted in an outcome that deviated from the probable *intent* of the code? Where, too, might the code have urged you to perform an action that you would have regarded as unethical or undesirable? Based on these reflections, develop your *own* code of conduct or honor code that you regard as superior to the hypothetical example above. In other words, if you could design a code by which all students at your college or university would live, what would that code contain? If you're having trouble coming up with ideas, use some of the suggestions for stimulating creative thought that we explored earlier in this unit or try one of the following ideas that John Fabian suggests in *Creative Thinking & Problem Solving* (1990) 199-200.

Paraphrase: Describe idea in your own words to see if you caught intended meaning. [*Read over the hypothetical honor code that appears earlier in this unit and then, without looking at it, express it in your own words, making improvements wherever you believe they're necessary.*]

Cluster: Group ideas to make them more manageable. [*Brainstorm ideas for an honor code, restricting yourself to a certain time*]

limit, such as 15 or 20 minutes. Then use lines to connect ideas that seem similar or appear to relate to one another.]

Card Sort: Collect ideas on cards during storming, then cluster on wall or floor. *[Do the same thing as described in “Cluster” but write each brainstormed idea on a separate index card. Then, instead of connecting similar concepts with lines, sort them into piles.]*

An Improved Code for College Students

After writing your improved code, subject it to the same scrutiny you used in examining the hypothetical example earlier. What unintended consequences might result if someone adheres scrupulously to precise wording of your code, even if that would cause a result very different from your intentions? Are there “loopholes” you can spot that need to be filled? If you could summarize the goal your code is intended to achieve in a few words, how would you describe this objective?

Many people argue that the role of colleges and universities should be to convey *knowledge* to students, not to teach them a specific set of *values*. On the other hand, we must remember that every institution embodies *some* system of values, and the values traditionally found in higher education — a commitment to free and open inquiry, honesty about the efforts one has made and the results one has achieved, civility even in the midst of serious disagreement, and a commitment to critical and

creative thought — are embodied not only in the goals that individual professors set in their courses but also in the various policies developed by the institution as a whole. As Derek Bok, the former president of Harvard University, has noted, honor codes and campus creeds play an important *pedagogical* role by educating students in the conduct expected of future leaders.

Perhaps the greatest benefit of honor systems is the stimulus they give students to think about their own moral responsibility and to discuss the subject among themselves. This is such an important advantage that one wonders why more colleges have not adopted an honor code of their own. Presumably, the pervasive competition for grades; the size, diversity, and impersonal nature of many large universities; their lack of any honor code tradition; and the widespread distaste for accusing one's classmates — all combine to curb enthusiasm for such an innovation. In the absence of strong student support it would surely be unwise to try to introduce a system of this kind. To try to force students against their will to turn in friends who violate the code might actually erode rather than strengthen respect for ethical standards. Still, even if students refuse to have an honor code, it is worth considering whether some equivalent can be found that will do as much to provoke serious thought about issues of moral responsibility. Bok (1990) 87.



The more you enhance your skills at critical and creative thinking, the greater improvement you will see in your coursework, career, and even many recreational pursuits that require innovation and strategy. Yet, as we have seen, critical and creative thinking plays an important role in the ethical choices that we make in our lives, and it can even improve our relationship with others. People who think critically are more likely to understand the long-term implications of their actions and the effect these actions will have on those they care about. People who think creatively are more likely to anticipate the needs of others and to surprise them in ways that will impress or delight them. In other words, critical and creative thinkers are not only more judicious in their choices, but they are also often seen as more *caring* people because they avoid actions that will inconvenience others and pursue actions that will produce widespread benefits. Regardless of the specific course of study you are pursuing, therefore, attaining a high degree of critical and creative reasoning should be a primary goal of every college student.

EXERCISES

1. One of the logical fallacies discussed above is the false analogy. Early in this unit we saw Steven Johnson compare learning algebra to learning how to use a StairMaster™ at a gym. Discuss several ways in which use of this comparison could result in a false analogy. In other words, what inappropriate assumptions might you make about learning algebra if you were to assume that it is *exactly like* discovering how to use a StairMaster™? Then discuss several ways in which this analogy is appropriate. Does more appear to be gained or lost through the use of metaphors, analogies, and parables as a teaching technique?
2. Find several editorials in the newspaper or online that deal with an issue of significant contemporary concern. Analyze each of these editorials and identify several examples of weak critical and/or creative reasoning. Then look for several examples of sound critical and/or creative reasoning.
3. In a passage above, Derek Bok argues that compulsory honor codes are likely to be counterproductive. Using your best critical and creative reasoning, identify potential positive and negative results in the area of academic dishonesty for each of the following scenarios.
 - a. An institution has no honor code and expects members of the faculty and staff to monitor the academic integrity of their students.
 - b. An institution has a voluntary honor code. Students may agree to its terms or not, depending on their preferences. Those who agree to the terms of the honor code are expected to adhere to it in all of their courses; they also receive certain advantages, such as unproctored exams and the right to take their finals whenever they choose. Students who do not sign the honor code must take their exams in proctored settings and submit all papers electronically through a program that searches for examples of plagiarism or inadequate citation.
 - c. An institution requires all students to sign an honor pledge. Students pledge that they will not lie, cheat or steal and that they will not tolerate infractions of these rules by others. A student-run Honors Council

investigates allegations of academic dishonesty that are reported to it by any member of the community including other students.

4. Below are two passages, unchanged except for editing where indicated. For the sake of fairness, one passage advances a pro-religion/belief in God argument while the other makes an anti-religion/belief in God argument. It is also fair to admit that neither passage should be regarded as reflective of the views of all (or even most) people who generally share the author's point of view. First, use the principles of critical thinking to analyze and evaluate the reasoning used by each person. Second, use the principles of creative thinking to advance a more compelling argument than the one that appears below. Note that you don't have to agree with either or both of these points of view. The goal is merely to argue the person's case more effectively.

From a speech given in the United States Congress on November 1, 2011, by Representative Trent Franks, a Republican from Arizona. The topic of the discussion was whether or not to endorse the official motto of the United States, "In God We Trust": Is God God? Or is man God? In God do we trust, or in man do we trust? I would submit to you that the answer to that question, Mr. Chairman, is one of profound significance. Indeed, Christopher Columbus trusted in God, and his service to God was to go out and search the world [to] find ways to do things that would honor God, and he ran into this place called America. Indeed, those who were colonists that first came to America came here because they wanted to worship God. They wanted to find a way to honor God. Indeed, the Founding Fathers that started this country did so in the name of God. So, their trust in God has had a profound impact on those of us that live in this day. And I would submit to you that if we answer the question the other way, Mr. Chairman, if man is God, then an atheist state is as brutal as the thesis that it rests upon, and there is no longer any reason for us to gather here in this place. We should just let anarchy prevail because, after all, we are just worm food. So indeed we have the time to reaffirm that God is God and in God do we trust. <http://www.c-spanvideo.org/appearance/600750245>

From Alan Bullock's *Hitler and Stalin: Parallel Lives*. New York, NY: Vintage Books, 1993. Pages 13-14. The topic of the passage is how his early education by the church affected the Soviet dictator Joseph Stalin when he was young. The fact that it was a church education helped to form the mind of a man who was to become known for his dogmatism and his propensity for seeing issues in absolute terms, in black and white.

Anyone reading Stalin's speeches and writings will notice their catechistic structure, the use of question and answer, the reduction of complex questions to a set of simplified formulas, the quoting of texts to support his arguments. The same church influence has been noted by biographers in his style of speaking or writing Russian: "declamatory and repetitive, with liturgical overtones." Apart from prayers twice a day, on Sundays and religious holidays the boys had to stand through church services that lasted for three or four hours. ... In return the monks spied on their charges, eavesdropping, searching their clothes and lockers, and denouncing them to the principal. Any breach of the rules, such as borrowing books from secular libraries in the town, was punished by confinement in the cells. The official policy of Russification made the seminary a stronghold of Georgian nationalism. A student expelled for his anti-Russian attitude in 1886 had assassinated the principal, and only a few months before Stalin's admission a protest strike of all the Georgian pupils led to the seminary's closure by the police and the expulsion of eighty-seven students.

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RESOURCES

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Unit Five:

College-Level Communication

Learning Objectives:

1. To understand why it is important to be intentional in all forms of communication.
2. To learn how our communication style can be modified to reach a specific audience or type of reader.
3. To become familiar with some basic principles of good oral communication.
4. To begin mastering the strategies that lead to effective oral and written communication.
5. To recognize ways in which we can use technology to improve our success in communication.

Considering Your Purpose

Effective oral and written communication is valuable in any field, any type of research, and any path a person takes in life. As we'll see in this unit, communication skills not only help us share our thoughts and feelings with others; they can also be instrumental in helping us *clarify* or *develop* certain thoughts and feelings. Particularly at the undergraduate level, the more someone writes and gives formal presentations, the more highly developed his or her critical and creative thinking are likely to be. We already saw in Unit Four that Robert Cosbey's concept of "thinking in paragraphs" gave us a mechanism for developing more complex and inter-related ideas, not merely write better paragraphs. In other words, even if you plan to pursue a life or a career in which you rarely have contact with other people, mastering written and oral communication will benefit you greatly. So, let's begin our discussion of college-level communication with an examination of ways to make written works more effective.

We tend to think about writing as though it were a single specific skill or activity. For instance, we might say, "I'm not a very good writer" or "But she writes so beautifully!" The implication behind both of these statements is that, no matter what

type of document is involved, a person either writes well or poorly. But, in fact, writing — particularly at the college level — consists of a large number of diverse but inter-related processes, and mastery of one of them does not necessarily result in mastery of all of them. Think, for example, of the differences between the types of writing that would be used in creating these two groups of documents.

- a. Filing a police report. Writing a short announcement for the newspaper.
Completing a deposition at an attorney's office.

- b. Preparing a eulogy. Offering a sincere, written apology. Writing a love letter.

Obviously, the style of writing that you'd use in the "a" documents would be completely different from what you might adopt for the "b" documents. In the case of the three examples mentioned in the first category, you would want to write in the clearest, simplest way

you can. You would state the facts as lucidly as possible, omit all extraneous words, and refrain from mentioning anything that wasn't strictly necessary. Your goal would be to convey *information*. In



the case of second group of documents, however, your style would be directed towards an entirely different goal. In this case, you're not simply trying to convey information; you're also trying to express an *emotion*. A love letter that is as crisp and stark as a legal deposition is not likely to have much of an effect. A eulogy that's as short and pointed as a police report will not offer those in attendance much comfort. As a result, you would approach writing these two types of document very differently. Different skills are involved — for instance, the **art of concision** as opposed to the **art of engagement** — and you may find it far easier to write in one style rather than the

other. But no matter how easy or difficult you've found academic writing before, it's always possible to improve.

The first thing you need to do before beginning any type of writing is to have your purpose clearly in mind. Now, of course, you may think of your purpose as "receiving an A on this assignment" or "getting this work out of the way" or some other achievement related to your grade or your responsibilities in the course. But that's not the purpose I have in mind. The goal that I'm discussing here is the goal that arises from the specific type of document that you're creating. What, in other words, are you trying to achieve? Are you trying to inform someone? Amuse someone? Console someone? Persuade someone? Calm someone? Inspire pity in someone? All these purposes, and a great many others, can occur in college-level writing. Make no mistake about it: The vast majority of your writing will be of the "informational kind," but you should not assume that this will *always* be the case for your written work. Many types of marketing assignments, sample memoranda, position papers, and the like are not designed simply to provide the reader with *facts*: They are also trying to make the reader *do something* because of those facts. A sample advertisement that merely tells consumers the features of a product without making them want to purchase that product would be a poor advertisement indeed. So, before you can begin writing *anything*, you need to have a clear idea of what your completed project is supposed to accomplish. In college, there are so many different types of writing you might encounter, each with its own set of goals, that it would be impossible to summarize them all in a single unit. Nevertheless, here are a few of the most important kinds of writing that you will probably need to master before you graduate.

- **The extemporaneous essay.** During quizzes, exams, and certain class assignments, you'll be required to write an essay "on the spot." Being able to write extemporaneously is an excellent skill to develop; no matter what you do in your career after college, there will be times when you need to create a quick and effective short piece of writing, such as a letter, email, or memorandum. The most important thing to keep in mind is that extemporaneous essays are usually **expository** in nature. That is to say, they focus more on facts and

- information than on mood or emotion. Your goal in most extemporaneous essays, then, should be to be as clear, accurate, and concise as possible.
- **The polished essay.** The only difference between a polished essay and an extemporaneous essay is that, since you don't have to create a polished essay spontaneously, you can revise it more extensively. You'll encounter polished essays in various kinds of homework assignments, take-home exams, and class projects. Most polished essays are expository in nature, although some may also be reaction papers (see below), position papers, or other types of writing that are seeking your *opinion* at least as much as they are seeking factual information.
 - **The reaction paper.** A reaction paper is a work that seeks your individual opinion about, response to, or perspective on a situation rather than a simple statement of facts. You may be asked to create a reaction paper after considering a work of literature, art, or theater, or after you've considered various political or philosophical issues. Inevitably, your individual viewpoint will be crucial to a well-constructed reaction paper. This does not mean, however, that reaction papers need to be filled with first-person pronouns (as we saw in Unit One, these are such words as *I, my, me; we, our, us*) or unsubstantiated views. Your instructor will probably provide you with a great deal of guidance on the expectations that he or she has for the assignment. Nevertheless, you may find that, even if your instructor allows you to speak in the first person in a reaction paper, your writing will be more effective if you restrict these forms to the very minimum. For instance, papers containing a large number of sentences that begin "I believe that ..." or "In my opinion ..." tend to be far weaker than essays that simply state what you believe or that present your opinion directly.
 - **The research paper.** Unlike an essay, which is often based on common knowledge or your current opinions, a research paper requires you to perform investigation that may include the examination of written sources, experimentation, analysis of data, or other types of observation and analysis. Research papers are typically longer than essays and, because they rely on

additional investigations that you conduct, almost always include a bibliography or a list of works cited. At the undergraduate level, a research paper may be either a synthesis and summary of research performed by other scholars. As we saw in Unit Three, when you're simply summarizing discoveries that other scholars have made on a topic, that type of writing is known as a *literature review*, and it's important to understand how to conduct a thorough literature review before trying to make your own original discoveries. For one thing, you don't want to waste time by conducting a study that's already been done; for another, knowing the previous work done on a topic can give you important insights into possible methods or techniques that you can adopt yourself.

- **Creative writing.** Unlike expository writing, creative writing seeks to entertain, amuse, and engage the emotions at the same time that it shares information. Poems, plays, short stories, and novels are all common forms of creative writing. If you are analyzing or responding to *someone else's* creative writing, you are actually writing an essay or reaction paper. Even outside of courses actually devoted to creative writing, some professors may allow you to substitute a creative work for an expository paper, particularly if there are numerous other non-fiction opportunities in the course. Naturally, you should always ask for permission before making this type of substitution, since it may not fit in well with the professor's educational purpose for that particular assignment.
- **Focused writing assignments.** In addition to the more general types of writing outlined above, you may also be assigned a course-specific or focused piece of writing in certain classes. For instance, lab reports, case studies, business plans, memoranda, web sites, and professional letters all come under the heading of focused writing assignments. Each of these forms will have its own protocols that need to be learned individually. One of the advantages of taking upper-level courses in a discipline comes from learning the format, style, and other expectations that tend to occur in publications and other documents specific to that field.

- **The thesis.** A thesis is an extended research paper that usually includes both a literature review and significant independent research on the part of its author. At the undergraduate level, a thesis is sometimes required as part of a capstone experience in the major or for the degree as a whole. Even where theses are not required, they can be valuable parts of a portfolio if you are seeking admission to graduate school, professional school, or employment immediately following your graduation.

Being Intentional

The very notion of “considering your purpose” is inseparable from the type of intentionality demonstrated by good students or researchers. You may not know in advance the outcome of a course or scholarly project — after all, if you already knew what you were going to learn or discover, why would you go to the trouble of actually performing the activity? — but good researchers don’t simply choose hypotheses at random, and good students put a great deal of consideration into choosing their courses. Let’s combine both of these practices into a thought experiment. Suppose that several years from now, you were to become involved in a major research project that would require you to do a significant amount of writing. In addition to recording your findings in your notes, imagine that you’ll need to publish an article in a very competitive journal, deliver a conference paper before hundreds of highly skeptical experts in your field, explain the importance of your findings to a broader audience through op-ed columns in a major newspaper, and publish a book that explains your discoveries in details. If your purpose is to become capable of doing all of this within three to five years, what courses should you take in order to make sure that you’ve mastered the *content* of your discipline? What courses should you take in order to make sure that you’ve mastered the *research methods* of your discipline? What courses should you take in order to make sure that you’ve mastered the *types of writing* that you’ll need to disseminate your research?

The Essay

The first form of writing that any college student should master is the essay. As a literary form, the essay was first developed by the French courtier **Michel de Montaigne** (1533-1592) who sought a new way of exploring his ideas on various topics. He called his new creations *essais*, meaning “attempts” or “experiments.” You may be familiar with the verb “to try” or “to attempt” in French, which is *essayer*, or the scientific term “assay,” which refers to a test that attempts to find and measure a particular substance. Etymologically, therefore, there is always something “experimental” about an essay, and for that reason it’s a form that writers frequently use to try out new ideas, to see where their thoughts lead them, or to attempt a compelling answer to a particularly vexing question. In most of your courses, the term “essay” will be applied to a wide variety of non-fiction forms. For this reason, the length of a college-level essay can vary quite a bit. A single paragraph on a test can be an essay, but so can a twenty-page paper. It’s not length itself that distinguishes an essay from other types of writing. The characteristic feature of an essay as opposed to other types of non-fiction writing, such as a research paper, is that most essays are not expected to include citations. The essay, in other words, is a form that usually contains the writer’s own thoughts, knowledge, impressions, or reactions. It’s usually not a summary of anyone else’s scholarship, and it’s rarely a report of the writer’s independent research or discovery. Nevertheless, because mastering the form of a well-constructed essay will give you many skills that you can transfer to other types of writing — such as the letter, memorandum, business plan, proposal, research paper, and thesis — it’s an extremely important form of writing that will repay all the attention that you can devote to it.

Because essays have so many different varieties, be sure you are clear what purpose your professor has in mind before you begin. For instance, in one class you might be asked to analyze the position taken by a politician. If you try to write a persuasive essay for this assignment, setting forth reasons why the politician is wrong rather than carefully examining the politician’s own premises, you’re likely to receive a very poor grade. You will have written one type of work when your instructor was actually seeking something quite different. In addition, you will have deprived

yourself of a valuable opportunity to master a new style of writing. On the other hand, in another class the instructor's purpose may well be to write a persuasive essay either agreeing with or refuting the politician. If you turn in an essay that merely breaks down the politician's argument without taking your own stand on the issue, you've again constructed an essay that has nothing to do with the purpose of that particular assignment.

Writing to Learn and Writing to Report

One of the reasons why college teachers so often assign essays in their courses is that the development of an essay is a significant tool for learning. While we often assume that an essay is a form of writing designed to *convey* ideas, it's important to realize that frequently non-fiction writing can help us *work out* our ideas. In other words, the formal

structure that essays force us to give our thoughts can help us to see connections among ideas, the implications



s that result from specific choices, and unintended consequences that only become apparent to us as we write out our arguments. Even more importantly, the sheer mental exercise of constructing the essay often causes us to probe into issues more deeply than we would if we simply spoke or talked about these topics. Constructing an essay can, therefore, cause us to learn things about ourselves and our world at the very same time that we're conveying our ideas to the reader. So, you shouldn't feel as though you have to have every single thought in place or outlined on paper before you

begin writing an essay. While that sort of elaborate pre-planning can be valuable in situations where you have only a limited space to convey a given amount of information or where you will not have an opportunity to polish or revise your essay, many of your writing assignments will not fall into these very restrictive categories. You will often be able to begin writing with a basic idea of where you *believe* your thoughts will take you in the essay and a general notion of what your major points might be. But it is only in the writing of the essay itself that you will begin to develop new perspectives and to discover new relationships among ideas. For this reason, you should view the assignments in which you are instructed to write essays not always as requirements to repeat something you already know. Frequently these assignments will be opportunities to learn something new.

Earlier in this unit, I said that writing can sometimes help “us *clarify* or *develop* certain thoughts and feelings.” We’ve just seen how writing to learn can help us clarify our thoughts, but what about our feelings? How can we not know how we feel, and how can writing clarify or develop a new feeling? The fact is that, although some of our emotions and reactions are readily apparent to us, others affect us only at a subconscious level. For instance, we may be aware that certain types of crime more readily fill us with disgust than others, but we may not consciously be aware of the fear, hurt, or anxiety that lies behind our strong reaction whenever that sort of crime is mentioned. Therefore, reflective essays don’t just help us clarify our critical and analytical skills; they can also be a type of therapy or self-study that allows us to understand our feelings better and, if we don’t like what we discover, to begin changing those feelings. For more on the concept of writing to learn, see Parker and Goodkin (1986) and Zinsser (1993).

Considering Your Audience

Once you have a clear idea of *what* you are trying to accomplish in your writing, the next question that you need to answer is, “Who is my expected audience?” Although your initial reaction in the case of a college assignment might be, “Well, my professor, of course!” it’s possible that your instructor actually intends for you to be writing with some other audience in mind. For instance, you may be instructed to write a lab report

in a science class that is in a style and at a level appropriate for a professional scientific journal. In a course on public policy, you may be asked to write a position paper that's intended to persuade a city commission to change its procedures. In a literature course, you might be asked to analyze a work on the assumption that the reader already is familiar with it, eliminating the necessity to retell the story or provide an historical context. Thus, for any type of writing you do, you need to have a clear understanding of your audience in mind so that you'll know what you can take for granted, what information you need to supply, any preconceptions or established values your reader may have, and what their motivation would be for reading your document. In other words, just as critical thinking involves identifying the unstated premises of a speaker or author (see Unit Four), so does effective writing require you to consider any unstated premises that your *reader* may have. For instance, in a course where you are designing a business plan for a new enterprise, it makes a great deal of difference whether you are proposing your ideas to the management and work force of the company itself, its board of directors, or the public at large. Each group will have a different knowledge base, different sympathies, and different needs. On an exam, unless you are told otherwise, you probably *can* imagine that the intended audience is your instructor; your goal in this case is to respond to the topic as fully as possible, but you will also know what abbreviations, technical terms, and concepts you can assume your teacher will know. Nevertheless, as a general rule, it is always beneficial to develop a clear image of the intended audience for any document before you begin to write it. Let's examine how this concept works in connection with one of the most fundamental forms of college-level writing there is: the **five-paragraph essay**.

The Five-Paragraph Essay

The five-paragraph essay is a highly structured form of expository writing that can be adapted to achieve many different purposes. Once you master its form, you'll find that you can use variations of it in all types of writing, from short essays on exams to application letters for graduate school or a job (see Unit Fourteen), all the way to a multi-chapter thesis or dissertation. The name given to this form of essay writing

reflects its basic outline where each of five paragraphs has its own purpose in the overall structure.

1. **Introduction and Thesis.** In the first paragraph, you introduce your theme or topic. The opening paragraph should try to accomplish two goals. First, it should make your **thesis** — the idea that you are trying to convey in your essay — perfectly clear to the reader. A thesis should be a truth claim to which a cogent and logical counterclaim could be made. Second, it should engage your reader’s attention, providing what is sometimes called a **hook** to pull your audience into your discussion. In order to make your thesis as clear as possible, your **thesis statement** — the explicit summary of your thesis — should be the first or the last sentence in the first paragraph. In order to engage your reader’s attention, you should try to make an observation that the reader may not have thought about or that will immediately seem important. Highly idiosyncratic, quirky, or “cute” phrasing will alienate more readers than it will amuse; these devices come across as attempts to be clever even though the writer has little to say and should thus be avoided. “Every day in the United States, another three children die of abuse or neglect.” is a good opening to an essay. “Say, who does Antigone think she is anyway?” is not.
2. **Body, Point #1.** The second paragraph should be devoted to an argument that supports your thesis, a significant piece of evidence that buttresses your argument, or both. As we’ll see, the three inner paragraphs of this essay are all devoted to arguments or evidence. In most cases, what you highlight in your second paragraph should be the *strongest* argument or evidence that you can bring to bear.
3. **Body, Point #2.** The third paragraph should be devoted to a second argument or bit of evidence that supports your thesis. For instance, you might use a different striking statistic in each of your three central paragraphs to demonstrate the severity of the problem you are trying to solve. Or you might devote the second paragraph to evidence

illustrating the significance of the problem, while the third paragraph outlines evidence supporting the effectiveness of the solution that you have proposed. In essays where all three central paragraphs are devoted to similar types of arguments or evidence, you should place what you regard as your *weakest* case in the third paragraph: This allows you to have your most compelling observations at the beginning and end of the essay.

4. **Body, Point #3.** Devote the fourth paragraph to a third argument or piece of evidence that supports your thesis. If you use similar types of arguments or evidence throughout all three central paragraphs, use the fourth paragraph to present your *second strongest* case. Alternatively, you might use the three paragraphs to discuss different *types* of evidence or observation. For instance, in an analysis of a character from a work of literature, you might use the second paragraph to explore what that character says about himself or herself, the third paragraph to consider what other characters say about the individual you are considering, and the fourth paragraph to identify the consequences of his or her actions. In a profile of a nation, the second paragraph could contain economic information, the third paragraph military information, and the fourth paragraph cultural information.
5. **Conclusion.** In the final paragraph, make a brief summation of your three central points that leads to strong support for your thesis. While you recap your central argument, you shouldn't simply repeat it word-for-word from the opening paragraph. Try to find some way of stating your general thrust differently, or bring out new aspects of your idea. Your final sentence should be clearly and creatively written, and it should reach a definite conclusion. In other words, a well-written essay should *end*, not merely *stop*.

The advantage of approaching essays in this way is that you begin each assignment with a pre-established template in mind. Your ideas will flow more easily, and they will quickly fall into place because you don't have to invent a new structure every time

that you go about drafting an essay. Moreover, the five-paragraph format has proven its value in many different situations and with many different audiences. People tend to find information presented in this form to be particularly compelling, and your writing will be stronger as a result.

Does a five-paragraph essay need to be precisely five paragraphs long? Once you master this format — i.e., thesis, several pieces of supporting evidence, and conclusion — not necessarily. You will find that you can condense the “five-paragraph approach” into a single paragraph when necessary, expand it when you have more than three central arguments or pieces of evidence, and even elaborate it into a multi-chapter thesis. But you will find those variations easier once you are perfectly comfortable with the five-paragraph form. The structure that we have examined gives your argument a logic and flow that may not be as readily apparent to the reader if you deviate too widely from this structure at first. So, practice a true five-paragraph form whenever it fits the requirements of an assignment or exam essay until you find that you can generate this type of outline almost immediately given any topic or task.

How long should each paragraph in the essay be? This question is very difficult to answer, since each assignment you will face and each instructor’s preferences will be different. There are, however, several rules of thumb that you ought to consider. In a formal essay, you never write a paragraph that is only one sentence long. Although one-sentence paragraphs are common in journalism, they are not acceptable in other forms of writing. Each paragraph of your essay, therefore, should contain both an observation and an explanation, elaboration, or justification for what you have observed. Simply including these elements is likely to take several sentences. As a result, even two-sentence paragraphs should be extremely rare. For instance, in your first paragraph, you will need at least: 1) A thesis statement. 2) A statement about why your topic is important or why the reader should care about this issue. 3) A statement that introduces either the topic itself (if it is the first sentence of the essay) or that introduces the body of your essay (if it is the last sentence in the paragraph). In each of the three central paragraphs of your essay, you will need at least: 1) A statement of your argument or evidence. 2) Two or more sentences supporting that argument or demonstrating the significance of that evidence. 3) A concluding

statement that summarizes any secondary points you have introduced. In your conclusion, you will need at least: 1) A sentence clarifying how your three arguments or major pieces of evidence support your thesis. 2) One or more sentences leaving the reader feeling that what you have said is interesting, important, or worth saying. 3) A final sentence that makes it clear that your essay is coming to an end and has been worth the reader's time.

Does the central thesis need to be stated in the first paragraph? Isn't it more dramatic to build up to the main idea at the end of the essay? There are two basic organizational structures for most types of expository writing.

- You can introduce information and data first, and then state your conclusion, drawing it from the points you have discussed.
- Or you can state your conclusion first, using information and data as illustrations.

For the vast majority of the writing that you'll do in college, the second strategy is far more effective than the first. At times, you may be tempted to structure your document according to the first plan, believing that your conclusion will have a greater impact in this way or that it will make your writing tighter or more suspenseful. This strategy hardly ever works. Think of the last time you received a long email message that seemed to include a lot of extraneous information, with the real point of the message buried in the final paragraph. Or consider the last time you read a long and rambling article, thinking all the time "What's the *point* here?" Delaying your central point until late in your writing will, whether you realize it or not, have the same effect on your reader. For this reason, it is always best to state your conclusion early and clearly in your writing, allowing all of your subsequent paragraphs to reinforce that point.

Being Innovative

The way in which effective writing is taught varies widely by culture and historical period. Choose a culture that is significantly different from your own — such as secondary schools in modern Japan, rabbinical schools in the early years of the Common Era, the Sorbonne in late mediaeval Paris, scribal schools in the New

Kingdom of ancient Egypt, or the *Gymnasium* in nineteenth-century Leipzig — and explore the methods used to teach writing within that environment.

- **Which members of society tended to be admitted to this type of schooling? Who was largely excluded?**
- **How did the pedagogical approaches used in that environment teach both a specific style of writing and a particular way of viewing the world?**
- **How is that worldview similar to and different from our own?**
- **How might one argue that the way in which we teach writing in our own schools also conveys a particular perspective on the world?**
- **Is the way in which “effective writing” is taught and understood in a culture necessarily bound to a specific set of values?**

Moving Beyond the Five-Paragraph Essay

Even though the five-paragraph essay is an extremely versatile and important type of non-fiction writing, it's not the *only* type of essay there is. While you need to master that basic structure in order to experiment successfully with its variations and possibilities, there are other types of short essays with which you also need to be familiar. For instance, some of the courses you take may require a style of writing to which the five-paragraph form does not adapt easily. You may need to write a feature story for a journalism class, a lab report for a biology class, or a literary critique for a poetry journal, and for any of these forms you may be given restrictions that cannot accommodate the five-paragraph form. Furthermore, for very short essays, such as on exams with multiple essay questions, you may find the five-paragraph form overly restrictive. Perhaps there are eight major points to be raised rather than three. Or perhaps the entire essay will be so short that all of the summing up that appears in a five-paragraph essay — one concluding sentence in each body of the paragraph and then an entire concluding paragraph at the end — would seem overly repetitive. Moreover, the advantage of the five-paragraph format, its well-known structure and convenient style, can also become one of its limitations. It can start making you feel as though all ideas have to be “forced” into this framework, rather than allowed their own, more natural development. For all of these reasons, you may soon find

yourself needing or wanting to move beyond the limitations of the standard essay form you have learned. Unless you have specifically been instructed to follow the five-paragraph format, this type of variation is perfectly acceptable. Just be certain that you understand *why* you are deviating from this form, *what you are gaining* by structuring your writing in a different way, and *what you may be sacrificing* from departing from a five-paragraph structure. In other words, ask yourself the following questions when you are considering the format you should adopt for any particular essay:

- What will my reader already know and assume at the beginning of my essay?
- What would I like the reader to know and assume by the end?
- What are the logical or natural steps that will take the reader from the beginning to where I want that person to be?
- Which of those logical or natural steps are important enough that they should become topics for entire paragraphs?
- Which of my logical or natural steps are best incorporated with or subordinated to the topics of my paragraphs?

Distinction in Oral Communication

While certain principles of effective communication in writing also apply to oral communication — e.g., don't lose sight of your fundamental purpose, and consider who your audience is — there are also unique features of giving presentations, speeches, and responses that are important for you to keep in mind. For instance, people absorb information much more slowly when it's presented orally than when they encounter it in writing. When reading a document, a person can always re-read a passage that he or she didn't understand, go back to an earlier section, or pause a moment to check the accuracy of a statement. That's not possible during oral communication. Although you will have worked on your topic for quite a while, people who are listening to you may be encountering these ideas for the first time. They need time to absorb and process what you tell them. So, oral presentations shouldn't be as densely packed with information as a concisely written paper. If you use technical terms, you may have to explain them since your audience may contain

people unfamiliar with them. If your writing style tends to contain long, complex sentences, you may need to break these into shorter statements when giving an oral presentation.

Furthermore, in addition to well-written grammatical statements, a logical flow of thought, and content that's accurate and relevant — all factors that you need to consider in your papers as well — there are matters of your oral presentation style to consider. If you're nervous at all when speaking to a group (and that type of anxiety is very common), you may tend to speak too quickly. It's useful to remind yourself a few times during your presentation to slow down and speak at a rate that allows the audience to reflect on what you're saying. If your professor gives you a time limit for your presentation, practice it aloud and time yourself several times before actually speaking in class. In that way, you'll know whether you've tried to cram twenty minutes worth of material into a ten-minute speech or are speaking so rapidly that you're done in less than five minutes. Know your material well enough so that, even if you're giving the sort of presentation for which you're required to read from a prepared text, you can look up frequently and make eye contact with members of the audience. Speakers who look down or are tied to their notes during presentations are frequently unpersuasive even if their material is accurate and compelling. Those who make eye contact with multiple members of the audience throughout the presentation are often considered by their audiences to be more credible and interesting.

Effective oral presentations also involve gauging your voice so that you can easily be heard by everyone in the room. If you speak too softly, people near the back will not be able to hear. If you speak too loudly, your sound will blast those sitting in the front row. In certain settings, you may need to use a microphone and amplifier. Be sure you're familiar with how to turn the microphone on and off, as well as how to control the volume, before beginning your presentation. It wastes time and looks unprofessional for people to fumble with the controls or have to request help from the audience after the presentation has begun. Speak with conviction and enthusiasm for your topic. You can't expect the audience to believe you or be interested in what you have to say if you seem bored or hesitant yourself. Keep going if you mispronounce a word or make some other type of mistake. Rather than apologizing

for the error, just ignore it and proceed. Audiences are usually very forgiving of minor slips and sometimes don't even notice them unless a speaker calls attention to it. In fact, it's a good idea never to apologize at all during an oral presentation. If you've ever heard someone give a speech in which he or she apologizes at the very start for being unprepared or having a cold, you probably know how ineffective these beginnings can be. The best way to avoid the temptation to apologize for being unprepared is to *be prepared*, and that requires both mastery of your presentation's content and a sufficient number of practice sessions to make you feel reasonably confident about what you will say and how you will say it.

Of course, not every aspect of preparing for an oral presentation is different from what you would do when completing an essay or paper. Both have to be organized in a way that the person who's hearing or reading your material will understand how one idea builds on another. It can be very effective, therefore, to adapt the style of the five-paragraph essay to an oral format. An introduction, followed by three main points and a conclusion, is an easy structure both for you to remember and for your audience to understand. It may seem that having ten or twelve key points will strengthen your argument, but the opposite is actually true. Most people, when hearing a presentation for the first time, can't follow a speaker's argument beyond three or four central ideas. The result is that they begin to feel information overload, stop paying attention, and allow their minds to wander. So, being concise and adhering to the basic five-paragraph structure not only gives you an automatic framework for many oral presentations, but it also makes those presentations more effective as a result.

Let's try to think of how you might organize a formal presentation. Suppose one of your professors asked you to deliver a well-prepared, 6-minute persuasive speech either supporting or refuting the following prompt.

Although some people support legalized gambling by claiming that it helps the economy, that reasoning is flawed. Unlike manufacturing, gambling does not create wealth; it only redistributes existing wealth. On this basis, gambling should not be legalized on the spurious premise that it provides economic benefits.

What steps would you go through to prepare for this speech? First, of course, you'll need to decide which position you'll take on this issue. Do you find the statement persuasive or not? Second, you'll need to explore the reasons *why* you're going to support that position. For instance, it won't be sufficient merely to say, "I support this statement because I believe that gambling is morally wrong" or "I reject this statement because I enjoy gambling myself." While those declarations may be reflective of your actual feelings, they don't really address the assignment. The prompt had to do with the potential *economic* benefit of legalized gambling. You'll have to tie your arguments to that aspect of the issue. So, the student who believes that gambling is morally wrong because of the suffering it causes people who become addicted to gambling will need to couch this position in economic terms. He or she would need to find out reliable information about the percentage of the population that suffers from gambling addiction. Does that percentage tend to increase in areas where gambling has already been legalized? What information is there about the costs to the economy that result from this increase gambling addiction, either through the need to fund additional treatment programs or the lost labor of those who miss work because of their addiction? Similarly, the person who supports the position because he or she enjoys gambling will need to find an economic argument related to this preference. What percentage of the population similarly enjoys gambling? In areas where gambling has been legalized, has an increase in tourism helped the local economy? Have the tax revenues generated by legalized gambling improved the economy? Use the creative thinking skills that we explored in Unit Four to develop additional arguments, but always make sure that they have a convincing economic basis.

Next apply critical thinking to the



statement itself. If you support the prompt, can you identify the premises and the logical structure that lead to the conclusion? If you reject it, what fallacies can you find in the reasoning? Then weigh all of this information against the other ideas you've had. You now have both specific, data-oriented arguments and a general critique of the reasoning behind the prompt you were given. Which of your arguments seems to be the strongest? Which do you feel would be less persuasive? Remember that you'll only have six minutes to present your case, so you'll want to focus on the ideas that seem the most compelling to you. When you've got a general idea of what you'll say, consider the audience for your speech. (You may need to ask the professor to discover precisely what he or she has in mind.) You may handle this speech differently if the intended audience is your fellow classmates, a group of legislators who are considering whether to legalize gambling, or an auditorium full of middle school students. Identifying the audience will affect the level of vocabulary you use, the type of argumentation you will develop, and perhaps even whether you'll want to incorporate visual aids such as charts, graphs, or maps into your presentation.

Finally, structure the presentation itself. For the sake of this experiment, let's use the modified structure that we borrowed from the five-paragraph essay: an introduction, three points, and a conclusion. Keep in mind that you don't necessarily have to give equal time to each of those sections. Your introduction and conclusion could be well less than a minute, and you may wish to spend more time on your first and last points than on your middle point. The goal now is to allocate your time to be most effective at persuading your audience that your stance on the issue is correct. Remember again that you only have six minutes. If you waste time on extraneous issues, distributing handouts, or trying to get a projector to work, you'll find it extremely difficult to make your case in the time that remains. (We'll consider more about when to use and when not to use audiovisual aids later in this unit.) At this point, you've got all of the basics covered. You know what your position is, how you'll support, what you'll need to keep in mind because of the audience you'll have, and how you'll structure your argument. If you were actually delivering this speech, it would only be at this point that you'd begin to prepare the actual things you'll say during your presentation and to practice the speech as many times as you need in

statement that summarizes any secondary points you have introduced. In your conclusion, you will need at least: 1) A sentence clarifying how your three arguments or major pieces of evidence support your thesis. 2) One or more sentences leaving the reader feeling that what you have said is interesting, important, or worth saying. 3) A final sentence that makes it clear that your essay is coming to an end and has been worth the reader's time.

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Kingdom of ancient Egypt, or the Gymnasium in nineteenth-century Leipzig — and explore the methods used to teach writing within that environment.

- Which members of society tended to be admitted to this type of schooling? Who was largely excluded?
- How did the pedagogical approaches used in that environment teach both a specific style of writing and a particular way of viewing the world?
- How is that worldview similar to and different from our own?
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	for “real-world” situations.
Asking Questions	Even asking questions during a class is a type of oral communication exercise, even though it may not be graded or evaluated by the professor. This type of activity is useful because it encourages you to formulate your question logically and succinctly, ask it before an audience of your peers, and listen carefully to the answer, asking follow-up questions about any points that remain unclear.

Strategies to Make Written and Oral Communication More Effective

As we’ve seen, a key element in effective writing and speaking is a clear and logical structure. The reader or audience needs to follow your argument, and they can do that more easily if each of your points flows cogently from the last. Having some type of organizational principle or outline in mind is important even if you’re asked to compose an essay extemporaneously on an exam or respond to a question during a panel discussion. Certainly, because of the time constraints during a test, your organizational framework is likely to be very brief. For instance, you might jot in the margin or on the back of the test the three key points that you intend to make, put them in the most persuasive or rational order, and develop your essay from these ideas. You won’t have the luxury of writing out even a short outline when you’re giving an impromptu answer orally, but a similar approach can be helpful. Begin by rephrasing the question. Doing so gives you a moment or two to think and helps anyone in the audience who couldn’t hear or understand the question when it was posed. Then say

something along the lines of “Now, in response to this issue, there are several key points we need to keep in mind.” Even if you immediately think of two or three key points, don’t lock yourself in by stating a specific number, such as “...there are three key points we need to keep in mind.” You may think of a fourth or fifth point as you’re outlining the first three, and it will be awkward to introduce these ideas since you’ve already stated how many ideas are significant. Even worse, you may forget your third point before you get to it — and, when you’re nervous, these sudden lapses of memory do occur — with the result that you’ll be forced to pause or admit what has happened. Leaving your outline a bit flexible when giving an extemporaneous speech allows you to take advantage of sudden inspirations when they arise and to wrap up your comments more quickly if you don’t know how to proceed. Of course, you should never say that you’re going to address several issues if you only have one idea in mind when you begin. You may be confident that you’ll think of something more to say by the time you need it, but it will be highly embarrassing if additional ideas just don’t occur to you.

As much as possible within the limitations of your topic, keep it real. In other words, try not to speak in generalities; cite specific examples whenever possible. Readers and audiences more easily relate to individuals whom they can visualize and recognize as real people than they can to broad principles, theories, or platitudes. Consider the difference between the following two statements.

Internationally, vitamin D deficiency has reached epidemic proportions. With changing dietary habits and the recognition that excessive exposure to the sun can result in life-threatening melanomas, people lacking this crucial nutrient can be found from the poorest developing nations all the way to the richest, most industrial societies. As a result, reported cases of rickets, osteoporosis, and stress fractures have increased dramatically over the last five years.

Irungu Mbanefo was diagnosed with rickets shortly after his sixth birthday. By the time he was a teen, he had already fractured four bones and been hospitalized more than a dozen times. The cause, his physician discovered, was a severe deficiency in vitamin D due to the fact that Irungu rarely ventured outdoors, never drank milk, and relied on herbal remedies rather than western medicine such as multivitamins and dietary supplements. But Irungu Mbanefo doesn't live in west Africa, doesn't have to cope with the unavailability of food and medications, and doesn't live in poverty. The doctor who diagnosed Irungu was his own father, and the family lives in a wealthy gated community in Beverly Hills. Irungu Mbanefo is the face of vitamin D deficiency today.

Which statement comes across as most vivid and compelling?

As another way of making a paper or speech more striking for your audience, it is sometimes helpful to include one or two well-chosen quotations. But there are effective and ineffective ways of quoting someone. Passages that everyone knows come across as trite. Quotes such as “It was the best of times. It was the worst of times.” or “As Dorothy said, ‘I want to go home.’” make your work look superficial and unoriginal. Particularly in oral presentations, hackneyed quotations can make the audience feel as though their intelligence has been insulted. The impression is that they’ve never read or seen the work in question and must be unfamiliar with so basic a statement. If you feel you absolutely must use a common quotation, try to make it clear that you don’t believe you’ve discovered something most people don’t know. Try saying things like, “Now, we’re all familiar with Yogi Berra’s dictum, ‘It ain’t over till it’s over.’” or “I’m sure you’ve heard Albert Einstein’s observation ‘God doesn’t play dice with the world.’ many times, but what’s less commonly known is ...” Moreover, too many quotes seem like padding. It appears as though you had so little to say that your presentation was simply stitched together out of entries in *Bartlett’s Familiar*

Quotations. Your reader or audience wants to hear *your* voice in your presentation, not how well you can cut and paste other people's statements from the Internet.

While you'll always want to follow your professor's instructions for your assignment, there are ten basic do's and don'ts for the vast majority of effective written and oral presentations.

1. **Do be sure to address the actual topic. Don't veer too far from the main subject you've been assigned.** In politics, there's a general rule about how to respond to questions: Reply with the message you *want* to talk about, even if it's not the issue you've been *asked* to talk about. In college courses, however, (and in most professional fields of endeavor) that strategy simply doesn't work. If your reader or audience thinks that you're being evasive on an issue, your credibility with them will suffer — and so will your grade. As you outline your remarks for a paper and then write it, ask yourself for each point or paragraph, "How does this idea relate to the issue I've been asked to discuss?" Similarly, when making a speech or public presentation, check yourself from time to time to make certain that you're still "on message." If you find that you've deviated too far from the main topic, move quickly to address this problem and return to your main subject.
2. **Do be concise in stating and defending your case. Don't include statements simply because you think they sound good or impressive.** As you proofread your first draft of a paper or outline your remarks for an oral presentation, condense your statements to make them tight, concise, and effective. For written work, one useful exercise is to take a sentence you've written and then read it back, omitting each word in succession as you read it over and over. Does the sentence make sense and mean the same thing without that word? If so, then the word was unnecessary and probably should be omitted. Probably the most extraneous words in expository writing are adverbs (words that modify a verb, an adjective, or another adverb and that frequently end in "-ly," such as "extremely" and "absolutely"). We sometimes use adverbs in the belief that they give emphasis to writing that would otherwise seem flat or uninspired. In fact, adverbs often have the opposite effect. They make our

speech writing seem overly embellished, when our goal should be **clear concision**. A similar point can be made for using exclamation points, underlining, or italics for emphasis in formal papers. These tools should be used rarely, if at all. In most cases, if you feel that you need to underscore a point through the use of an exclamation point, underlining, or italics, you are better off rephrasing the entire sentence rather than “adding on” this emphasis artificially. The Roman poet **Horace** (65-8 BCE) in his *Ars Poetica* called an unnecessary phrase that is extravagant, flowery, or sentimental a “purple patch” (*purpureus pannus*) and regarded this practice as a feature of ineffective writing. That observation is still worth keeping in mind today.

3. Do use appropriate academic language. Don't use unnecessary jargon.

Most college professors believe that essays and oral presentations are forms of expression in which you simply can't be *too* formal. Slang or colloquial words, obscenities, and a “chatty” style are inappropriate in the vast majority of academic work. But at the same time that you want your style to be professional formal, it should also be accessible. Never use a word that you aren't fully certain you know what it means. Even familiar words can lend your work a stuffy tone if you use them instead of an equally clear short word. For example, it adds nothing to your speaking or writing if you adopt the word “utilize” instead of “use,” “prevarications” instead of “lies,” or “animadvert” instead of “remark.” In fact, these words call attention to themselves when you want your reader or audience to notice the brilliance of your thought, not the size of your dictionary.

Being Analytical

Find an opinion piece in a recent newspaper or a one-person oral presentation on YouTube or Hulu. The essay or presentation you select should deal with a highly controversial, polarizing issue. Critique the arguments that are presented. Are they based on data, anecdote, or “gut feeling”? Does the argument proceed systematically and logically from one point to the next? Can you spot any fallacies? What can you learn about the writer or speaker that helps you identify

any unspoken assumptions he or she is making? Then suggest how you could make a stronger case *even if you yourself do not agree with the writer or speaker*. When you select the article or presentation, avoid “cheap shots”: Works where the logic is so severely flawed that there would be no challenge in refuting it.

4. **Do take every opportunity to write and speak often. Don't put off written or oral assignments until just before they're due.** Like many skills, writing and speaking get easier (and better) the more you engage in them. Students are sometimes surprised to learn that the semester they're working on five papers simultaneously produces far better work with much less effort than the semester they're writing only one brief report. The more your skills at writing and speaking are fully engaged, the more natural it becomes to think in outlines and paragraphs rather than as a series of scattered thoughts. For this reason, if you feel that you write poorly, work with your academic advisor to develop a schedule where you'll write more, not less. In fact, *any* sort of writing can be good exercise for preparing essays, papers, and reports. Keep a journal or blog, email accounts of what you're doing to your family and friends, and make an effort to write *something* every day. If you do, you'll gradually find that extensive writing assignments no longer seem difficult or intimidating. The same principle is true of speaking. Volunteer for every speaking opportunity you can, even if you hate public speaking — perhaps *especially* if you hate public speaking. Challenges become immense if you face them rarely or let them go to the last minute. They're more easily overcome if you confront them frequently.
5. **Do avoid first-person forms (I, me, my; we, us, our) unless they're relevant and necessary to your topic. Don't engage in self-aggrandizement or self-pity.** References to yourself don't make your essays and speeches seem more personal; they usually weaken your argumentation and sometimes alienate your audience. Statements such as “I believe ...” or “We can readily see that ...” are not as strong as the same observations would be if these phrases were removed. As a general rule, therefore, don't ever say *that* you believe

something; simply tell your reader or listener what you believe. In a similar way, writers or speakers who seem utterly fascinated by their own achievements or words alienate the very people they're trying to persuade. At the opposite extreme, people who engage in self-pity or present themselves as victims may believe that they'll gain the sympathy of others, but it's more likely that at least some people will dismiss them as "whining." So, a second general rule is, don't praise, apologize for, or feel sorry for yourself. Let others do that for you.

6. **Do search for multiple ways of expressing an idea. Don't merely repeat yourself.** When we were examining the five-paragraph essay, we saw that while conclusions are appropriate places to summarize and restate items, it's not very effective simply to repeat earlier statements word-for-word. If you find that you are repeating yourself in a speech or writing assignment, something has gone wrong in your essay. Try paraphrasing your central idea or expanding on it in some way. This variety not only makes your work more interesting to the person reading or listening to it, but it may also help people who couldn't understand your argument when it was phrased in one form comprehend the issue better by having it explained in a different way.
7. **Do cover your topic thoroughly. Don't resort to "brain dumps."** A **brain dump** occurs when you include every possible fact or observation you can make about a topic, regardless of its relevance to the subject of the essay or speech. A good college-level presentation is not just about recording information; it's about *selecting appropriate* information and observations to justify a position, explain something, or make a point. Irrelevant information ends up making your case more difficult to discern and, as a result, it unnecessarily complicates the task of the audience or reader. At the same time, you'll want to be sure that you've covered your topic adequately. People sometimes believe they're being clever by talking only about the aspect of an issue where they have the most compelling argument or thorough information. That approach rarely deceives anyone and makes the work seem superficial and misleading.

8. **Do refine your topic appropriately. Don't choose a subject so narrow that your readers or audience won't be able to understand it.** You can only do so much within the scope of the average essay or oral presentation. A five-paragraph essay or ten-minute speech on the history of class warfare throughout history is bound to be superficial. By restricting your topic to what you can discuss *adequately* within the limits of time and space available, you'll make a stronger argument and engage your reader more completely. Sometimes, of course, your topic will be assigned to you. If you feel it's too broad to be handled within the format you have, talk to the professor about ways of focusing or clarifying the topic to make it more manageable. Don't simply ask what to do; have several suggestions or alternative approaches in order to see if you're on the right track. The opposite extreme, talking or writing about an excessively narrow topic, is also likely to leave your intended audience feeling disengaged. They may not be approaching the subject with as much background information as you have. As a result, they may be unable to understand where your topic fits into "the big picture" or why they should care about it.
9. **Do proofread a paper or practice a speech multiple times. Don't rely on a first draft. Proofread carefully ... and aloud, if possible.** Because of the time constraints under which many papers are written and speeches are prepared, students sometimes cut corners. They may assume that their word processor's spelling and grammar features will correct any errors in form or that their ideas will all fall together once they get up to speak. But spell check won't catch the difference between homonyms (words that sound the same but are spelled differently, such as "there," "their," and "they're") and they're unlikely to spot a typographical error that results in the correct spelling of a different word (such as mistyping "about" as "abut"). For this reason, you should never rely on electronic substitutes for your own careful proofreading. Unless you are writing an essay during an exam or in a public setting such as the library, you should also read through your entire document **aloud** at least once or twice. Reading your draft aloud will help you see spelling and

typographical errors that you may not have noticed if you only went over the paper “in your head.” Moreover, oral reading will help you spot sentences that are unnecessarily long or cumbersome, fragments, and other passages that simply “don’t work.” If you have the time and it’s permissible within the ground rules of the assignment, you may also want to have a trusted friend read over your work as well. Making an agreement with another student that you will always proofread that person’s writing if he or she will always proofread yours is one of the best arrangements you can make. You may have already experience the phenomenon of reading over one of your papers five or six times only to have someone else immediately spot a typographical error that you had never noticed. Frequently we’re so close to our own writing and so used to seeing on the page what we want to see on the page that we don’t noticed an obvious error no matter how many times we review it. Having another set of eyes review your work is thus always a good idea, as long as your instructor permits this practice within the limits of having each student do his or her own work. A similar approach is also beneficial in the case of oral presentations. Having a few friends hear you practice what you intend to say (as awkward as that may feel the first few times you do it) can alert you to arguments that are weak or transitions that seem abrupt.

10. **Do have a “narrative arc.” Don’t rely on the five-paragraph form as your *only* organizational structure.** We’ve already seen that, while the five-paragraph structure is a useful initial outline for many papers and presentations, it doesn’t work in every situation. Moreover, this framework can sometimes make works seem fragment: an introduction, three separate points, and a conclusion. The way around these problems is to think in terms, not only an outline, but also a continuous narrative arc that spans your entire essay or presentation. What “story” are you telling? (The word *story* here doesn’t refer to a fictional tale, but rather the connecting flow of your ideas, how they unfold in both a reasonable and interesting manner.) One good way of identifying your narrative arc is to have a few friends listen to your presentation or read your paper and then have them summarize the chain of

thoughts that they observed in it. If what they report is significantly different from what you had intended, it's clear that your narrative arc won't be apparent to your actual audience either.

Distinction in Multimedia Communication

Technology gives us opportunities for communication that, only a few years ago, wouldn't have been possible. Presentation software — such as PowerPoint, Keynote, and Prezi — makes it possible to combine text, sound, still and moving images, and many other elements that can make speeches and discussions far more effective. Remote communication software, such as Skype and Facetime, allow us to speak with and see people anywhere in the world. Social networking sites, such as Facebook, MySpace, and LinkedIn provide access to experts in a broad range of disciplines, while sharing our own views and insights with a broad community. And classroom management systems — like Blackboard Academic Suite, CourseWork, eCollege, and Moodle — allow us to communicate with everyone else in our courses at any time we like and to share text, images, and recordings with them. But despite all the advantages that are possible with multimedia communications, there are also some guidelines and warnings. We'll start by looking at some of those guidelines in this unit and then consider several important warnings in Unit Twelve.

Perhaps the first guideline anyone needs to consider when preparing to make a multimedia presentation is a good rule of thumb for many other aspects of life as well.

Key Principle

Just because you *can* do something, it doesn't necessarily follow that you *should* do something.

Presentation software gives you lots of options. You can create transitions that move from one slide to the next with effects that include cross-dissolving the two images, moving from one to the other by means of vertical or horizontal “blinds,” opening a “door,” zooming in or out, sliding in the new image from any angle, uncovering the second image, and many other ways. You can introduce new text by paragraph, line,

word, or letter. You can link sound effects to each transition or animation. You can move items about, make words flash or disappear, change your color scheme repeatedly, and link from a slide directly to the Internet. But, rather than making your presentation more effective, many of these devices will distract the audience and cause your ideas to become lost in a welter of special effects. For this reason, before incorporating any sort of effect, sound, image, animation, or transition into a presentation, ask yourself the following question: **How will this addition make it easier for my audience to become engaged with and interested in my subject?** If you can't provide a convincing answer to that question, you're probably better off leaving the effect out. As a general rule of thumb, using more than one transition between slides in a presentation is distracting. The only exception to this rule is slideshows that run automatically and consist solely of photographs; in this case, having only one type of transition soon becomes boring.

On the other hand, incorporating a few carefully chosen images or effects can make a presentation much more compelling. Let's suppose you're giving a presentation that is going to compare and contrast William Butler Yeats' poem "The Lake Isle of Innisfree" and Robert Frost's poem "Stopping by the Woods on a Snowy Evening." Let's suppose, too, that you're giving this presentation in a course where you can't take it for granted that every student is familiar with these poems. Passing out copies of the poems for the audience to read isn't very environmentally friendly. Reproducing the text on your slides would make them cluttered. And reading the poems aloud yourself might interrupt your flow and cause people's minds to wander. But audio and video recordings of these two authors reading their own poems are widely available on the Internet and easily incorporated into presentation software. So, you can give your audience the advantage of hearing how Yeats and Frost read their own work, stressing certain words and incorporating various pauses, as an effective transition to your discussion of these works. In other words, the ability of presentation software to incorporate images and sounds can make a presentation better, as long as you have a persuasive reason for including these effects.

Successful multimedia presentations require careful preparation. Be sure you know how to set up and operate the technology well in advance of when you'll need it.

If you're using a laser pointer or remote presenter, you'll want to make it seem effortless and natural. If you're running the presentation off your own laptop or tablet, have all of the cables you'll need to make the connection and learn how to set up and remove this equipment quickly. Find out how cables need to be connected in the room and with the actual system you'll be using. Have multiple back-up plans. Accidents do occur. It may be that, on the day of your presentation, the cable that will connect your computer to the projector will develop a short or your hard drive will crash. Having a copy of the presentation ready on a CD-ROM or flash drive will allow you to move your material to someone else's system. Know the time that you have available and fit your materials to that time. If you are giving a ten-minute presentation, you'll never be able to get through 45 PowerPoint slides, at least not in any productive manner. You should figure that each slide in a presentation will need to be displayed for at least one or two minutes, so having more than six slides will cause you to rush or make it impossible to finish on time. Keep your text simple on each slide. Use individual words or sentence fragments rather than complete statements. Below are two slides that a student might use during a presentation on contract law.

Three Requirements for Realty Contracts To Be Legally Valid

1. There must be an **offer**. The buyer must make a written offer to pay a certain amount for the property being exchanged.
2. There must be an **acceptance**. The seller must agree in writing to the terms the buyer has proposed.
3. There must be **consideration**. In law, consideration refers to something that has actual value exchanged between the two parties. In realty contracts, the seller offers the property as consideration. The buyer usually offers money, although other possibilities exist.



For oral presentations, the second slide is far more effective than the first. The first slide is much too crowded with text, which is difficult for audience members to look at for an extended time. Moreover, some of the information is unnecessary; the speaker doesn't need to state in the heading that there are three requirements for a realty contract to be valid, since he or she has numbered the points anyway. Finally, by placing so much information on the slide, the speaker is left with a dilemma. If he or she doesn't present that same information, the audience will need to read it and may end up missing some of the observations the speaker is sharing. If he or she does present the same information, members of the audience will feel as though the speaker is just reading the slides to them and may well become bored and disengaged. The second slide has the advantages of providing the speaker with an outline (in case he or she happens to forget in what order the points were supposed to occur), reinforces for the audience the information the speaker regards as most important, and leaves the speaker with plenty of material to amplify orally what is being presented visually on the screen.

Being Reflective

Consider the Key Principle that was introduced in this unit: Just because you *can* do something, it doesn't necessarily follow that you should do something. One version of this principle, usually attributed to the journalist William Safire (1929-2009), phrases the idea in this way: "The right to do something does not mean that doing it is right." Although the context in which this principle was introduced in this unit had to do with multimedia presentations, it was also suggested that this rule of thumb "is a good rule of thumb for many other aspects of life as well."

Reflect on an occurrence in your life that illustrates this principle. What lessons did you or can draw from that experience?

When preparing materials for a multimedia presentation, keep the needs of your audience in mind. Will the people in the back be able to see and hear? Will they be familiar with any technical terms you may be using? What do they need in order to understand your ideas most easily? Using these principles, you may wish to check that the font size you're using is still legible at a distance. The letters may seem huge to you when you're standing only a few feet from the screen, but they may look just right to someone near the back of a large auditorium. Simple fonts — such as Arial, Helvetica, and Times New Roman — are easier to read than are complicated old English or cursive fonts. Having the fonts in colors that contrast with the background will also make your text easier to read. If your background is dark, choose a color and level of brightness that makes your characters stand out. For light backgrounds, use heavier or bold fonts, again in colors that contrast with the backdrop. Think in terms of visual effect. While you shouldn't include images and film clips just for the sake of having them, there are certain situations in which a properly selected picture, graph, or table can convey information much more quickly and dramatically than words alone. The great advantage of presentation software is that it *can* incorporate visual elements that can reinforce the information you're sharing. So, if a picture or film clip relates directly to your topic, including it will make your presentation much more effective than would slide after slide of words and bullet points.



The factor that makes all written, oral, and multimedia work most effective is careful and detailed planning. Having a plan in mind doesn't constrain you to using *only* that framework for what you say or write; it simply ensures that, no matter what happens, you will have some type of clear roadmap if you start to lose your way. It's often the case that not every idea you include in an oral or written presentation will be known to you before you begin. Preparing these works is a learning process at least as much as it is a process of communication. While in certain instances, such as during exam essays and oral quizzes, you may be aware of every single point you will raise before you begin, you will rarely have this advantage in other situations. As we write or plan a speech, we continue to make discoveries, see new connections, and develop ideas that wouldn't have occurred to us if we hadn't received that assignment. Your outline, in other words, should always be a living document, shifting and adapting as your thoughts come together. On the other hand, if you begin to write or speak without *any* sort of plan, you're likely to find that your thoughts will become jumbled and that you end up not having made any point whatsoever.

EXERCISES

1. Think about or locate the best piece of writing you've ever done. The particular item that you select need not be perfect, and it doesn't have to be an academic paper. It can be a poem, letter, journal entry ... anything that you believe represents your best writing. Try to identify three reasons why you chose this example. Is it more creative? Is it freer from grammatical errors? Was the topic of particular interest to you? Was it praised by others? List the three reasons why you believe what you have selected is the best piece of writing you have ever created.
2. Find an essay you wrote for a class. As you read it over, can you easily identify its thesis statement? If you can, where does that statement appear? If you cannot, how would you craft a suitable thesis statement for the essay? Where would you place it? Using a highlighter, identify the major arguments or pieces of evidence that you introduced in the essay to support your thesis. How many

- major arguments or pieces of evidence were there? Did you devote separate paragraphs to each of them? Would the essay have been stronger if you had done so or would it have lost an essential quality? Looking back on this essay, do you regard it as an effective piece of writing? What leads you to that conclusion?
3. Find several recent books or articles that contain extensive citations. Try to choose examples from various disciplines, such as English literature, psychology, chemistry, and marketing. Can you identify the citation style that each author has used? Do specific styles of citing sources tend to appear more commonly in works of particular disciplines?
 4. Critique the oral communication styles of several:
 - a. newscasters
 - b. politicians
 - c. teachers
 - d. religious figures
 - e. award recipients
 - f. product representatives/salespeople

- What do they do that's particularly effective or ineffective? Do they use any styles or techniques that you could borrow for your own presentations? Do they use any styles or techniques that would be completely inappropriate for a college-level presentation that you'd make to faculty and students at your school?
5. The Internet is filled with presentations that have been made using PowerPoint, Keynote, or Prezi. Do a search and find several examples in an area that interests you. As you proceed through the presentation, note particularly effective and ineffective uses of the presentation software. How would you have made the presentation different?

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There are also numerous works available that address writing and speaking within specific disciplines, such as:

- Beer, D.F., & McMurrey, D. (2005). *A guide to writing as an engineer*. (2nd Ed.) Hoboken, NJ: Wiley.
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- Rampolia, M.L. (2003). *A pocket guide to writing in history*. (4th Ed.) New York, NY: Bedford/St. Martin's.

If you search your library, bookstore, or online vendor, you are likely to find an entire book devoted to writing in any discipline that you are studying.

Distinction in Self-Determination – Personal Transition

Unit Six:

Developing Time-Management Skills

Learning Objectives:

1. To become familiar with the theory behind good time management, including some of the fallacies that can cause us to misjudge our need for time.
2. To apply that theory to very practical matters in managing time effectively.
3. To explore a few resources college students can use for more effective time management.
4. To consider best practices in time management.
5. To learn how to deal with the stress that can arise from time pressures.

The Theory of Time Management

People rarely see the need to manage resources they regard as unlimited. For example, as long as many people believed that the supply of clean air and fresh water was abundant, they felt very little need to conserve it. Aggressive conservation and recycling efforts really became widespread only when it began to be apparent that even these commodities, while abundant, were not *unlimited*. In a similar way, when college students manage their own resources, they place the greatest emphasis on what they believe to be in the shortest supply. Students with very small budgets manage their money quite differently than do students who come from more privileged backgrounds. At institutions where tuition rates rise when students register for more than a certain number of credit hours, students tend to choose their courses more carefully and are reluctant to prolong their undergraduate programs beyond the maximum number of hours permitted. And for the majority of students the most precious resource of all is *time*.

Key Principle

Undergraduate students should expect to spend about two hours working *out of class* on a course for each hour they spend *in* that class. As they advance in their

programs of study and begin doing more independent work, they should expect to spend about *three* hours working out of class on a course for each hour they spend in that class.

What this principle means is that, near the beginning of a student's college career, if he or she takes a 15-credit-hour load, the expectation will be that this student will spend roughly 45 hours a week — five hours longer than a full-time job — just on schoolwork: 15 hours in class and an additional 30 hours studying. Moreover, this total doesn't include time spent getting to and from class, eating meals and performing other essential tasks, engaging in extracurricular or co-curricular activities, holding a job, sleeping, or doing anything else that's part of a well-rounded undergraduate experience. How can anyone possibly attain all of these goals without feeling stressed or slighting responsibilities that really deserve more time and attention? The answer to this question is **time management**, and developing this skill is extremely important. Good time management will serve you, not only in your academic work, but also in your co-curricular and extracurricular activities. It can make the difference between being able to "have it all" and needing to make substantial sacrifices. Good time management certainly requires a bit of discipline but, like the responsible use of any resource, that discipline can pay huge dividends in the long run.

A Theoretical Basis for Effective Time Management

In order to develop effective practices for using time well, we need first to consider why we so often use it poorly. We can understand our tendency to misuse the time we have available to us in terms of four interrelated concepts (all of which may be useful in your academic work also). The first of these concepts is known as the **Lorenz Butterfly Effect**. In December 1972, **Edward Lorenz** (1917- 2008), a pioneer in the field of **chaos theory**, gave a presentation at a conference of the American Association for the Advancement of Science with the title "Predictability: Does the Flap of a Butterfly's Wings in Brazil set off a Tornado in Texas?" Lorenz's argument was that the universe is so complex and interconnected that it's nearly impossible to determine with complete certainty whether any specific occurrence may in some way be the cause

of a later effect. As a result, we can never be absolutely *certain* that we understand the entire chain of cause and effect that led to a particular result. While the likelihood that certain factors will influence any given activity is extremely remote, it is their very distance and improbability that causes us not to take them into account when we are considering why something happened.

The next three concepts are all different types of **fallacy** (a logical inconsistency or error), which we can add to those we encountered in Unit Four. At that time, we were focusing on strengthening the critical thinking that occurs in your coursework and research, exploring how to make the strongest possible argument, and discussing how to spot the weaknesses in the reasoning of others. But we can commit fallacies in our everyday lives as well. The term **planning fallacy** was coined by Daniel Kahneman



and Amos Tversky to refer to the type of wishful thinking that people tend to make when planning for the future: They underestimate the probable costs of an activity while overestimating its probable benefits. See Kahneman and Tversky (1979). In college, people commit the planning fallacy when they convince themselves that they can bring their D up to an A in a course by producing an excellent 20-page research paper in a single weekend. As **Jalal Tabani**, the first Kurdish president of Iraq, was quoted as saying, “Wishful thinking is one thing, and reality another.” In most areas of our lives, the planning fallacy doesn’t cause us much harm. But when it relates to the type of deadlines or projects that have life-changing impact, committing this fallacy can be disastrous.

The third concept we need to consider is the **fallacy of reification**. Reification occurs when we mistake an idea or concept for something physically real. In many cases, we’re guilty of reification when we believe so strongly that things *should* work in

a particular way that we end up believing that that's how things actually *do* work. We've "made a thing" out of a mere belief or hope. The origin of this word can be found in two important Latin roots. The root *rei-* comes from the Latin word *res*, which means "thing." It shows up in such words as *republic* ("the public thing") and *rebus* (a type of code or puzzle in which phrases are sounded out, not by means of letters or words, but *by means of things*). The root *-fic-*, is derived from the Latin verb *facere*, which means "to make" as in our word *factory*. Reification thus literally means "making a thing" out of something that isn't actually real. We can compare it to the word *deification* which occurs when we "make a god" (*deus*) out of something that isn't.

If we put the Lorenz Butterfly Effect, the planning fallacy, and reification together, we produce the fourth concept that explains why things so often go wrong in time management: **Platonicity**. This term was created by **Nassim Taleb**, the essayist and author of *The Black Swan*, who wanted to describe the human tendency to believe that, if we only plan carefully enough, we can be ready for any contingency. Taleb chose the term Platonicity for this fallacy because it involves regarding our plans for the future as though they were as perfect and real as the ideal **forms** described by the philosopher **Plato** (423-347 BCE). In Taleb's words, Platonicity is "our tendency to mistake the map for the territory," in other words to reify a plan by confusing our *model* for how things might turn out with the thing itself (the actual future as it unfolds). Taleb (2010) xv. Platonicity involves the planning fallacy because we tend to be overly optimistic about the impact various activities will have (such as assuming that we'd be happy if only we had a million dollars), and it involves the Lorenz Butterfly Effect because it is those distant and unanticipated factors that so often cause our plans to be wrong. We might be minded of the line in John Lennon's song "Beautiful Boy," which says, "Life is what happens to you while you're busy making other plans" or the Yiddish proverb suggests, "Men tracht und Gott lacht." (People plan. And God laughs.) The subtitle of Taleb's *The Black Swan* reflects this same idea: *The Impact of the Highly Improbable*. We simply *can't* envision every possible contingency, and so things frequently don't turn out as we expect them to. Our plans for the future are mere models and, as we discover in our research, a model is only a *hypothesis* about reality; it isn't reality itself.

It's not that there's anything wrong with planning. The very idea of intentionality that we've been using in each unit depends on the careful development of plans. The problem arises when we believe that we've planned for *everything* and then begin to base our activities on that assumption. It is here that we can commit serious errors of time management. A good rule of thumb is: **Things *always* take longer than we expect them to.** Time management is an area in life where it's not just acceptable, it's even *admirable* to be a bit pessimistic. After all, cars will get flat tires. People will not be in their offices when you need them. Computers will break down or the power will fail at the worst possible moment. Things that "couldn't" happen *will* happen, particularly when a deadline is extremely important. While you can't anticipate what delays will arise, there are two very practical steps you can take to avoid having an unexpected inconvenience become a major disaster.

1. **Estimate *generously* how much time will be required to accomplish anything you need to do.** It's easy to become overwhelmed by our schedule if we don't make a realistic estimate of how long different tasks will take. But just being realistic isn't enough. We have to start with a level-headed estimate of how long it'll take us to get something done, and then build in a cushion of time. How much of a cushion should you build? The answer depends on how important the task is and what your personal experience has been. Truly critical tasks deserve *large* cushions, just to be on the same side. But, for day-to-day tasks, an additional one-third to one-half of the time you think you'll need will be enough. That's right: If you think it'll take you an hour to get an assignment done, block out an hour and a half. You'll end up needing that extra time more frequently than not. Then take into account what your experience has been like in meeting deadlines: If you find that you've often been guilty of grossly underestimating the time some activity will take — resulting in missed deadlines, all-nighters, or angry friends and family members — you'll probably want to try using a fairly large multiplier to compensate for this tendency. For some people, doubling or even tripling their initial estimate of the time a project will take is not too much. In these cases, if you feel it'll take you four hours to write a paper, you may need to allocate twelve, just in

case you need all that time. But remember: Even if you feel you're usually pretty accurate in predicting the length of various activities, it's always good to overestimate at least a little in case your printer runs out of toner, the computer system is down, or you get interrupted unexpectedly. You never know when the Lorenz Butterfly Effect is going to confront you with something you could never have expected.

2. **Don't schedule activities back-to-back.** If you have one activity right after another on your calendar, any one of them can throw your schedule off. If everything runs smoothly and you don't need the extra time, great! You've now got a few extra minutes to catch your breath, read a book, play a video game, catch up with friends, or check your email.

Being Intentional

Some people may argue that the very effort of goal-setting and being intentional about your life is a waste of time because forming any type of long-range objective inevitably leads you into the planning fallacy or Platonicity. Is it, in fact, productive to imagine what your life may be like ten or twenty years from now and to begin preparing for that future? If it is, what do you personally consider to be the best way to avoid looking back on your life at some distant point in the future and feeling that much of your time and effort was wasted? If it *is* productive to make long-range plans about your life, what steps could you be taking right now to avoid the steps and problems discussed in this unit?

The Practicalities of Time Management

As we just saw, the *theory* of time management can move us very quickly into *practical situations* that can help us make better use of our time and become more productive. So, let's continue this process and explore how understanding the Lorenz Butterfly Effect, the planning fallacy, the fallacy of reification, and Platonicity can help us in specific ways that can improve our academic performance. We'll start with the planning fallacy, that type of wishful thinking that can cause us to develop unrealistic

plans for the future. Now that we know the dangers this fallacy can cause our scheduling, we can take steps to avoid it by making three very important distinctions.

goals versus obligations

urgency versus importance

tasks versus appointments

In every schedule or plan, there are things you *want* to do (your **goals**) and things you *have* to do (your **obligations**). Naturally, some items on your schedule will fall into both categories at once, but the distinction is still useful when we're trying to allocate our time. Too many approaches to time management make the mistake of lumping all our objectives together and telling us simply to develop a list of "tasks" or a "to do list." It's much more effective to think of planned activities in terms of **obligations**, **goals**, and **both**. For instance, if you have to study for a quiz in a class that you're taking simply because it's required, that's an obligation. If you want your spring break to be free so that you can go on a trip to the Bahamas with your friends, that's a goal. If the major you're pursuing requires an internship, but you'd want to do one even if it weren't part of your program, that's an activity that falls into both categories simultaneously. With this framework in mind, list ten things you hope to accomplish this semester and then indicate whether each activity is an obligation, a goal, or both. For the moment, leave the Priority column at the right blank.

Obligation	Goal	Both	Activity	Priority
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. _____ _____ _____.	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. _____ _____ _____.	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. _____ _____ _____.	_____

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. _____ _____ _____.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. _____ _____ _____.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. _____ _____ _____.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. _____ _____ _____.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. _____ _____ _____.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. _____ _____ _____.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. _____ _____ _____.

Making this distinction between obligations and goals is very important but, in order to turn this list into a reasonable action plan, we next have to consider that other pair of qualities mentioned earlier: **urgency versus importance**. Urgent tasks are those that have to be done *now*. Important tasks are those that have to be done because they *have great value* for you. Under the time pressures that arise during the typical academic year, it can be all too easy to become preoccupied only with the most urgent of tasks: the assignment that's due tomorrow or the quiz that's scheduled for this week. Activities that are of equal or greater importance but that have more distance deadlines

— or no real deadlines at all — tend to get lost in the shuffle. The problem is that many of these long-term activities can be even more significant to your success than some of the items that seem so urgent. Getting a start on that paper that's not due for over a month may appear less pressing than a task you're supposed to do tomorrow but, if that paper counts for 50% of your grade, it can be far more important. Common examples of important activities that may not seem immediately urgent include planning for a semester abroad or an internship that's more than a year away, selecting courses that will prepare you to write an honors thesis before you graduate, and securing a leadership position in a campus organization that could one day help you enter or advance in your chosen career. In other words, don't build a schedule simply on the basis of *deadlines*. Consider also the *benefit* that each activity will bring.

Let's consider the distinction between what's urgent and what's important in terms of an actual example. Suppose you happen to have a day with no classes, and your lists of goals and obligations looks like the following.

- [O] Review new section of Spanish vocabulary words.
- [O] Create ten annotated bibliography items for history paper.
- [O] Complete calculus assignment.
- [O] Take mock quiz for biology.
- [G] Try the new Thai take-out restaurant for lunch.
- [O] Study for biology quiz.
- [O] Do laundry.
- [B] Get groceries.
- [O] Vacuum the living room.
- [G] Go to the football game.
- [B] Work out in the fitness center.
- [B] Get together with Rachel to discuss the calculus assignment.
- [O] Write opening paragraph for history paper.
- [O] Have oil changed in the car.
- [G] Call home.

[B] Ask Alan if you can borrow his laptop.

If your list only had two or three items on it, it'd be fairly easy to distinguish the most important and/or the most urgent task you hoped to accomplish. But faced with a list as long as the one above, you may have a hard time choosing which of them is the most important in order to block out time for it even if it doesn't appear to be as urgent as some other tasks. There are several ways in which you can set your priorities, dividing these time management techniques into two groups.

1. **Clarifying and Reclassifying Activities**
2. **Comparing and Ranking Activities**

Clarifying and Reclassifying Activities

The third distinction we encountered earlier was between **tasks** and **appointments**. Tasks are things you need to do. Appointments are things you need to do *at a particular time*. If we clarify and reclassify some of the items on our list, we start to realize that several of them may not immediately appear to be time-specific, but they actually are. For instance, you've mentioned that you intend to work out in the fitness center. But what criterion will you use to judge when that activity is complete? You probably wouldn't be satisfied with a three-minute workout, and you're probably not expecting to be in the gym all day. But you haven't really clarified exactly what this task means. So, the first step is to go back over the list and develop a realistic but generous idea of the time commitment involved. For instance, your entry about the workout might mean "**Work out in the fitness center for one hour**" or "**... until my aerobics routine is complete.**" Only when you clarify your intention will you be able to avoid committing the planning fallacy by being too optimistic about what you'll be able to fit into your one free day.

The next step is to reclassify some of these items, making them appointments instead of tasks. After all, you can't go to the football game any time you want. If it's a night game, you won't be able to use it as a mid-morning break. So, even though you may not think of such activities as attending football games and eating lunch as appointments, they really are: They occur at specific times that can't be changed

beyond a certain point. That clarifying phrase, “beyond a certain point,” is important. You do have *some* flexibility. You could eat lunch a bit earlier than usual or arrive at the football game after the first quarter. But except for this limited amount of elasticity, their time is largely fixed. Schedule these items first — if you’re really committed to attending the football game (maybe it’s a playoff) and trying the new Thai restaurant (maybe your roommate’s family runs it, and you promised to go) — and then build the rest of your obligations around them.

After you’ve reclassified certain tasks on your list as appointments, look through these items again to see if any of them can be reclassified as **prerequisites for other tasks**. In other words, your goal of working on your paper’s bibliography



probably needs to come before you draft your opening paragraph, so in terms of scheduling priorities, the bibliography has to come first. In a similar way, you’ll probably want to have that conversation with your friend about the

calculus assignment before you sit down to do it, particularly if you were interested in discovering precisely which problem sets the professor wanted you to do. You also have two items related to your biology quiz: taking the mock quiz and studying for the quiz itself. Here you have a number of decisions to make. Would it make better sense to take the mock quiz first so that you’ll know which areas you need to focus on in your studies? Or would it be better to study first, then take the mock quiz to discover how well prepared you are? Making sure that your actual intentions are clearly in your mind will help you a great deal when you sit down to work today. And if your intention was really to study some material before the mock quiz, take that quiz to find

out how well you know the material, and then to study again, based on which questions you missed, then you need to split these two tasks into three: 1) **Study for biology mock quiz**; 2) **Take mock quiz for biology**; 3) **Study for actual biology quiz**. That type of restructuring will help you be more realistic about how much time to set aside and also to be more effective in establishing how these priorities rank against your other activities.

Comparing and Ranking Activities

The final step in setting priorities is to compare the unscheduled activities you have to do and then rank them in importance. Since it can be overwhelming to find the one highest priority in a list of twenty or more activities, don't look at them all. Look at two of them. For instance, in our hypothetical example, the first two items on the list were **Review new section of Spanish vocabulary words** and **Create ten annotated bibliography items for history paper**. With your focus only on these two items, which of them seems more important? If you decide that reviewing the Spanish vocabulary is a higher priority than working on your history paper, set the latter activity aside and consider the importance of studying for your Spanish class against the next item on the list: **Complete Set aside wus assignment**. Whichever of those two activities you consider to be less important at the moment and go onto the next item on the list. If you go through your entire list this way, you'll end up with what you consider your highest priority. You can then go through the same procedure for all the rest of the items on your list until you've placed them all in priority order. If you don't overthink this exercise and simply trust your first impression, sorting an entire list in this way actually only takes a few minutes. But in most cases you won't even have to go through the entire list once. By the time you've compared four or five items you'll already know which activities are going to end up being your priorities for the day, and you can simply focus your attention on those first.

If you find this **paired comparisons method** of setting priorities doesn't work well for you, you might find it more helpful to develop an **urgency and importance formula**. We've already encountered this distinction, but now we can apply it to an actual situation. In this case, getting to the football game quickly because it starts in

ten minutes is urgent, whereas getting a good score on the GRE or MCAT is important because it'll be a factor in where you go to graduate school. An urgency and importance formula works something like this: Assign values to each item on your to do list, first in terms of its urgency, and then in terms of its importance. The values that you assign depend on how you approach things, but it's usually a good idea to give higher values to the importance side of the formula than to the urgency side. As a result, one possible model is the following.

Urgency

No deadline	0 point
Deadline is more than a month away	1 point
Deadline is between a week and a month away	2 points
Deadline is this week	3 points

Importance

No real significance	0 points
Will be significant for about two weeks or less	2 points
Will be significant for about two weeks to six months	4 points
Will be significant for longer than six months	6 points

Consider each item on your to do list and give it one urgency score and one significance score, based on the formula you've developed. Then add these two scores together for each item. In our hypothetical example, your results may end up looking something like this.

	Urgency	Importance	Total
Create ten annotated bibliography items for history paper.	2	4	6
Study for biology quiz.	3	2	5
Do laundry.	0	2	2
Go to the football game.	3	2	5

Get together with Rachel to discuss the calculus assignment.	3	2	5
Have oil changed in the car.	3	6	9

When you look at your results, it may surprise you that the activity receiving the highest score is changing the oil in your car. But, as you think about it, you may realize that the result makes sense: You've been putting off having your car serviced for far too long already, and you're afraid you may be causing damage to the engine. That expense is one you couldn't possibly afford and, if your car is unusable, you couldn't get to class and your schoolwork would suffer anyway. So, even though you were tempted to postpone this task yet again, you realize that you'll need to make time for it today. You may also be surprised that, according to your formula, studying for the biology quiz, going to the football game, and asking Rachel about the calculus assignment all ended up with the same score. If you find yourself thinking, "That can't be right. Studying for biology is *much* more important than those other things," then there's your answer: You now know what your second priority for the day has to be. The formula merely helped you see something that was more difficult to see when you were facing an entire list of potential activities. If no single item clearly emerges as a higher priority among a group of tasks with equal score, then try using the paired comparison method to identify the item you should focus on first.

Being Reflective

See if you can identify both the most productive and least productive days you've had recently. What factors can you identify that gave you the focus and energy to be productive that day? Keep in mind that productivity can mean many different things. It doesn't have to be measured in terms of the number of pages you wrote for a paper or the number of chapters you read in your textbooks. Some people may feel that their single most productive day was one spent relaxing with family and friends, even though there was no tangible "product" that resulted. In a similar way, were there certain factors that caused you to become more exhausted, unfocused, and ineffective on that other day? Can you develop a strategy to avoid or reduce those factors in the future?

A third way to approach comparing and ranking various activities is the **biorhythms method**. The term *biorhythms* was originally coined to refer to a theory, now discredited, that people cycle through a certain pattern of physical, emotional, and intellectual highs and lows over a 30- or 60-day period. But we'll use this term differently. For our purposes, we'll consider your own energy rhythms over the course of a day. Some people are early risers, while others tend to sleep late even if they went to bed early. Some people have their greatest amount of energy first thing in the morning and then gradually tire more easily over the course of a day. Others start slowly and don't really feel a high level of energy until after lunch or late in the evening. And some people seem to have two or three energy cycles, reaching a peak just before lunch, declining in the afternoon, and then coming back later in the evening. You are probably already aware of your current energy rhythms, even though those patterns may change over the course of a lifetime. Knowing these rhythms can help you plan your activities most effectively. For instance, if you know that you tend to have your highest level of energy in mid- to late morning and are often sluggish in the afternoon, then you'll want to capitalize on that pattern. In our hypothetical example, we've just seen that two activities — having the oil changed in the car and studying for the biology quiz — came out as the highest priority, with maintenance ranking ahead of studying. But that doesn't mean you have to have your car serviced first. On the basis of your personal rhythms, it's probably more sensible to study for the quiz in the morning while your energy is high, and then take your car to the dealer or a service station in the afternoon when you'll be tired, and all you'll then need to do is to wait for the oil to be changed. You might decide, too, that you'll call home and check in with Rachel while you're waiting, since those two activities can also be done at a time of day when your energy is low.

Using these same principles, go back to the list of ten obligations and principles you prepared earlier and number them from one to ten in the rightmost column in terms of their priority. Establish this priority ranking using either the paired comparisons method or an urgency and importance formula. In fact, it can be informative to experiment with both methods and see whether your results differ.

Does any ranking surprise you by being significantly higher or lower on your priority list than you would have thought?

Resources for Effective Time Management

The time management techniques we've considered so far are all effective ways of avoiding the planning fallacy. But, once we've developed a schedule and a list of other tasks we'd like to accomplish, how can we reduce the likelihood of the schedule itself becoming a barrier to our work? How, in other words, can we avoid reification and Platonicity by mistaking our *plan for the future* with our *actual future*? To solve this potential problem, we'll explore a number of resources you have available to you that can assist you with time management: to do lists, time diaries or time logs, specific and recurring planners, and Gantt charts.

To Do Lists

Creating a list of tasks you intend to accomplish — a so-called **to do list** — can be an extremely valuable resource in time management.[°] But these lists need to be prepared and followed in a certain way in order for their value to be at its greatest. In fact, to do can turn out to be a complete *waste* of time if prepared inappropriately. A lean, carefully prepared list of tasks will remind you of what you need to do, gently “nag” you about the deadlines that still lie ahead, and help you get a handle on your priorities. On the other hand, for many people to do lists merely serve as unwelcome reminders of all the things they'll never accomplish. In order to make the most effective use of one of these lists, consider the following guidelines.

1. **Never place any item on your list that's too large to be completed during a single session.** Any task that's too complex to be finished in a single study session (or, at most, a single day) should be broken down into multiple tasks that *can* be accomplished in less than one day each. There's a great psychological advantage in this approach: Checking off several items as they're

[°] Much of the advice that appears in this section also appears in Buller (2012) 208-209, but it has been redesigned in a manner to make it applicable to the sort of time-management challenges most frequently encountered by college students.

- completed provides an incredible sense of accomplishment and helps keep you from being overwhelmed by the immensity of the goals you've set for yourself.
2. **If an item has remained on your to do list for more than a few weeks, simply remove it.** Any goal that gets carried over from list to list for several weeks is unlikely to be achieved anyway. Rather than feeling burdened by these unfulfilled dreams, refocus your attention on tasks that *can* and *will* be accomplished. In other words, "write research paper" is a poor task to put on your list precisely because it can't be completed within a single study session and will *have* to be carried over from list to list each day. Divide it instead into a series of smaller goals, each of which can be finished in less than one day. By doing so, rather than being paralyzed at the prospect of one immense task, you'll be motivated to use your time more effectively by confronting a series of more manageable tasks. In the same way, "write bestselling novel" is a poor item for the list both because it can't be accomplished in a single task and for the vast majority of people it can't be accomplished at all. Remember that this is a to do list, not a **vision board** (a collage of images relating to things you want or lofty goals you hope to achieve) or a **bucket list** (see Unit Twelve). It's a list of specific, highly achievable tasks. So, rather than feeling like a failure because a distant, unachieved goal remains on your to do list, remove it and use your list instead for more immediate concerns.
 3. **At the end of each day, spend no more than ten minutes reorganizing your to do list and setting the next day's priorities.** A small amount of time spent on setting priorities can help you get prepared for the next day with motivation and energy. *Too much time* spent on this task, however, simply becomes one more unnecessary distraction. So, don't let reorganizing your to do list become just another obligation that occupies your time. Maintaining your list as a word processing file, as part of an electronic calendar program, or a text file on your PDA or phone can save you from rewriting an entire list each day and thus free up your time for more important things.
 4. **Consider the possibility of *over-planning* your day occasionally.** If, as we've considered above, you place two or three reasonable tasks on your to do list,

you'll probably get them done that same day. Similarly, if you have five or six reasonable items on your to do list, you have a very good chance of getting them all done. But if you have twelve or fifteen reasonable items on your to do list, it seems unlikely that you'll be able to accomplish all of them in a single day, unless they're very easy tasks; nevertheless, you *may* find a way of accomplishing nine or ten practical but worthwhile goals if you stretch yourself a bit. In other words, it can be a good motivational tool for you to set yourself an overly ambitious set of goals every now and then. But you should only try this plan if you're the sort of person who won't lose motivation by not being able to accomplish all of your goals every day or if long to do lists will paralyze you into achieving *none* of your objectives.

Time Diaries or Time Logs

We sometimes get behind schedule because we don't understand very well how we actually spend our time. Keeping a **time diary** (also known as a **time log**) for even a single day can be a productive and eye-opening experience that informs you about ways in which you can more efficiently use the time you already have available. To keep a time diary, simply take a sheet of paper, record the time at which you get up that morning, and then, every fifteen minutes throughout the day, make a brief note about what you did during the previous quarter hour. Your note should not be long; you want to engage in an exercise that can *save* you time, not assume a burden that costs you precious time. The beginning of your time diary might look something like the following.

7:00 am	Woke up.
7:15 am	Brushed teeth and dressed.
7:30 am	Brisk walk on campus.
7:45 am	Brisk walk continued.
8:00 am	Showered.
8:15 am	Dressed and went to breakfast.
8:30 am	Breakfast with Devon.
8:45 am	Break continued; walked to class.

9:00 am	Advanced Calculus class.
9:15 am	Advanced Calculus class continued.
9:30 am	Advanced Calculus class continued.
9:45 am	Advanced Calculus class continued.
10:00 am	Advanced Calculus class ended; returned to room.
10:15 am	Read newspaper. ...

By the end of the day, you should have a comprehensive list of how your day was spent. Are there any obvious periods in which you feel that you didn't use your time efficiently? Are there any activities that you could reschedule so as to make better use of your time? If you were to group these fifteen-minute blocks into large categories like attending class, eating, studying, getting ready, relaxing, traveling, waiting, and so on, what two or three categories occupy the majority of your day? What two or three categories occupy the least amount of time? Are you satisfied with that result or do you wish it were different? If your learning preference is highly visual (see Unit Two), you might even consider using a spreadsheet program to generate a pie chart that summarizes how much time you spent on each category. There are few ways in which to understand instantly how you might rearrange your priorities than seeing a disproportionately large "slice" of a pie chart devoted to activities that you consider of relatively little importance.

If you try keeping a traditional time diary any longer than a single day, you may find yourself tempted to give up. After all, you have to stop what you're doing, think about how to describe or classify that activity, and then record it. After a while you'll probably discover that you're investing a great deal of time just in keeping your diary up to date. Fortunately, there are several resources you can use to make this process more efficient. The first resource is simply a "check-off log." Begin a spreadsheet (or photocopy the example in **Table 6.1** at the end of this unit), place specific times throughout the entire day down the left column in 15-minute increments, and major categories that describe your various activities along the top row. For example, the top of your spreadsheet might look something like the following.

Time	Email	Phone	Texting	Class	Homework	Job	Relaxing	Videogames	Internet	Other Fun	Meals	Travel	Sleep
8:00													
8:15													
8:30													
8:45													
9:00													
9:15													
9:30													
9:45													

Every fifteen minutes throughout the day, simply note what you're doing and mark the appropriate category on the form. So, if you were traveling to your job or a class at both 9:00 and 9:15, you'd simply put a check in the Travel column on the appropriate row. (You may find it helpful to set an alarm on your watch, phone, or computer to remind you when a 15-minute period has elapsed.) For Sleep, you'd note the time you turned in and the time you got up. The only parts of the form for which you may not want to use checkmarks are the Class and Homework columns. In those sections, it's probably better to develop a symbol to indicate which class you were attending or completing an assignment for. The symbols should be brief but recognizable, so that you can record them quickly but also understand them later. If you're taking courses in French, English, calculus, and engineering, a simple F or C will tell you whether you were studying French or calculus. But you can't use E or even ENG for either English or engineering, because the specific course you meant won't be obvious to you later. In these cases, a different type of symbol (such as X and O or the first letter of the professor's last name) might be useful. Just be sure to record somewhere the key to the symbols that you chose. Even if it seems at the time as though you'd never forget your system, memory lapses do occur, and they could render the entire diary useless. In other columns, you may need to write a short word or two to cover an

activity not clearly indicated by a column of its own. Once you've kept this kind of record for a few days, you can begin to look for patterns that emerge. You might begin to notice sections that look like the following.

Time	Email	Phone	Texting	Class	Homework	Job	Relaxing	Videogames	Internet	Other Fun	Meals	Travel	Sleep
11:00				F									
11:15				F									
11:30				F									
11:45				F									
noon											✓		
12:15											✓		
12:30			✓										
12:45			✓										
1:00			✓										
1:15								✓					
1:30								✓					
1:45								✓					

Examining this chart would show you that, after lunch on this day, you spent nearly an hour and a half texting and playing videogames. That may or may not be a problem for you. Perhaps this time right after lunch is not your most productive time, and you know you'd fall asleep if you weren't engaged in some easy and enjoyable activity. In that case, it may be the best time of the day for you to keep up with your friends and take a break from your morning classes. But perhaps that time of day happens to be when you're most alert and creative. In that case, it'd be a much better use of your time to spend it working on long-term projects or doing some homework than devoting it all to things you do largely for the fun of it.

There are also electronic resources you could use to track your time easily.

Software packages and apps allow you to designate an activity when you begin, click on “Start,” click on “Stop” when you



complete it, and thus have a record of your entire day on your laptop, tablet, or phone. Other versions of this software are web-based and can run on your browser in the background behind whatever you happen to be doing. There are also apps, programs, and websites that can be used to develop Gantt charts, set up meetings (by finding out when all the members of a group are available, track appointments, and remind you of upcoming events). Electronic calendar programs are now ubiquitous, and they can be easily synched between your phone, desktop and laptop computers, and tablet. It's merely a matter of identifying what your individual needs are in the area of time management and to match them with whatever level of technology you find easiest to use.

Being Imaginative

The use of time diaries can also provide you with a source of data that, with a bit of creativity, could become the basis for a class project. Suppose that you were able to persuade ten students to keep a time diary for two weeks at each of the following locations: your own school, an extremely conservative religious college, a large university well known for the radical political views of many students, a law school, a medical school, a technical school for training professional cooks, and an online university. Suppose, too, that you were able to gather similar information

for parallel institutions in England, Brazil, Japan, and New Zealand. What type of product possibilities could you develop from this information? Think in terms of statistical projects, a short story or poem, a film documentary, and an ethnographic study. How might your project look very different if it was one of five projects you had to do in a single class, the only project you had in a single class, and the thesis or capstone activity you completed in your last semester before graduation?

Specific and Recurring Planners

A daily planner is a type of schedule that tells you exactly what you need or wish to accomplish during each waking hour of any given day. The goal of a daily planner is not to over-schedule your time but simply to show you *what* you want to accomplish *when*. Naturally this type of planner will include any classes you need to attend that day. But your planner should also indicate when you intend to wake up, go to bed, eat, study, relax, get together with your friends, work on a long-term project, travel to and from classes, and accomplish any of the other tasks you may have on that day. Because a daily planner tells you exactly what you're doing at a particular hour of a particular day, we call it a **specific planner**. **Table 6.2** at the end of this unit is a specific planner that you can photocopy in order to keep track of your tasks and appointments. But sometimes when you're trying to get a grasp on your schedule, you aren't as much interested in the specifics of any *particular* day; you're more concerned about repeated patterns of your commitments. For instance, suppose you're a member of a club that wants to meet every Thursday evening at 8:00. Is that a possible time for you? Rather than looking at your schedule for every Thursday throughout the entire academic year, a planner of your recurring weekly activities can tell you when your classes, rehearsals, practices, meetings, lessons, and other repeated events are scheduled. On a PDA or electronic calendar, your daily planner of specific activities and your weekly or monthly planner of recurring activities can be the same document. If you prefer to keep a printed planner, however, it's usually better to keep these two documents separate. **Table 6.3** at the end of this unit is a recurring planner you can use for activities (like your classes) that have a weekly schedule and **Table 6.4** is a

recurring planner you can use for activities (like certain club meetings and social events) that have a month schedule.

Gantt Charts

Gantt charts receive their name from **Henry Lawrence Gantt** (1861-1919), a mechanical engineer who's credited with several innovations related to efficiency and "project flow." In its simplest form, a Gantt chart is a timeline that visually represents the various stages needed to complete a project. Each stage of the project is depicted as a line extending from its start date to its end date. Stages that are possible to conduct simultaneously are represented with overlapping lines; stages that can only begin when another stage in the project is complete are represented with successive lines. The value of a Gantt chart is that it makes it much easier for students to make a realistic estimate of the time they'll need to complete various assignments. It can also help you at the very beginning of a project to think through all the steps you'll need to complete in order to finish a complex task. It wouldn't be helpful to develop a Gantt chart for most class assignments or for short essays. Nevertheless, for extended projects, such as completing a thesis, applying to graduate or professional school, or planning a major event for a campus club, a Gantt chart can be invaluable. As an example, let's imagine that you wish to create a simple Gantt chart for a long research paper that is due in one of your classes. You can develop your bibliography at the same time that you are conducting your research, so the lines representing these two activities could overlap completely. You might begin constructing your outline for the paper at some point during your research, so those two lines might overlap partially. But you cannot begin your second draft of the paper until your first draft is completed, so those lines would be sequential. **Table 6.5** at the end of this unit illustrates how a Gantt chart for your project might look. Gantt charts help you get a grasp on your priorities and break complex tasks into manageable parts. **Table 6.6** is a blank chart that you can use for planning your own projects.

Best Practices in Time Management

Once you've taken control of your time in the ways we've already considered, you're ready for a few simple but well-tested practices that can help you become an expert in effective planning and achievement. Many of these best practices are derived from the following key principle.

Key Principle

People use their time most effectively if they are always aware of what they are trying to achieve at that particular moment. If you cannot give yourself a good answer to the question, "Why am I doing what I'm doing right now?" you probably should be doing something else.

This principle doesn't mean that you can never do something simply for the sake of enjoyment. "I'm doing this because I need to relax," "I'm doing this to reward myself for getting my thesis done on time," "I'm doing this because I needed a break from all my studying," and "I'm doing this for a little variety since I was bored after reading all day" are all legitimate answers to the question "Why am I doing what I'm doing right now?" The goal isn't to become exclusively focused on your schoolwork or other "productive activities" but to make you **mindful** of *why* you're spending your time as you do. If you find yourself repeatedly answering your question with a response like "I'm doing this because I enjoy it," it may be time to ask yourself whether enjoyment is the only goal that you have ... or that you can afford. Every well-rounded person does things simply for the sake of enjoyment every now and then, but few well-rounded people do *everything* simply for the sake of pleasure. **Delayed gratification** — postponing an immediate pleasure for the sake of obtaining an even greater pleasure or more significant goal later on — should be part of every time management system. With this advice in mind, consider how you might benefit from the following three best practices in time management.

1. Keep your workspace tidy. You may feel that a cluttered desk is the sign of a complex mind, but actually a cluttered desk can be a monumental waste of time.

Having to interrupt your work in order to find a set of notes or class handout that's buried somewhere in a pile is far less productive than using that time to complete your assignment because you knew exactly where to find your class notes and handouts. Most people tend to work more effectively and to be more creative in their ideas and solutions in clean, well-ordered, attractive spaces. Perhaps you're not an advocate of **feng shui** (風水, pronounced "FUNG SHWAY," Mandarin for "wind water"), the belief that the way in which a physical environment is organized affects the attitudes and fortunes of the people who use that space, but you don't have to believe in a cosmic principle to recognize that people can be affected by their environments. The **Broken Window Theory** of law enforcement argues that, if petty crimes such as the breaking of windows in abandoned buildings are tolerated, entire neighborhoods become less law abiding. When people live in areas that are neat and free of any evidence that infractions of the law are tolerated, they act differently than they do in environments where buildings are in disrepair, covered with graffiti, and neglected. See Corman and Mocan (2005), Harcourt (2001), Harcourt (1998), Wilson and Kelling (2003), which offer both explanations and critiques of this theory. While the Broken Window Theory may attribute a great deal of its impact to social influence or "peer pressure," it's also the case that people tend to act more orderly in an orderly environment. On a small scale, this approach works in your room at home, in an apartment, or in a residence hall. It also applies to the way you keep your computer or laptop. Is your computer's "desktop" cluttered with a large number of files or are your documents organized neatly into files or directories where they can easily be found? The environment in which we work has a surprising effect on the *quality* of our work, as well as on our effective use of time. So, while you should never put off beginning a difficult assignment with the *excuse* that you first need to organize your desk and computer, a little bit of time making certain that your workspace is clean and in order can save you a great deal of wasted time later.

Being Innovative

How would you design a study to demonstrate whether college students study

more effectively when their workspace is orderly? How would you go about finding out what previous work has already been done on this topic? Since this study will inevitably involve human subjects, what procedures are in place on your campus governing this type of research? What precautions might you take to reduce the likelihood that your preconceptions do not affect your interpretation of the results? What factors would you need to control for in your experiment? For example, can you be certain that your results will be the same no matter which academic subject a student is studying? Will your results be the same regardless of the student's previous academic record? Can background noise also be a type of "clutter" that affects the results of this study?

2. Combine appropriate tasks and activities to leverage your time whenever possible. We usually think of plagiarism as citing the words or ideas of *someone else* without appropriate attribution, but it's also possible to plagiarize yourself. **Self-plagiarism**, re-using parts of your own work in two or more courses, is regarded by most institutions as equivalent to cheating, and the consequences can be extremely serious. But while it's always unacceptable to claim credit twice for the same project without your instructors' permission, it may be completely appropriate to work on two *complementary* projects, as long as both of your instructors are aware of your intentions. For instance, the 1748 text *De l'esprit des lois* ("On the Spirit of the Laws") by Charles de Secondat, baron de **Montesquieu** (1689-1755) may have relevance to both the course in French literature and the course in French history that you're taking. While it would be dishonest to submit papers in both of these classes that were identical or that even contained several passages in common, it can be much more time efficient for you to write two different papers dealing with separate aspects of Montesquieu's work (perhaps its literary antecedents and its historical impact) than to conduct two entirely unrelated studies on two quite different topics. In fact, you may well end up learning more because you'll have studied a single issue from a variety of perspectives rather than multiple issues from a single perspective. Just be certain that you ask both professors if this approach is permissible. Offer to let them each see the two papers so that they can tell there has been no duplication between them. You'll be using your

time more effectively because you won't be researching two separate topics from scratch. Some of your bibliographic items are likely to be the same in both projects, and the background information that you learn about Montesquieu's life and times will be valuable for both papers.

The same approach that you might take on a large scale with these two papers can be taken on a smaller scale with your daily activities. Combine tasks so as to make your use of time more efficient. Drop off library books during your morning walk to the gym. Eat lunch on the way back from class rather than returning directly to your room and then having to make another trip out. When you go out on errands for necessities, prepare lists of what you need in advance so that you don't have to make numerous trips for only one or two items. Combining activities in this way not only saves you time, but it can also save other resources as well, particularly if you must drive in order to accomplish any of these goals. As we saw earlier in this unit, one of the key techniques to effective time management is being **mindful** of what you are doing, when, and why. (We'll talk more about mindfulness in a moment and in Unit Eight.) If you begin paying closer attention to how you spend your time, you're likely to discover that you have much more of this resource than you thought you had available.

3. Learn from the past, plan for the future, but live in the present. Ancient travelers to the city of **Delphi** in Greece are said to have encountered the inscription "Nothing too much" (μηδὲν ἄγαν) on the porch of the temple of **Apollo**. Like many stories from the classical world, the exact history of this saying is uncertain. Textbooks often call it a motto of the **Delphic oracle** itself and describe the phrase as inscribed above the doorway of the temple. But the earliest source to describe this inscription, Plato's *Protagoras* (343b) simply describes it as a "famous inscription" that was *dedicated* by the **Seven Wise Men** at Delphi, leaving many scholars to conclude that the statement appeared on an offering such as a statue or tripod rather than on the temple itself.[†] Whatever its true origins and location, the phrase appears to have

[†] The Seven Wise Men were a group of philosophers and public figures dating from the seventh and six centuries BCE who were famed for their wisdom. The precise grouping of the Seven Wise Men varies

resonated strongly with early Greek society. One of the Seven Wise Men, Cleobulus of Lindos, is said to have uttered a similar sentiment — “Moderation is best” (μέτρον ἄριστον) — and in the *Nicomachean Ethics* (4.9) the philosopher Aristotle defined every virtue (such as courage) as a point of balance between two extremes (such as rashness and cowardice).

While our own heritage from the Romantic Age frequently causes us to praise people who throw themselves into activities with their whole hearts, heedless of the consequences, this Greek worldview is a far safer guide when we are trying to master time management. It’s equally dangerous to fixate on and to be indifferent to our past: Preoccupation with our regrets or former triumphs can blind us to opportunities in the present, while unwillingness to reflect on what we’ve learned from our failures (as well as our successes) can prevent us from becoming even more effective in the future. Similarly, if we avoid planning at all we may miss taking steps now that will be beneficial to us in the years ahead, while if we spend too much time planning we might not spend enough time doing and also fall victim to the Lorenz Butterfly Effect and the three time management fallacies mentioned earlier. In Unit Eight, we’ll discuss what the psychologist Ronald Siegel calls “the mindfulness solution”: a way of living in the present moment without paying too much or too little attention to the past and future. The term “mindfulness” actually has a long heritage. It is often used to translate the Sanskrit word *smṛti* (Sm&it), which refers to being properly aware of and attentive to whatever object of meditation a person has selected. In essence, it is about not letting your mind wander when you don’t want it to. In English the word “mindful” goes back at least as far as the fourteenth century and applies to someone who is paying close attention to what’s happening. In both the eastern and western senses, therefore, *mindfulness* is about being cognizant of what’s happening as it’s happening, not letting our thoughts drift off towards past regrets or future fears.

from author to author, but it usually includes Solon of Athens, Cleobulus of Lindos, Chilon of Sparta, Bias of Priene, Thales of Miletus, Pittacus of Mytilene, and Periander of Corinth. Although Plato does not specify which of the seven actually developed the motto “Nothing too much,” later authors frequently attributed it to Solon. In any case, the phrase is now often regarded by scholars as a concise bit of folk wisdom that became associated with the Seven Wise Men only by legend.

Best practices in time management involve the same approach. Good time managers tend to be people who are truly “there” in everything they do and experience. They don’t waste time looking for items that they misplaced while daydreaming or redoing a term paper that was a disaster because they weren’t paying attention when they wrote it the first time. They give the future and the past their due, but they live their lives in the present.

Coping with Stress

Stress can be caused by many factors, but one of the most common causes of stress for college students is the need to complete so many different tasks — coursework, a job, and a personal life — within a very limited period of time. Of course, a certain amount of stress in life is both unavoidable and beneficial. Stress can be helpful when it makes us test our boundaries, work at a higher level than we thought possible, honor our commitments, meet our deadlines, and avoid situations that would eventually be harmful to us. It’s only when our stress becomes *excessive, continual, or uncontrollable* that we need to be concerned. It’s a sign that something has gone wrong when *everything* seems to cause us stress or when anxiety arises *for no apparent reason whatsoever*. In addition, you may be suffering from stress if you ...

- ... feel your heart pound or often have noticeable palpitations.
- ... are repeatedly unable to focus on your work or other commitments because you feel you will never get everything done or finish your work to your satisfaction.
- ... have a dry mouth that won’t go away, particularly if it becomes more noticeable when you are worried about something.
- ... either can’t sleep at all or wake up repeatedly in the middle of the night, unable to put all your obligations out of your mind.
- ... find yourself unable to concentrate in class because you are so worried about your workload that you can’t think about anything else.
- ... suffer from a lasting sense of apathy because you feel that nothing you do will matter anyway.

- ... have headaches frequently, particularly if the muscles in your back, neck, or shoulders are extremely tense.
- ... rely increasingly on drugs, alcohol, sex, or gambling to distract you from your work or because you feel you need these things in order to relax.
- ... take refuge in unrealistic hopes that something dramatic will change, thus ending the stressful situation.
- ... miss class repeatedly in an effort to catch up, but end up falling more and more behind as a result.

Make no mistake about it: Several of these warning signs can be symptoms of *other* serious health conditions besides stress. Check with your doctor immediately if you have prolonged instances of heart palpitations, dry mouth, headaches, or insomnia in order to make sure that these symptoms are caused by stress and not some other illness. Moreover, if people who know you have expressed concerns about how you've become increasingly disengaged or reliant on chemical substances and avoidance behaviors, take these concerns seriously and confer with a trained counselor who may be provided by your school, insurance program, or county health department. In other words, the advice that appears below is for the *relatively mild instances* of stress that can affect every college student from time to time, not for those whose anxiety or tension is making them seriously ill or provoking suicidal thoughts.

As you probably already know from experience, simply being told to relax does little to reduce your overall stress level. In fact, studies have indicated that instructing a very tense person to calm down can actually *increase* the amount of stress the person is feeling. See, for example, Wegner, Broome, Blumberg (1997). What *can* you do, then, to help yourself relax when you're facing a great deal of pressure? The following are several possible approaches, not all of which may be applicable to you. So, consider these ideas, decide which of them might be helpful to you, and try applying one or two of them the next time your level of stress seems high.

- **Become more intentional and controlled in your breathing.** You can slow down your breathing by consciously inhaling through your nose and exhaling through your mouth. As your breathing slows, you will often find that you

- quickly begin to feel more relaxed and in control. Don't try to take *deeper* breaths or to *hold* your breath since a number of clinical studies indicate that deep breathing *increases* a person's heart rate. See, for instance, Ahmed, Harness, and Mearns (1982) and Sroufe (1971). In other words, the important factor is not the *depth* of the breath, but its *regularity*. For centuries schools of meditation all over the world have taught that the first thing students need to do is to concentrate on their breathing, to become aware of both inhalation and exhalation, and to make these cycles more regular. Rapid breathing or "gulping" of air can heighten your level of anxiety and even lead to hyperventilation and panic attacks. See Ley (1985). Regular, calm breathing tends to have the opposite effect: It leads to a greater sense of tranquility and a reduction in heart rate and the other measurable indications of stress.
- **Take control of what you can.** Sometimes we feel stressed because everything appears to be out of our control. Our own feelings and preferences don't seem to matter. While there are certainly many situations in which college students have no control over the work they are assigned or when material is due, it simply isn't true that *everything* is outside their control. Think for a moment about your current obligations and commitments. Why do you feel responsible for each of these tasks? What are you afraid might happen if you don't live up to that particular obligation? By asking yourself questions like these, you'll realize that there are important differences among the reasons why you feel pressured by your various commitments. In fact, you'll discover that you have control over many more of your obligations than you may initially believe. And just by realizing you have some control over your priorities can help reduce your level of stress.
 - **Break large problems or challenges into manageable parts.** Another way in which you can exert control over a situation is to stop regarding your commitments as single, almost unimaginable tasks and to begin thinking of them as a series of small and achievable goals. We've already seen that it can be paralyzing to think of a long research paper that is due in a few weeks when you still have all your other assignments, your job, and your obligations to your

family to consider. But if you think of what you have to do as not “one long, impossible-to-complete research paper” but a series of 15 or 20 small steps — all of which happen to add up to a research paper — the whole task can become much more manageable. Small tasks such as finding five good sources, drafting a thesis statement, writing two pages of an outline, writing three paragraphs of your draft, polishing two pages of your final draft, and so on can each seem easy to accomplish in a way that the project, when viewed in its entirety, does not.

- **Understand that people control their reactions to situations far more often than we often realize.** We have just seen that you may have more control over your various responsibilities than you realize. Yet certain situations and events will remain outside of your ability to manage them. Even in these situations, however, you still have a choice in how you react to the challenge. When you find yourself under a great deal of pressure, try viewing all the work you have to do as an opportunity to test your character. You’ve handled tough challenges before, and you’ve succeeded in overcoming them. Moreover, in order for you to reach your goals, you’re continually going to face a heavy workload and competing priorities; your current situation is a good preparation for what lies ahead. The problem you’re trying to solve is not an obstruction to your college education; it’s an essential *part* of your college education.
- **Identify situations or environments that seem to trigger your greatest stress.** Although stress is sometimes caused by our general circumstances rather than by some specific concern, it may be possible to identify particular people, places, or situations that increase our stress. For instance, you may observe that you become particularly anxious on days when you meet with one particular professor, have to complete a certain type of assignment, or meet in a campus facility for which you have unpleasant memories or associations. Of course, knowing what triggers feelings of pressure or anxiety doesn’t give you license to avoid these encounters. Running away from problems or developing avoidance behaviors is a less effective strategy for dealing with stress than addressing your concerns head on. To begin with, only rarely does this

strategy work in the long term. It may be one thing for you to avoid a friend whose disparaging or sarcastic remarks on exam days always seem to make you more nervous, but this technique won't work when the person who triggers your anxiety is a roommate, professor, or member of your own family. In certain situations, you may be able to talk with the person about how their behavior affects you and effect a change in what that person does or says. In other situations, you may be able to desensitize yourself to certain environments by repeatedly visiting them, first for a short amount of time, then for longer and longer periods until your anxiety subsides.

- **Stay physically active.** Many different studies have documented the importance of physical activity in reducing stress, decreasing levels of generalized anxiety, and diminishing stress-induced headaches, particularly for children and young adults. See, for example, Salmon (2001), Moraska and Fleschner (2001), Biddle, Fox, and Boutcher (2000), Fox (1999), Clark, Sakai, Merrill, Flack, and McCreary (1995), Calfas and Taylor (1994), and Norris, Carroll, and Cochrane (1992). Sedentary lifestyles have a strong correlation with increased levels of stress, elevated blood pressure, and even certain types of depression. Unfortunately, students who feel pressure from their schoolwork and other obligations frequently reduce their amount of exercise at the very time that exercise is most important. Maintaining at least *some* level of physical activity can help us keep things in perspective and manage stress. Even a brisk walk around campus can be very effective in providing the type of exercise needed to reduce your stress.



- **Get a full night's sleep as often as you can.** Research has also demonstrated a clear correlation between lack of sleep and high stress levels. See, for instance, Hall, Baum, Buysse, Prigerson, Kupfer, and Reynolds (1998), Kant, Pastel, Bauman, Meininger, Maughan, Robinson, Wright, and Covington (1995), and Kollar, Slater, Palmer, Docter, and Mandell (1966). The precise nature of the causal relationship is, however, not always clear: Does lack of sleep increase a person's level of stress or do people tend to lose sleep when they are in very stressful situations? Quite possibly stress and lack of sleep are connected in a vicious circle: When we feel tense, we don't sleep; not sleeping makes us anxious and irritable the next day; since we are tense, we sleep even less the following night; and so on. It's possible to draw several conclusions from this situation. We handle pressure more easily when we're feeling rested; we tend to work better — and thus not get behind — when we've had a sufficient amount of sleep; being tired can cause us to make mistakes, thus either increasing our stress or causing us to have to redo work even as our obligations and commitments increase.
- **Eat a well-balanced diet.** You already know that proper nutrition is important both for health and your overall sense of wellbeing. That understanding tends to get ignored, however, when the pressure builds and assignments are due. The temptation to eat meals on the run increases. We grab food quickly, eat in a hurry, and barely notice what we had for lunch. In order to keep our energy up, we drink more tea, coffee, or other caffeinated beverages. We may also find ourselves attracted to foods that are high in refined sugar such as candy, pastries, and cookies. But this type of diet can only compound our sense of stress. Caffeine often causes people to feel anxious and on edge. See Totten and France (1995), Landrum (1992), and Sawyer, Julia, and Turin (1982). Refined sugar can bring a sudden energy boost, but it is often followed by a slump that makes it even more difficult to focus and concentrate. The best approach to stressful situations is to maintain the same sort of balanced diet we should be eating even when we are not experiencing any sense of pressure. By eating meals in a more leisurely manner, we give our bodies a chance to calm

down and recover from all the effort we've been devoting to our studies, family obligations, and personal commitments.

Being Analytical

As we saw in Unit Three, some extremely interesting research can be done, not within the confines of any particular discipline, but by blending the approaches of different academic fields. But in order to conduct a legitimate and reliable interdisciplinary study, you have to think critically about the steps that will be necessary in order to define and perform the research properly. So, suppose you decide to investigate the role that meditation, yoga, tai chi, or prayer have on stress reduction and increasing a person's satisfaction with life. This topic could easily involve neurobiology, philosophy, religious studies, exercise science, medicine, alternative medicine, psychology, physiology, and a number of other disciplines.

1. Since it's difficult, particularly at the undergraduate level, to become proficient in all of these disciplines simultaneously, what strategies might you use to develop a meaningful approach to this topic?
2. How do you go about doing a literature review of prior research on this topic since it involves so many disciplines?
3. What books, article, and electronic resources would you consult as reliable sources for background information on this project? What standards would you use to determine whether a particular source should be regarded as reliable?
4. Some scholars might regard the outcomes you are studying – “reducing stress” and “improving satisfaction with life” – as difficult to define or assess. One discipline may define these terms differently from another. How might you define these outcomes in a manner that would make your results verifiable, reproducible, and significant? Is it necessary to reduce these outcomes to quantifiable measurements in order to conduct meaningful research?

5. If you would involve human subjects in your research, what ethical issues might you need to address? What procedures does your institution have in place for studies involving human subjects?



We began this unit by noting that people tend not to use resources efficiently if they feel these resources are unlimited or if they don't pay attention to how much of each resource they are using and why. We all know people who seem to get a great deal done but who always have time to talk or at least to stop and say hello. On the other hand, we all know other people who are constantly rushing off to do this activity or complete that task, who constantly talk about how terribly busy they are, but who don't seem to be accomplishing all that much. The difference between these two situations can be as simple as effective time management. Devote your time to the things that are really important to you, complete the tasks that are urgent, and reduce the amount of time you spend on activities that are neither important nor urgent. Rather than panicking over how much work you still have to do, take a little honest pride in how much you've already accomplished, and you'll realize that you are well on your way towards more effective time management.

EXERCISES

1. Complete a time diary like the one described in this unit. Focus on two days: a regular day with several classes or other recurring responsibilities and a weekend day or the day in which you have the most flexibility with your time. Develop at least three candid observations about how you spend your time. If you were to develop one strategy to manage your time more effectively based on what you observe from your time diary, what would it be?
2. How might you expand the use of a "check-off" type of time diary even further? For example, what type of data could you collect for an undergraduate research project quickly and easily using this method? For this question, don't limit your ideas to those related to time management. Try to think of applications this type of record could have in different disciplines to

- track other sorts of patterns.
3. Prepare a simple Gantt chart for a project or assignment that you have due in one of your classes. Break each part of your work into steps small enough to complete in a single study session. Are there particular types of assignments for which you think this type of preparation will be more valuable than others?
 4. Make a list of the activities that occupy significant amounts of your time but that have little benefit or satisfaction for you. Are there ways in which you can reorganize some of your priorities in order to have more time for the things that are really important to you?
 5. Reflect on the last few situations in which you noticed that you were stressed or felt under a great deal of pressure. What physical sensations do you most closely associate with this experience? Are there particular steps that you take in order to relax or deal with stress more effectively? What is your best suggestion to a fellow student on how to cope with stress that was not mentioned in this unit?

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RESOURCES

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Table 6.2: Sample Daily Planner of Specific Activities

5:00 am	
6:00 am	
7:00 am	
8:00 am	
9:00 am	
10:00 am	
11:00 am	
12:00 noon	
1:00 pm	
2:00 pm	
3:00 pm	

4:00 pm	
5:00 pm	
6:00 pm	
7:00 pm	
8:00 pm	
9:00 pm	
10:00 pm	
11:00 pm	
12:00 midnight	
1:00 am	
2:00 am	
3:00 am	

4:00 am

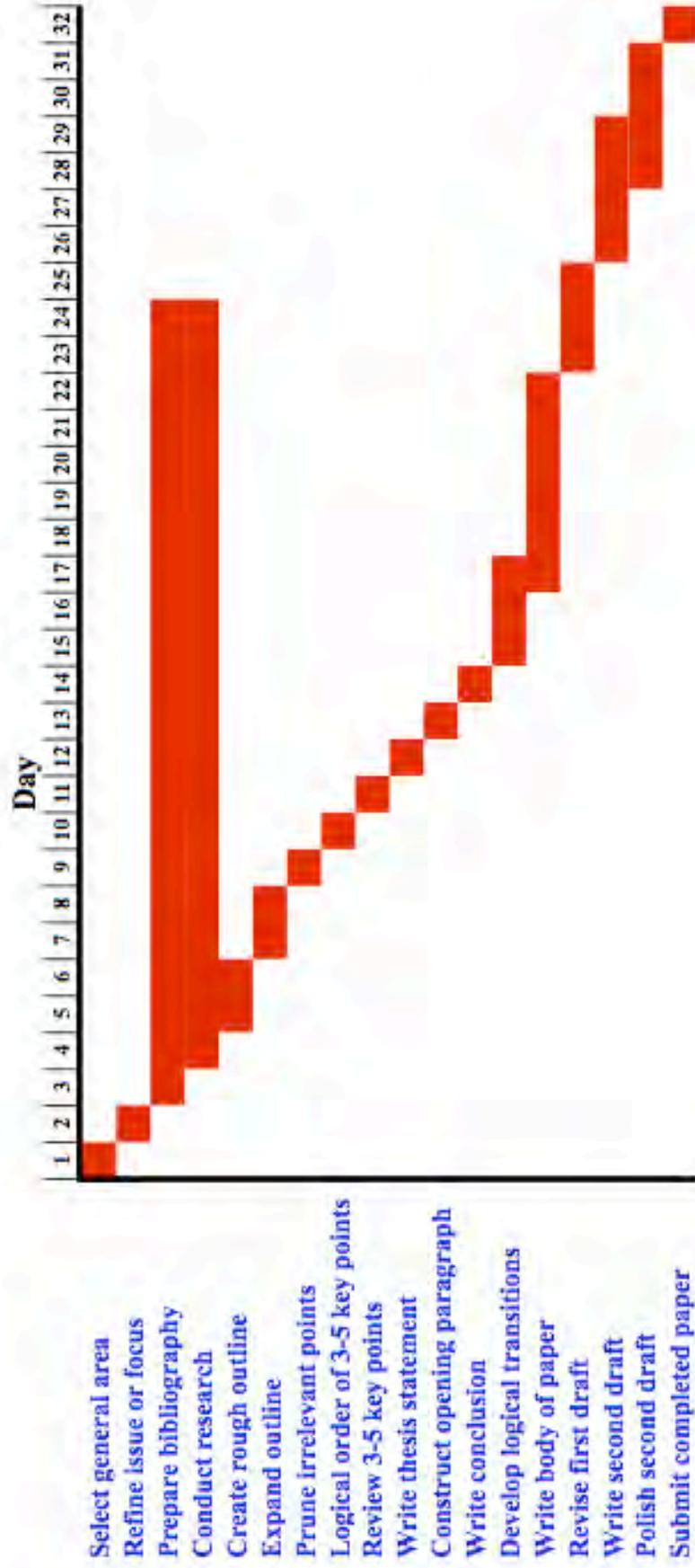
Table 6.3: Sample Weekly Planner of Recurring Activities

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5:00 am							
6:00 am							
7:00 am							
8:00 am							
9:00 am							
10:00 am							
11:00 am							
12:00 noon							
1:00 pm							
2:00 pm							

Table 6.4: Sample Monthly Planner of Recurring Activities

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
First Week							
Second Week							
Third Week							
Fourth Week							
Fifth Week							

Table 6.5: Sample Gantt Chart for a Research Paper



Unit Seven:

Making Difficult Decisions

Learning Objectives:

1. To consider several useful strategies for making decisions of all kinds.
2. To explore ways of making decisions that reflect our basic principles and beliefs.
3. To apply good decision-making principles when choices are made about sexuality or sexual activity.
4. To examine how appropriate decisions can be made about the use of drugs or alcohol.
5. To consider the issues that should be explored when making financial decisions.

Effective Strategies for Making Decisions

We all make decisions every day. We decide what we'll eat, where we'll go, what we'll do, and how we'll respond to countless different questions. But as a college student, you not only have all these routine decisions to make, you'll also be confronted with a number of difficult and complex issues. For instance, if you're a traditional-aged college student, you may be experiencing a larger degree of freedom and responsibility than was available to you earlier in your life; all the choices now open to you may make it challenging to select the option that will be best, not only now, but also for the long term. If you're not a traditional-aged college student, you probably have to balance academic priorities with your other responsibilities; you may also feel frustrated at times because, even though you are used to making your own decisions about so much of your life, you now find yourself in a situation where others control — or *try* to control — many aspects of what you do. This unit will explore some of the difficult decisions that students make while in college and will examine several ways in which undergraduate students can go about deciding which option is best for them.

A lot of decisions are quite easy. We simply know our preferences or trust our instincts, and the answer seems obvious to us. But those aren't the decisions that most

people struggle over. Nor is effective decision-making always a matter of finding the one right answer among a number of obviously wrong answers.

Key Principle

The hardest decisions we have to make aren't between right and wrong. They involve finding the *best* option among many right options or the *lesser evil* among many problematic options.

Consider a situation in which every one of your options would result in hurting *someone*. How do you go about deciding whom you'll hurt? Do you try to find the solution that results in the *least harmful* choice? That's certainly an effective strategy in many instances, but it won't work if all of the options cause an equivalent amount of harm. Do you choose to harm the person who can best afford, absorb, or otherwise handle the harm that will result? That's also an effective strategy but it won't work if you don't know any of the people involved or if there's no obvious choice about who that person should be. Do you simply choose someone at random? That approach will result in a *conclusion* of the choice, but is it really a *decision*? Haven't you simply surrendered responsibility to chance? There have to be more effective ways to make good decisions, and there are. Let's explore several of them.

Cost-Benefit Analysis

Any time you find yourself weighing possibly negative implications of a decision (the costs) against possibly positive implications (the benefits), you're engaging in a fundamental decision-making strategy known as **cost-benefit analysis**. In its simplest form, this type of decision-making is performed by making a list of pros and cons of each choice in a decision, similar to the process used by Robinson Crusoe after his shipwreck or advocated by Benjamin Franklin in his *Autobiography*. In a slightly more elaborate form, it might consist of creating an actual balance sheet of expenses in time and money resulting from a decision against the benefits that would accrue. In your personal life, you'll perform this type of analysis when you're trying to decide whether to rent or buy a home, lease or purchase a car, or buy one model of appliance with a

lower initial cost but higher upkeep versus other models that require a larger initial investments but that are largely maintenance free. See Buller (2012) 115. In the last unit, we considered a situation in which you discovered that the single most important thing you had to do one day was to change the oil in your car. Let's return to that situation and imagine that you're trying to decide whether to do it yourself or to have it done professionally. You draw up a quick cost-benefit analysis that looks like the following.

Do It Myself		Pay to Have It Done	
Costs	Benefits	Costs	Benefits
Financial: \$15.88 (oil only)	Learn to become more self-reliant	Financial: \$26.00 (oil and service)	Can study while the service is being done
Time: 1-1.5 hours	Costs less	Time: 15-30 minutes	Takes less time
Messy: I'll probably get oil all over my clothes my skin and clothing		Some of the time savings will be wasted driving to and from the service center.	Professionally done: less chance of error
More time involved		Costs more	No need to borrow tools
Don't have the tools to do it properly; will need to borrow them			
Might cause permanent damage			

Do It Myself	Pay to Have It Done
if done wrong	

After drawing up this type of list, you might look at it and draw several conclusions.

- Doing it yourself has more costs than benefits, while having it done by a professional has an equal number of costs and benefits.
- Some of the costs of having your oil changed by a professional are minimal. For instance, the savings from doing it yourself is only \$10.12, less than the price of a pizza.
- Several of the costs of doing it yourself seem to far outweigh both the benefits of changing your own oil and the costs of having it done for you. For example, the fact that you'll lose some time driving to and from the service station pales in comparison to the risk of *permanently* damaging your car by doing something wrong.

Given all these considerations, you may well decide to have a professional do the work.

Certain software packages can help you “automate” decision making through cost-benefit analysis. The spreadsheet program Microsoft Excel comes with a Pros vs. Cons template in which you can enter various costs and benefits, assign them an importance factor of 1 (not really important) to 5 (extremely important), and receive a generated recommendation about whether the pros or cons win. There are also apps for your phone or tablet that similarly record the costs and benefits of decisions along with a score indicating the significance of each factor. Other programs or apps use methods such as **expected-utility theory** (a more complex form of cost-benefit analysis that also takes account of such factors as the probability that each possible outcome will occur, your own comfort with or aversion to risk, and individual preferences) or the **Analytic Hierarchy Process** (an approach that breaks complex decisions down into easier sub-decisions) in order to provide recommendations as to what choice is likely to produce the most satisfying result. One advantage of these automated processes is that you don't really have to follow the recommendation given; the software merely makes a suggestion that you can “try on for size.” If it doesn't

“feel right,” you’ve come much closer to reaching your distinction. For example, if the program you’re using recommends that the best use of your summer income is to buy a new laptop rather than saving it for graduate school, your own level of comfort or discomfort with that recommendation can tell you which choice you subconsciously *wanted* to make all along.

The Limitations of These Analysis Systems

The big problem with all of these systems is that they can leave you prone to Platonicity coupled with reification, two fallacies we considered in the last unit. In other words, no matter how complex your decision-making formula is, it’ll never approach the complexity of real life. And we’d be making a huge mistake if we began to confuse our model for a completely accurate depiction of how our lives really work. A secondary problem is that, while the analysis systems we were just exploring can be

helpful in guiding you towards making a major decision, even the easiest of them is too cumbersome to use regularly for all the decisions we need to make. What would benefit us more is a set of guidelines or principles we can rely on to help us make better choices



regardless of whether the matter is life-changing or relatively routine. One method that many people find useful is the **best-case scenario/worst-case scenario system**. With this approach, you quickly ask yourself four questions.

1. **What’s the best possible outcome that could occur if I decided to do X?**
2. **What’s the worst possible outcome that could occur if I decided to do X?**
3. **What’s the best possible outcome that could occur if I decided not to do X?**

4. What's the worst possible outcome that could occur if I decided not to do X?

If you believe that one of the two worst-case scenarios is absolutely unacceptable, you have a very good reason for not pursuing that path. If both of the worst-case scenarios are acceptable or equally unacceptable, then the most attractive option of the two best-case scenarios is probably the path you should pursue.

But even that approach doesn't help you in those situations in which the positive and negative outcomes of each decision are equal in their effects. In these cases, it's often helpful to adopt the six-part reflective and analytical process that management consultant **Peter Drucker** (1909-2005) recommends in the *Harvard Business Review on Decision Making*.

1. **Classifying the problem.** Is it generic? Is it exceptional and unique? Or is it the first manifestation of a new genus for which a rule has yet to be developed?
 2. **Defining the problem.** What are we dealing with?
 3. **Specifying the answer to the problem.** What are the "boundary conditions?"
 4. **Deciding what is "right," rather than what is acceptable, in order to meet the boundary conditions.** What will fully satisfy the specifications before attention is given to the compromises, adaptations, and concessions needed to make the decision acceptable?
 5. **Building into the decision the action to carry it out.** What does the action commitment have to be? Who has to know about it?
 6. **Testing the validity and effectiveness of the decision against the actual course of events.** How is the decision being carried out? Are the assumptions on which it is based appropriate or obsolete?
- Drucker (2001) 2-3.

In order to understand how Drucker's approach works in real-life situations, later in this unit, we'll explore several major types of decisions that people have to make.

Being Reflective

As we saw, Drucker's approach to making decisions may be considered a reflective and analytical process. But there are other types of reflection that can aid you in your own decision making. One type involves considering how you've made good and bad decisions in the past. Think about the three best and the three worst decisions of your life. Be sure that you select examples where you had a clear choice, either among several options or whether to pursue an opportunity at all. Begin your reflection by examining whether you can find any similarities among each set of decisions. Are there types of choices that you're particularly good or bad at making? Then see if you can recall how you went about making the decision. Do you carefully analyze the options and their implications? Do you go with your instincts? Did you consider best- and worst-case scenarios? Did you ask others for advice? The goal of this reflection is to see if you can learn anything from your past decisions that you can use for making better decisions in the future. In other words, try to identify the decision-making process that's worked best for you in the past.

If you find this activity interesting, you can then expand this study by engaging in oral histories with others to discover how *they* made their best and worst decisions. If your learning preference is visual, see if you can diagram or chart these processes. Do any patterns emerge? For example, do any particular groups — older people versus younger people, liberal arts majors versus science majors, athletes versus non-athletes, women versus men — make decisions in a way that differs from another group? If you wanted to build this exercise into a full research study with reproducible results, what additional steps would you need to take?

Basing Decisions on Your Core Principles

Another important aspect involved in making decisions is making sure that what you decide reflects your own values and core principles. But in order to do so, we first must understand exactly what those values and principles are. It's not uncommon for

us to give lip service to certain beliefs because they're advocated by our family, country, religion, or some other group with whom we identify. If asked, we may even feel we're firmly committed to those values, only to discover that we fail to follow them in a crisis or when others mock or challenge us. So, as part of developing a sound approach to making decisions, let's see if we can identify the values that truly define each of us and help guide us when we have choices to make. The first way in which we'll try to accomplish this goal is to identify those moral principles that we believe are central to our identities. And we'll use the creative and critical thinking skills that we've been exploring in other units as a way of clarifying these beliefs. So, the first step in this process is to answer this question: **If I had to choose three ethical principles that would be the *only* principles people would live by, what would those principles be?** Keep in mind that, outside of these principles, everyone would be free to do whatever he or she wished. If you don't forbid an action, people would be free to do it. If you don't require an action, no one would have to do it; it may even be the case that *no one* did it. With these guidelines in mind, what are your three most fundamental values?

The Three Ethical Values or Principles Everyone Would Be Required to Live By

1. _____

 _____.
2. _____

 _____.
3. _____

 _____.

Now let's look at these values in a number of different ways. The first approach we'll take is to explore our values in terms of their impact. Imagine that everyone in the world had to take your principles *literally*. What would be their effect? As an example, suppose one of your principles is, "No one should ever kill another person."

Consider the implications if that principle were applied literally and universally. It would mean that no one could ever kill someone else in self-defense. “That’s okay,” you may think. “Since everyone has to live according to my principle, no one could kill me either, so self-defense is not an issue.” But consider a situation in which you or someone you love is about to be brutally sexually assaulted, beaten so severely that intense pain would become a lifelong challenge, and disfigured in a way that could never be treated or repaired. If it were a choice between that outcome or killing the other person, which of these two options would you choose? The principle also says that no one should kill another *person*. Are you troubled that animals are not protected by this principle? On the other hand, if you extend protection to animals, are you comfortable with meat never being available again as a source of food anywhere in the world, leather not being available for shoes, and all animal testing — including tests that could save human lives and alleviate suffering — being banned?

In considering the impact that a moral principle would have if it were applied strictly and universally, you’re evaluating your ideals in light of what is known as the **categorical imperative**. This approach to morality was developed by **Immanuel Kant** (1724-1804) who distinguished a categorical imperative — which Kant in his native German called a *kategorischer Imperativ* — from a principle that’s not universal but adopted for a particular purpose. In this way, “People should treat others as they themselves would like to be treated” is a categorical imperative. It’s a rule that the speaker expects to be applied universally and to be of widespread benefit. But a principle like “People need to speak more slowly in order to be better understood” reflects an entirely different concept. Not everyone in the world *should* speak more slowly — in fact, some people could probably benefit from speaking a bit more rapidly — or is having difficulty being understood. So, while the goal may be of positive value to the speaker (and perhaps his or her audience), it doesn’t apply universally and convey universal benefits. Even some principles that are phrased as though they were categorical imperatives don’t successfully pass the test of universal benefit. If someone says, for example, that one of his or her core beliefs is that “People should never lie,” the implications of this principle can be highly negative if it results in a large number of deaths, injuries, or other significant harms simply because one had to tell the absolute

truth in any and all circumstances. We were seeing similar results with our earlier statement that “No one should ever kill another person.” By examining your core values in light of the categorical imperative, you thus gain a clearer sense of the impact they would have if they were truly practiced as they are phrased.

A second approach that’s useful in defining your core beliefs is to return to the paired comparisons method of clarifying priorities that we encountered in the last



chapter. Take two of the three value statements you’ve just developed and ask the following question: If everyone in the world had to live by only one of these two principles, which of them would be a better rule? You may find it very challenging to

decide between the two since you’ve only very recently had to condense your fundamental principles down to just three. But force yourself to do so. If it’s possible, can one of these two principles be modified so that it captures the spirit and intent of the other? When you’ve finally selected one of your two principles, compare it to the third remaining principle. Again, if everyone had to adopt only one of the two, which would be better? When you have finally selected one principle as your single most important value and belief, ask yourself whether you’d be willing to die defending this core principle. If you wouldn’t, is there anything else for which you would be willing to sacrifice your life? If you discover that there is, reconsider just how committed you said you are to your “most important value.” Now, it’s perfectly possible that you may not regard any idea as *ever* worth dying for, but if you do, you obviously have an extremely strong commitment to this principle, and it almost certainly should help define what you view as your core beliefs. By the end of this process, you should have

a very clear idea of the moral principles that need to guide your decision-making process.

Once you have your most important values clearly in mind, the next question to ask is what you're going to do about them. In other words, if these values are truly important to you, how do they affect the way in which you live from day to day? A useful approach to answering this question — which you can also apply to other types of decision-making — is to create a **mind map**. A mind map is a visual device that can be used to generate and organize ideas. In the case of your core values, you might create a mind map in the following way.

1. Look at the three core principles you developed in the previous exercise, and ask yourself: What is my ultimate goal that lies behind all these values? For some people, the ultimate goal might be “To be of service to others,” while some might phrase their goal as “To live an easy and comfortable life,” “To be a good Christian,” “To understand as much of life and the world as possible,” or something else.
2. Compare this goal to the one you developed when you were exploring your philosophy of learning in the first unit. Are the two goals congruent with one another or do they conflict? If they seem reasonably compatible, proceed immediately to the next step. If they seem very different from one another, be sure that you understand why you've set such conflicting goals in these two activities and whether there's any way of bringing your two principles into better harmony.
3. Think of an easily remembered two- or three-word phrase that represents your goal, such as “serve others,” “comfortable life,” “Christian values,” “understand life/world,” or whatever best captures the spirit of your goal.
4. Take a blank sheet of paper, write this phrase in the middle of the paper, and surround it with a rectangle, oval, or some other shape.
5. Look back at your three core principles and similarly think of a two- or three-word phrase for each of them. Write each of these phrases a short distance from the phrase at the center of your mind map, placing one entry above that phrase,

the second one to its lower right, and the third one to its lower left. Be sure to leave a lot of room between those phrases and the edge of the paper.

6. Draw three lines from the center phrase, each line connecting to one of the new phrases.
7. Take each one of your principles in turn and ask yourself, “If this is an important value for me, and is tied to the overall goal I’ve placed at the center of the page, what specific actions should I be taking?”
8. Come up with at least three actions for each core principle, jot down phrases describing them near that principle, and connect these phrases to the principles with short lines.
9. Then examine the actions you’ve recorded and draw connecting lines between any two actions that are similar, overlap, or complement one another.
10. Begin using these principles and actions as the basis for making decisions, wherever they may be applicable.

At first, these ten steps make the process seem very complicated, but it really isn’t. To get a better handle on how the process works, let’s look at an example of the way in which one student might create such a mind map as a guide to making decisions. Our hypothetical student identified three core principles in the previous exercise.

- 1. The physician’s guiding principle of “First do no harm,” traditionally said to derive from the ideals of the ancient Greek medical writer Hippocrates (ca. 460-ca. 370 BCE).[‡]**
- 2. The altruistic principle of considering others before considering oneself.**
- 3. The community engagement principle of providing uncompensated service for the good of those who need assistance.**

Upon considering these three principles, the student decided that the theme connecting them all was “helping others, particularly those who cannot help themselves.” The student then writes the words *Helping Others* at the center of a mind map, chooses a phrase for each of the three core principles stated above, adds those

[‡] Although commonly described as part of the Hippocratic Oath, the origin of this phrase is actually much more recent and interesting, a topic well worth exploring by students who are interested in the health professions. See Smith, C. M. (2005). Origin and uses of *primum non nocere* — Above all, do no harm! *The Journal of Clinical Pharmacology*. 45.4, 371–377.

phrases to the mind map, and connects all three principles to the central theme with short lines. The next step is to look at each principle and to ask, “If my goal is not to harm others, what actions could I perform that reflect this value?” The student chooses his or her three best ideas, does the same for the two other principles, places these statements on the mind map, and connects each of them to the appropriate principle. At this point, the mind map looks like **Figure 7.1** at the end of this unit. The student then takes a red marker and draws connecting lines between any two actions that he or she views as somehow related to one another. Now the mind map begins to look more like **Figure 7.2**. Examining the result, the student notices that a lot of these red lines are associated with eliminating the death penalty. Although that was a goal that the student always regarded as important, it’s only when he or she sees the visual representation of how values should be guiding his or her actions that it becomes clear just *how* important this goal has become. This understanding can then help the student make decisions related to everything from what major to pursue and which course to take, to which clubs to join and how to spend his or her leisure time.

Mind maps have value in more than just decision making. You can use them in your academic work to illustrate how different ideas interconnect and to make concepts more memorable when you’re studying. Mind maps are a useful way to bring critical and creative thinking together, and they can be valuable in finding a structure when you’re brainstorming new ideas.

Being Imaginative

Some students find all of the approaches to decision making that we’ve considered in this unit — cost-benefit analysis, other types of formal analysis systems, the best-case scenario/worst-case scenario system, Drucker’s six-step approach, the identification of core principles, and mind mapping — to be too awkward or artificial for them. They may even regard any attempt to reduce decision making to a system as a “gimmick” far removed from how they actually go about evaluating different options. Being as innovative as you can, develop an approach to making decisions that is effective but doesn’t reduce this process to a formula or system. In other words, using more creative thinking than critical thinking, invent

a way of making good decisions that strikes you as less regimented and mechanical than the approaches examined so far in this unit.

Making Decisions about Sexuality

Now that we've explored various approaches to decision making, let's apply them to some of the decisions that everyone has to make. Among the most complex choices facing people are issues that involve some aspect of sex. Not only must people decide at what point sexual relations are appropriate in a relationship, they must also decide how much they wish to share with others about their own sexual identities and the role that sexual activity and orientation play in their lives. An important reason why sexuality becomes so complicated whenever we discuss it is that it means so many different things to different people. To one person, sex may be viewed simply as a source of pleasure, a joy to be experienced as often as possible. To another person, sex may be seen as an act of the greatest intimacy, something almost sacred that should be shared only with a partner for whom one has a deep and abiding love. Some people delight in having had sex with a large number of people; others find comfort in having shared this experience with only one person. To still others, the very idea of sex cannot be separated from procreation, and thus sexual activity should be limited to relationships in which both parties are committed to the care of children. Due to the broad range of views on this topic, miscommunications and misunderstandings are common. For everyone who believes that a relationship changes irrevocably as soon as people engage in sex, there is someone else who will be puzzled and reply, "But it was only sex. It wasn't that important." When a relationship changes from platonic to sexual, it can result in a long and fulfilling romance, or it can end a friendship and ruin a career. It can result in some of your fondest college memories or cause you your most bitter regrets. Your own views about sex are likely to be affected by your religious convictions, personal values, family traditions, and the norms of your community. In other words, your attitudes about sex are inevitably shaped by who you are and the experiences you've had in your life.

Quick Reflection: Did any of the three core principles you developed in the last section relate to sex in any way?

While each of us may view our own attitudes towards sex as so clearly rational that we can't imagine anyone else believing anything different, it's important to understand that there are many people who are equally committed to views diametrically opposed to our own. What seems perfectly acceptable to you may well seem shocking or disgusting to someone else, and vice versa. For this reason, we must all take responsibility for our own individual sexual decisions. Whether or not we engage in sexual activity is an extremely personal choice. Forcing or cajoling someone to engage in sex when he or she doesn't want to is a crime. As a result, any sexual activity that doesn't occur between completely willing adult participants will be regarded as a very serious matter, not only by your college or university, but also by civil authorities. In the same way, if *you* decide that you're not ready for a sexual relationship — either in general or with a specific person at a specific moment — then that's entirely your own decision; no amount of pressure, from either your friends or the other person, should dissuade you from your conviction. If you decide that you're going to postpone sexual activity until you're part of a committed relationship, your choice needs to be respected. If you decide that, after having considered the matter carefully and seriously, you wish to engage in sex, then that is also your choice to make. Some cultures and traditions will judge that decision very harshly. You should always ask yourself whether you are ready to live with the consequences that may result from the decision you've made. In this light, let's expand on a key principle we saw in Unit One.

Key Principle

Every decision has consequences. Any choice you make is inevitably a choice to accept the consequences of that decision. This principle holds true in your academic work, just as it does in every other aspect of your life.

In the case of sexual activity, what we choose may lead to positive consequences, such as a deep relationship, great pleasure, participation in what most people regard as a fundamental aspect of the human experience, and the chance to become a parent. But that same choice may also have negative consequences, such as misunderstandings about the nature of the relationship, the possibility of disease (including certain incurable conditions, several of which can be life-threatening), and unwanted pregnancy. In order to make the best decision for your individual situation, you'll need to weigh these factors and to remember the implications of the Lorenz Butterfly Effect that we explored in the last unit: you may not be able to predict *all* the consequences that can occur. For this reason, let's explore three potential consequences of sexual activity, even though many other factors will also need to be considered as you make your own decisions.



The Possibility of Pregnancy

Any sexual activity that involves a fertile man and a fertile woman has at least *some* possibility of pregnancy. When both partners are eager for a child and aware of the responsibilities involved in this decision, a successful pregnancy can be the most wonderful news either of them will ever hear. But if even one of them isn't fully

committed to parenthood and its responsibilities, an unplanned pregnancy can prove to be one of the most devastating experiences of one's life. Any sexual activity that might result in pregnancy should occur only after full consideration of what this decision and its possible consequences mean. Certainly, there are methods that can be used to reduce the likelihood of pregnancy, but all of them merely reduce — they do not eliminate — this risk. Among the most common techniques used for birth control are:

- **Male withdrawal before orgasm.** This procedure is very risky and has a high probability of failure. Because even pre-ejaculatory fluid can contain sperm, pregnancy may result even if this technique is performed correctly.
- **Restraint from sex during the most fertile days of the woman's cycle.** This technique, also known as “**natural family planning**” or “**the rhythm method,**” can also be unreliable because menstrual cycles are sometimes irregular and because sperm remains viable for several days after intercourse.
- **Women's hormonal contraception before sex.** In addition to “**The Pill,**” hormones such as estrogen and/or progestin may be administered via implants, injections, vaginal rings, and other methods. While highly effective in preventing pregnancy, this method of birth control is not 100% successful and requires regular re-administration of the hormone in order to remain effective.
- **Women's hormonal contraception after sex.** This method of birth control, the so-called “**Morning After Pill**” or Plan B™, should be regarded only as an emergency contraceptive rather than a regular approach to family planning. Essentially a high dose birth control pill, hormonal contraception after sex prevents the woman from ovulating, precludes a fertilized egg from implanting itself in the uterus, or disrupts the normal ovulation cycle.
- **Women's barrier techniques.** These methods prevent the man's sperm from making contact with the woman's egg, and include vaginal sponges, **diaphragms**, cervical caps, female condoms, and vaginal pouches. Barrier techniques are most effective when combined with a spermicide (see below).
- **Interuterine devices (IUDs).** An IUD is a medically designed and approved object that is inserted into the uterus and, by a process not yet fully understood, prevents a fertilized egg from becoming implanted.

- **Men's barrier technique.** An approach taken by the man that prevents his sperm from making contact with the woman's egg through the use of a **condom**.
- **Spermicides.** Chemicals that kill the sperm once it has been ejaculated into the woman. Spermicides are available as foams, liquids, creams, films, and vaginal suppositories.
- **Surgical contraception.** Operations that prevent the woman's eggs from passage through her fallopian tubes (**tubal ligation**) or the man's sperm from passing through his vas deferens (**vasectomy**). Although frequently reversible, neither operation should be considered if there is any possibility that the person would like to conceive a child at a later date. Also, although both procedures are extremely effective, failure does occur in a small number of cases, and neither procedure should be regarded as entirely without risk.
- **Abortion.** Abortion may be defined as the artificial termination of a pregnancy prior to birth. Like hormonal contraception after sex, this procedure should be regarded not as a standard approach to birth control, but should be pursued only after giving full consideration to all the issues involved, including the risks that can result from any medical procedure.

All birth control techniques balance certain risks with certain benefits. If you decide to adopt one of these techniques, the method that's right for you is best selected jointly with a trusted physician who is familiar with your individual medical history. Certain religious traditions also regard some or all techniques of birth control as unacceptable, so your own religious convictions or cultural background are also matters that may influence your choice. Now consider the process you used to reach these decisions. Does that process resemble any of the approaches that we explored in this unit? Does it combine aspects of several approaches? If it differed entirely from the approaches we discussed, how would you describe your decision-making process to someone else?

Being Intentional

While, as we've seen, sexual activity achieves different goals for different people, one of its most important results can be the birth of children. Family planning is

thus an extremely common type of goal setting. Although not entirely within a person's control — pregnancies often don't occur when people want them to but do occur when they don't want them to — having a clear idea of the type of family you'd *like* to have increases the chance you'll achieve that goal. Consider, therefore, the type of family environment you believe would best suit your values, personality, and life goals. If you're of traditional college age and not yet married, envision the type of home environment you'd most like to have twenty years from now. Would you have a partner? If so, what do you envision that person to be like? Would there be children in your household? If so, how many would there be and what would be their ages twenty years from now?

If you're already married or have a long-term partner, consider the last time the two of you discussed your vision for what your family will be in the future? If you agreed on that vision, was that agreement immediate or did you need to discuss the matter to come to a consensus? Is this type of planning an ongoing activity or is it a subject you don't return to very often? How would you describe your level of satisfaction with how those plans are working out?

If you already have children, what do you hope their family lives will be like in the future? Obviously they will be the ones who will be most directly involved in those decisions, but how do you imagine you would react if their planning differed substantially from your own hopes and dreams? For instance, if having grandchildren is extremely important to you, how might you respond if your children chose to remain childless? Do you believe it's right to express your hopes to your children, or are you comfortable letting them make their own decisions in personal matters like family planning?

Sexually Transmitted Diseases

Another possible consequence of sexual activity is the chance that you may communicate or acquire a sexually transmitted disease (STD). Many barrier techniques of birth control — particularly, male and female condoms, vaginal pouches, and dental dams for oral sex — greatly reduce the possibility of transmitting an STD; however, they don't eliminate it entirely. While many STDs are treatable if they're

caused by bacteria, fungi, protozoa, or parasites, those conditions that are caused by viruses may be resistant to treatment or even impossible to cure. The following are some of the most common types of diseases that can be transmitted through sexual activity:

- **Caused by bacteria:** gonorrhea, syphilis, and chlamydia.
- **Caused by fungi:** yeast infections.
- **Caused by protozoa:** trichomoniasis (or “trich”).
- **Caused by parasites:** pubic lice (or “crabs”) and scabies.
- **Caused by viruses:** Hepatitis B, Human Immunodeficiency Virus (HIV or Acquired Immune Deficiency Syndrome/AIDS), and Human Papilloma Virus (HPV or genital warts).

Since some of these conditions are incurable, it's no exaggeration to say that *unprotected sexual activity can literally be a matter of life and death*. Particularly if you're engaging in sex with a partner you haven't known for very long, it is always responsible to insist on barrier techniques of birth control. Moreover, college students who are sexually active should ask to be tested for STDs on a regular basis, especially if they've had multiple partners (or if their partner is likely to have had multiple partners). Receiving such a test is a responsible part of having made the choice to engage in sexual activity. No one should ever resist being tested out of a false sense of shame. Just as there is no shame in asking for a strep test if you work in an environment where many people have sore throats, so is testing for STDs simply a prudent part of your health plan when you're sexually active. You should never feel ashamed to receive medical advice when you're acting responsibly in light of your decisions. If you find yourself unwilling to ask for contraception or STD testing when you're considering a new sexual relationship, it may be that you're not as ready for sexual activity with that person as you believe. A number of resources are available if you wish to be tested for STDs, including your campus health service or counselors, Planned ParenthoodTM programs (www.plannedparenthood.org), Safe Zone programs (safezonefoundation.tripod.com), clinics specializing in contraception, and so on.

To return then to our central topic in this unit, making sound decisions, let's explore the following situation.

A year ago, a young man named Jason was diagnosed as having the Human Papilloma Virus. His doctor informed him that, while there's no cure for HPV, a number of different treatments exist, and the condition often simply goes away on its own. Jason then decided to pursue **cryotherapy**, a process that freezes a small affected area, with new cells then healing the area that's been treated. For the year since the diagnosis, he hasn't noticed the return of any symptoms, but he doesn't really know whether the condition has completely gone away. For the past month, Jason has been dating Jennifer and, while he really cares about her, he doesn't believe it's at all likely that they'll ever get married. They go off for a weekend of camping and, late at night in a state park, Jennifer lets Jason know that she would like to have sex with him. He doesn't have any condoms or any other barrier methods of birth control with him, and there's no opportunity to purchase any until they leave the state park on Sunday evening. Jason also doesn't know Jennifer's sexual history, including whether she herself has had any STDs or whether she has been vaccinated against HPV. Nevertheless, Jason has wanted to have sex with Jennifer ever since they've been going out, and he has an especially strong desire to do so tonight. Among the choices Jason has before him are the following.

- A. He could decline having sex with Jennifer and not give her any reason, but he knows her well enough to understand that, if he passes up this opportunity, she's unlikely ever to be willing again and will probably break up with him.
- B. He could tell her the truth, which he is fairly sure will not only "ruin the moment" but also cause her to break up with him.
- C. He could say that he's still not ready for such an important step forward and suggest that they wait a bit longer.
- D. He could explain that he doesn't have any condoms with him and doesn't want to run the risk of pregnancy, although he believes that Jennifer is likely to dismiss this reason by saying she's on the pill.

- E. He could simply take his chances since he has been symptom-free for about a year, although there is still a chance that he could pass HPV on to Jennifer.
- F. He could insist that they first have a conversation about contraception and STDs, although he fears that such a discussion will “ruin the moment.”
- G. He could take another course that you devise yourself, specifying its benefits and drawbacks.

Evaluate these options in terms of Drucker’s six-step decision-making process that we explored earlier.

1. Is this problem unique or is it one that other people (including Jason himself) may encounter again?
2. What is at stake when different options are selected? In other words, what is the worst-case scenario of each choice? How do they rank against one another in terms of importance?
3. What are the “boundary conditions” of the problem? That is to say, what are the factors that Jason is unable to change?
4. What are the acceptable solutions? What do you regard as the *right* solution in terms of the first three steps of this process?
5. What should Jason do to implement the right decision?
6. How will he know whether his decision was correct?

Sexual Addiction

Addictions occur when one is no longer able to make free choices about whether to engage in some activity. Addictions to drugs, alcohol, smoking, videogaming, or gambling are familiar to many people, but it’s also possible to become addicted to sex. For sexual addicts, intercourse and orgasm are no longer strong desires; they are *compulsions*. Sexual addicts are driven to engage in sex frequently, but they receive only minimal satisfaction. They often have feelings of guilt or remorse after sex, even though these feelings don’t prevent them from pursuing additional sexual encounters.

Like other types of addicts, sexual addicts tend to be secretive about what they do and often deny they have a problem until their relationships are ruined or their work or schooling is in serious jeopardy. Treatment of sexual addiction can take several forms, including the twelve-step programs commonly used in the treatment of alcoholism and drug addiction. If you suspect that, in your case, sex has become an obsession or destructive force in your life, it may be time to discuss your experience with a trained, professional counselor.

Making Decisions about Drugs and Alcohol

Another aspect of life in which difficult decisions must be made involves the consumption of drugs or alcohol. As in the case of most difficult decisions, people make different choices in this aspect of their lives depending on how they apply **reason**, **knowledge**, or **experience** to their opportunities and challenges. For instance, you may have already said (or heard others say) things similar to the following.

- **REASON:** “Oh, sorry. I can’t go out drinking tonight. I’ve got a major exam in Russian history first thing tomorrow morning, and I have to do well on it. I need every moment I can spare tonight to review all those dates and names.”
- **KNOWLEDGE:** “I experimented with marijuana a little when I was younger but, after my junior year, I stopped using it altogether. We read this article in my Human Development class about some of the risks of marijuana use, and it scared me a little. I saw a glimpse of what could have been my own future, and I didn’t like it.” On such an article, see Bell, Wechsler, and Johnston (1997).
- **EXPERIENCE:** “No, I always stop after the third drink. I’ve learned what my limits are.”

Certainly, not everyone *can* make informed choices about using drugs or alcohol. Illnesses like alcoholism and drug addiction are extremely serious, and they call for professional counseling and treatment. If you ever have reason to believe that you’re no longer in control of your own decisions about alcohol or drugs — or if someone close to you has suggested that you might have a problem with substance abuse — seek professional counseling immediately. Most colleges or universities have counseling centers with well-developed programs that can help you before these

problems ruin your life or academic career. If damage has already been done, the programs can help you get back on track and compensate for the effects that drugs or alcohol have had on your life.

Even if alcoholism or addiction is not a problem for you, the use of drugs and alcohol can lead to poor decision making ... to choosing options without the benefit of that very reason, knowledge, and experience that helps people to make *good* choices.

For instance, college students who indulge in drugs and alcohol are much more likely to engage in sex than are their peers who refrain from mood enhancing substances. See Pope, Ionescu-Pioggia, and Pope (2001) 1520.



Nevertheless, recall the following key principle we encountered in Unit Four:

Correlation does not guarantee causality. Simply because two variables share a relationship, you can't assume that one of them triggers the other. In other words, it may not be that use of substances *causes* people to become sexually adventurous but rather that students who are willing to experiment with drugs and alcohol are also willing to experiment with sex. Nevertheless, it's not impossible that at least *some* of the correlation between sexual activity and use of drugs or alcohol may be due to the fact that mood-altering substances diminish one's inhibitions. When a person's inhibitions are lowered, he or she is more likely to consent to sexual activity that would have seemed less appealing when sober. Moreover, people who engage in unprotected sex are significantly more likely to have used drugs and alcohol shortly beforehand than are people who refrain from use of these substances. See Semple, Patterson, and Grant (2004), Colfax, Vittinghoff, Husnik, McKirnan, Buchbinder, Koblin, Celum, Chesney, Huang, Mayer, Bozeman, Judson, Bryant, and, Coates, (2002), Woody,

Donnell, Seage, Metzger, Marmor, Koblin, Buchbinder, Gross, Stone, and Judson (1999) and Strunin and Hingson (1992).

For this reason, students who elect to use drugs or alcohol should realize that, under the influence of these substances, their ability to make informed decisions can be significantly impaired. That's why driving, boating, and operating heavy equipment under the influence of drugs and alcohol is illegal. Your reaction time is reduced by the use of mind-altering substances, and your ability to make decisions in a critical or analytic manner is hampered.

Being Analytical

One key principle we keep encountering reminds us that correlation doesn't guarantee causality. In Unit Four we saw that this rule is sometimes known as the fallacy of *post hoc, ergo propter hoc* ("after this, [and] thus because of this").

Identify two phenomena that many people believe to be causally related, but which you believe to be unrelated or coincidental.

- f. How would you go about constructing an effective survey, inventory, or controlled experiment to demonstrate a widespread belief that the two phenomena are causally related? What population would you study (your friends, the students at your school, members of a certain gender or ethnic group, people within a certain age group, citizens of your country, or some other group)? How large of a sample would you need to survey in order to obtain meaningful results?
- g. How would you go about determining whether the two phenomena do indeed correlate? In other words, what measures would you use to determine whether, as one variable increases or decreases, the other variable changes in a recognizable and predictable manner?
- h. If your study demonstrates that no true correlation exists, you would have proven that the widespread belief of your population is false. But if your study does suggest that a correlation exists, how would you go about determining whether that correlation is based on causality? Is it possible to control one

variable while measuring the other? Are there appropriate statistical methods that can help you differentiate correlation from causality?

One additional factor to keep in mind in connection with drug and alcohol use is that arrests for driving while under the influence can cause students to lose their financial aid and or scholarships at some institutions. In addition, having such an arrest on their record may cause these students to have difficulty obtaining professional licenses in certain fields.

Making Decisions about Managing Money

One final area that we need to consider in this unit involves making important decisions about money. Some students graduate from college with large amounts of debt incurred through student loans, vehicle payments, and the use of credit cards. Even more complete their undergraduate programs without developing even the foundations of a retirement plan. Regardless of whether you are a traditional- or non-traditional-aged student, there are several financial decisions you can make *now* in order to protect yourself and your family in the future. Several of these decisions involve the words “principal” and “interest.” The term **principal** refers to the original sum of money involved in a loan or investment. In other words, if someone places \$20,000 into a savings account, that \$20,000 is the principal. If someone borrows \$20,000 as part of a student loan, once again that \$20,000 is the principal. The term **interest** refers to the fee that is paid for the use of the principal. So, if you deposit \$20,000 into a savings account that pays 5% **simple interest** annually, at the end of the year you’ll have earned \$1,000 in interest. Similarly, if you borrow \$20,000 at a rate of 5% per year, at the end of the year you’ll owe \$21,000: the \$20,000 principal that you borrowed plus \$1,000 in interest. All of this is extremely easy to comprehend. But where interest assumes a special importance comes in the area of **compound interest**. We say that interest is compounded when the lender doesn’t withdraw interest when it’s earned, but keeps adding that amount to the principal. From then on, interest is paid on the principle *plus* any interest that has been combined with the principle, causing the amount owed to grow quite rapidly. Over time, **the power of compound**

interest can work very favorably when you're depositing or lending money and very unfavorably when you're borrowing money. For instance, let's consider our example of the person who places \$20,000 in a savings account at a rate of 5% per year, but now examine the effect of interest compounded annually

- We've already seen that, at the end of one year, the person would earn \$1,000 on a principal of \$20,000.
- At the end of two years, the person would earn \$1,050 on a principal of \$21,000.
- At the end of three years, the person would earn \$1,102.50 on a principal of \$22,050.
- At the end of five years, the person would earn \$1,215.51 on a principal of \$24,310.13.
- At the end of ten years, the person would earn \$1,551.33 on a principal of \$31,026.56.
- At the end of twenty years, the person would earn \$2,536.95 on a principal of \$50,539.
- At the end of thirty years, the person would earn \$4,116.14 on a principal of \$82,322.71.
- And so on. Keep in mind that this scenario assumes that the person's **entire investment was only that initial \$20,000** and that **no additional funds** were ever deposited except the interest as it was earned.

In thirty years, the amount more than quadrupled — and that return resulted from a fairly modest return of 5%. You can imagine what happens when interest rates are even higher or compounded more frequently. For example, if interest is compounded quarterly, the person would have \$88,804.26 after thirty years. If it's compounded monthly, this amount rises to \$89,354.89. And if interest is compounded daily (as it often is) the total yield from an original investment of only \$20,000 reaches **\$89,624.57**.

High interest rates and the power of compounding are precisely what make credit card debt so dangerous. Most credit cards charge an interest rate well over 10%. Let's consider an example with a credit card rate of 18% per year (a relatively

common amount of interest for a charge card), and a person who charges \$1,000 on his or her card. The person's plan is to pay \$100 each month on this account and not to charge anything else until that original \$1,000 is paid off. If the person adheres to this plan, it will take an entire year to pay off the debt, and the cost of this transaction will be \$74.21 in addition to the \$1,000 charged on the card. Perhaps that doesn't sound so bad. Keep in mind, however, that people rarely charge *nothing* to a card until a complete balance is paid off. Moreover, plans to pay set amounts month after month frequently falter because of unforeseen circumstances. Because of the power of compound interest, either one of those contingencies will greatly increase the time it



takes to pay off the debt and the total amount of interest that has to be paid. Probably the worst thing people can do (aside from not paying their bills at all) is to pay only the **minimum payment due** each month. Minimum payments are usually

calculated by credit card companies as 2.5% of the outstanding balance. In the case of our hypothetical example of a \$1,000 purchase made on an 18% credit card, it will take **nearly thirteen years** to pay off the card with an initial minimum payment of \$15 a month and cost **\$1,115.41 in interest**, more than the original amount charged on the card. Even that will only occur if **no other purchases are made** and **no payments are missed**.

If compound interest poses a great threat when it comes to loans, it can be highly beneficial when it comes to investments. Suppose that, rather than making a purchase on a credit card, that same person invested \$1,000 in a **mutual fund**, a managed collection of investments in stocks, bonds, and other types of securities. Small investors tend to find mutual funds attractive because, for a relatively low initial deposit, they provide a high level of diversity across many different types of

investments. Their major disadvantage is that, unlike savings accounts, mutual funds are not federally insured; when the stock market performs poorly, mutual funds can actually *decline* in value. Let's suppose that the mutual fund in which our \$1,000 is invested averages an 8% annual return (a reasonable, perhaps even conservative return for many of these funds) and that, rather than paying \$15 per month as a minimum payment on a credit card, we contribute an additional \$15 per month to the mutual fund.

- In five years, the investment will be worth \$2,537.88.
- In ten years, it will be worth \$4,883.20.
- And in the thirteen years that it would have taken to pay off \$1,000 on a credit card with minimum payments, that same \$15 per month would have boosted the value of the mutual fund to \$6,810.86.

In this way, by using a credit card, the person lost \$2,115.41 over thirteen years. By investing in a mutual fund, the person *gained* \$5,810.86 over the same period of time.

Being Innovative

In contemporary western democracies, most people tend to regard the charging of compound interest as a major engine of the economy. Even in the west, however, there were periods in which loaning money at interest (usury) was discouraged, even forbidden. Moreover, in certain cultures and ethical traditions today, charging interest is prohibited. Conduct an anthropological and historical study of one community that either did or still does ban loaning money at interest. In that environment, are there any mechanisms that allow for large scale “installment purchases” to be made or for money to be invested that circumvent the injunctions against usury? What are some approaches that were used in other periods of history or are still in use in other cultures today? If you had to develop a system that allows for long-term investment without charging interest, how could you design an approach that would be fair? How does it benefit the person or group providing the capital? How does it benefit the person or group receiving the loan?

The Rule of 72

One of the most dramatic ways to demonstrate the power of compound interest is called the **Rule of 72**. Here's how this rule works:

- Take the annual percentage interest rate of an investment or loan.
- Divide 72 by that number.
- The result is the number of years it will take for you to double either your investment or your debt.

In other words, with an 18% credit card, it can take **only four years** for the size of your debt to double if you don't pay off a larger amount than you add to the card each month. ($72/18=4$) On the other hand, if you invest in a mutual fund or certificate of deposit and receive an average annual return of 8%, you will double your money in **only nine years**. ($72/8=9$) In other words, a \$2,000 initial investment becomes \$4,000 in nine years, \$8,000 in eighteen years, \$16,000 in twenty-seven years, and \$32,000 in thirty-six years. For traditional-aged college students, this means that every \$2,000 placed in an investment today will be worth approximately \$40,000 at the time they retire. And that result is independent of any other contribution they might make to the fund in later years. So, the financial decisions that you make today can have a dramatic effect on the choices you will have in the future.

Let's explore a financial situation where a crucial decision needs to be made.

Sarah's in her last year of undergraduate work and she intends to continue her education in graduate school in order to be a university professor one day. Unfortunately, during the fall term she's in a car accident for which she's declared to be at fault. Her out-of-pocket expenses for both the vehicles involved in the accident and the resulting injuries to the other driver total roughly \$20,000 that's not covered by her insurance. Her family has been struggling to make ends meet, since both her parents were laid off when a local factory closed, and no bank is willing to loan her that much money without collateral. She then tries several options. She attempts unsuccessfully to identify collateral among her possessions. She asks friends for a loan.

Everything she tries is to no avail. In the end, she finds herself confronted by only two options: She can drain her entire savings, putting off graduate school and delaying her career. Or she can max out her only credit card by putting all the expenses on the card and thus paying the equivalent of 22% interest per year. On the assumption that those two choices are Sarah's only options, which decision-making process seems most appropriate and how might it function in this situation?

- A list of pros and cons?
- A cost-benefit analysis with a weighted set of pros and cons?
- Peter Drucker's six-step process?

Credit Reports

When you apply for credit, the entity that's offering you the loan will usually check your **credit score**, a rough estimate of the likelihood you'll pay back the money you owe. In the United States, there are three major credit-reporting agencies: **Experian**, **Equifax**, and **TransUnion**. Over the course of your lifetime, all three agencies are likely to amass information about your credit and payment history. But although these agencies are separate, they all use variations of the same method to calculate your credit score: an industry standard developed by the **Fair Isaac Corporation** (FICO) and thus now named a **FICO Score** after this company. A FICO Score is a number between 280 and 850 that is based on five weighted components.

1. **Payment History**, the degree to which you've made past credit payments on time. **35%**
2. **Amounts Owed**, your current outstanding debt. **30%**
3. **Length of Credit History**, how long you've held each credit account. **15%**
4. **New Credit**, the number of accounts you've recently opened and the number of credit inquiries that have recently been made about you. **10%**
5. **Types of Credit Used**, your variety of credit (such as mortgages, auto loans, credit cards, and store accounts). **10%**

(See Figure 7.1.) These components are intentionally skewed, however, so that 20% of the scores fall into these ranges.

- below 620
- between 620 and 690
- 690 and 745
- between 745 and 780
- above 780

So, although scores can range as low as 300 or so, very few people fall into that extremely low category. But the higher your score is the better; it means that you are very likely to repay your debt in full and on time. Now, while all three credit bureaus base their scores on the FICO method, they do calculate the scores in slightly different ways.

- **TransUnion** uses the standard FICO method, producing a result that ranges from 300-850.
- **Experian** uses a proprietary variation of the FICO method known as the PLUS method, producing a result that ranges from 330-850.
- **Equifax** uses a different proprietary variation of the FICO method, producing a result that ranges from 280-850.

For this reason, although your three credit scores are likely to be similar, they're highly unlikely to be identical. You're entitled to receive one free credit report from each of the three agencies annually. These reports will tell you what's recorded in your credit record, and you'll have an opportunity to correct that information. The companies are *not* required to tell you your credit *score* without charge, however, so to obtain that result, you'll probably have to pay a fee. Many bogus or imposter sites claim to offer access to free credit reports, although they're actually trying to sell you a service. The only authorized, government site from which you can obtain your free annual credit report is www.annualcreditreport.com. You can also call 1-877-322-8228.



It can often appear as though making difficult decisions is only about passing up enjoyable opportunities for safer and often less interesting options. While it's true that **deferred gratification** can often increase the pleasure and benefits that result from our

decisions, the purpose of this unit isn't at all to suggest that everything fun is harmful. Rather, it's to illustrate that **decisions always have consequences**. The critical and creative thinking skills that a college education helps develop are useful in determining, not just the immediate consequences of each decision, but also the long-term implications that can result from an extended series of causes and effects. Sexual activity, the consumption of alcohol, the use of medications, taking out loans, and making investments can all play a positive and productive role in a person's life. Frequently, however, that role only *becomes* positive and productive when people are fully aware of the future consequences that are likely to result from the important decisions they make each day.

EXERCISES

1. As we saw in this unit, the role that sex plays — or should play — in a person's life varies greatly from individual to individual. Write a brief statement of your own **sexual philosophy**. What does sex mean to you? Is "sex" limited only to intercourse or do you also consider other activities to be sex? With whom should one engage in sexual activity? What do you believe each person's expectations should be? What is your attitude towards those whose sexual philosophies are distinctly different from your own?
2. Perform a candid self-assessment of your own sexual identity. You do not have to share your response with anyone else, if you do not wish to do so. In terms of orientation, do you think of yourself as **heterosexual**, **homosexual**, **bisexual**, or something else? In terms of your self-image, do you think of yourself as **transgendered** (i.e., your self-image is that of the other biological gender), **cisgendered** (i.e., your self-image is that of your own biological gender), or something else? In terms of your libido, if you were to rank your own intensity of sexual desire on a scale that ranges from 1 (virtually non-existent) to 10 (extremely high), how would you rank yourself? How would you define your most essential values, attitudes, and convictions about sex?
3. Imagine that a close friend or a member of your family told you that he or she was as different as possible from you in each aspect of sexual identity that you

- explored in exercise #2. How would you respond? Would your feelings about the person change in any way? Why or why not?
4. In the United States, importing leaves of the coca plant are illegal without a federal license. In Peru, coca leaves are sold legally, tea made from coca leaves is offered free by most hotels, and candy and other foods made from coca leaves are readily available. Peruvian drugstores known as *boticas* also sell certain drugs over the counter that require a prescription in the United States. Imagine that you're on a spring break trip to Peru.
- a. Would you accept a cup of coca leaf tea if it's offered to you by your hotel?
 - b. Would you accept a cup of coca leaf tea if it's offered to you by your hotel as an effective and commonly accepted remedy for altitude sickness?
 - c. Would you be willing to try candy or other foods made from coca leaves?
 - d. Would you be willing to purchase a non-addictive drug from a *botica* that requires a prescription in the United States and that you normally use but for which you accidentally left your prescription at home?
 - e. Would you be willing to purchase a non-addictive drug from a *botica* that requires a prescription in the United States and for which you had no prescription but that may effectively treat a medical condition that you have?
 - f. Would you be willing to purchase a non-addictive drug from a *botica* that requires a prescription in the United States and for which you had no prescription but that produces temporary feelings of euphoria or great happiness?

Defend your answer in each case.

5. Estimate the number of years you expect to be working full time before you retire. Then design a realistic investment scenario that would allow you to accumulate a million dollars to use in retirement. A spreadsheet or programmable calculator can help you account for the effects of compound

interest. Because you are designing a realistic scenario, avoid any improbable assumptions such as “In year 5, I win the lottery” or “Then, in year 29, I come into a large inheritance.” Suggest a possible strategy, even if it doesn’t seem possible given your current or anticipated income. Although you may not use the following example, here’s a sample of the sort of solution you could develop.

- a. I expect to retire in 40 years.
- b. Suppose I find an investment that pays an average return of 7% per year.
- c. I begin with an investment of \$5,000 per year.
- d. Then I add to this investment as follows:
 - i. \$1,000 a year in years 2 through 5.
 - ii. \$2,500 a year in years 6 through 10.
 - iii. \$5,000 a year in years 11 through 20.
 - iv. \$10,000 a year in years 21 through 30.
 - v. And \$25,000 a year in years 31 through 40.
- e. I will have just over a million dollars when I retire.

Your investment will grow more quickly, but your calculations will be more complicated, if you assume an annual interest rate where a pro-rated portion of the interest is compounded daily, weekly, monthly, or quarterly. What modifications would you need to make in your calculation in order to accommodate a more rapid rate of compounding the interest?

6. Suppose that someone got into trouble through imprudent use of credit cards by charging \$12,000 on a card with an annual interest rate of 18%. The card compounds interest monthly on amounts that haven’t been paid for a month or longer. The initial minimum payment on this account is \$300.
 - a. Calculate approximately how many years it would take this person to pay off the credit card if he or she made the same \$300 payment each month and added no further charges to this card.
 - b. Calculate approximately how many years it would take this person to pay off the credit card if he or she made the minimum payment of 2.5%

of the outstanding balance each month and added no further charges to this card.

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Figure 7.1: A Sample Mind Map

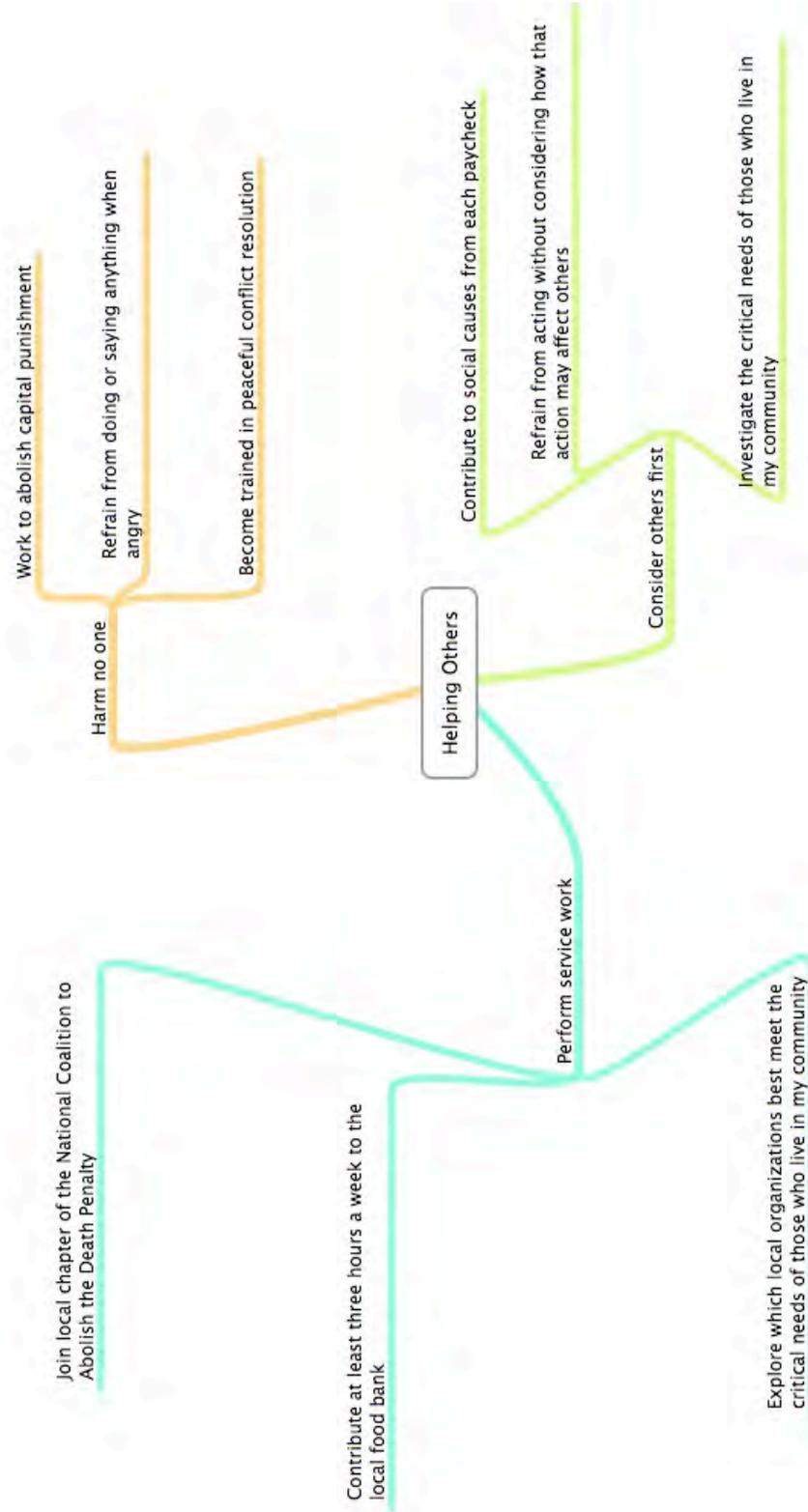


Figure 7.2: A Sample Mind Map with Connecting Lines

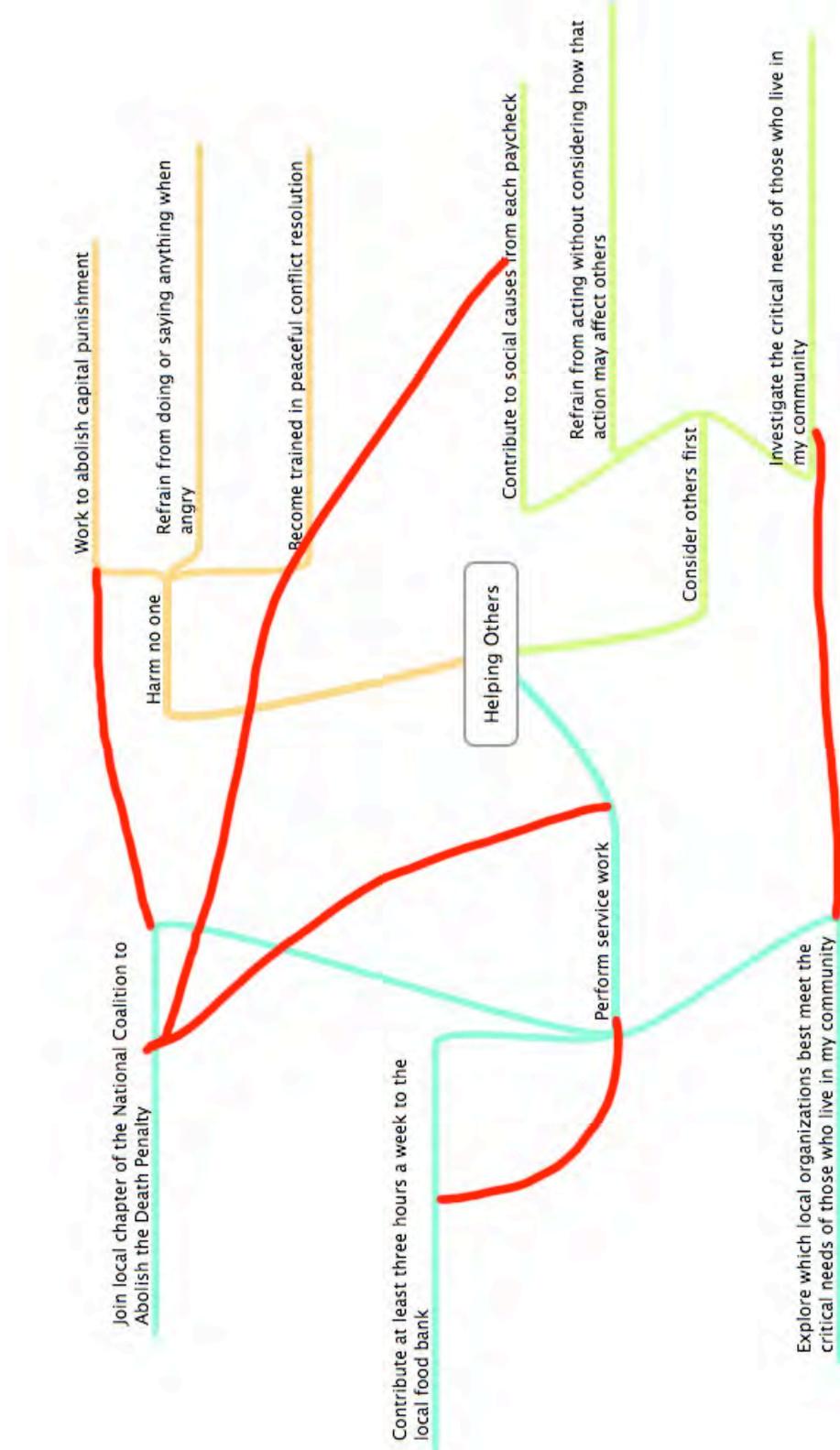
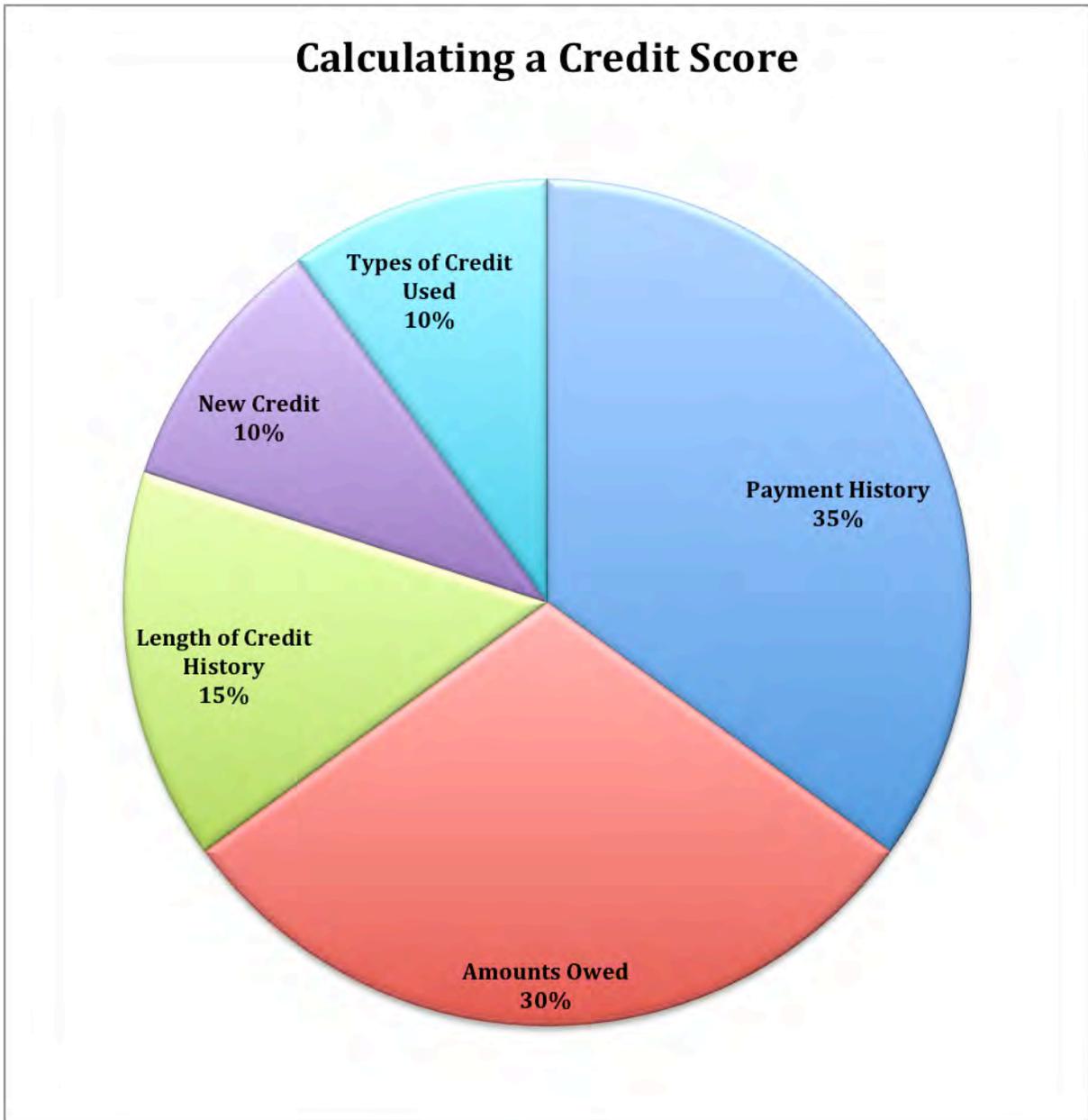


Figure 7.3. Components of a Credit Score



Unit Eight:

Self-Advocacy

Learning Objectives:

1. To examine constructive ways of interacting with friends, roommates and family members.
2. To explore the most productive ways of making requests to and addressing problems with members of the faculty and administration at your school.
3. To understand the notion of Emotional Intelligence and how it can make you more effective in advocating for your own needs and desires.
4. To consider effective strategies for dealing with day-to-day challenges.
5. To identify the resources that are available to you when you encounter more serious problems.

Interacting with Friends, Roommates, or Family Members

Second only to the pressures arising from their coursework, the greatest amount of stress most college students feel stems from situations where they have to serve as their own advocate with their friends or members of their family. We always envision that our relationships will go smoothly. At the beginning of a romance, the other person seems perfect in every way, and we're surprised that we've finally met someone who understands us so completely. When we're being considered for a job, the people who are interviewing us seem so reasonable and compatible with our goals that we imagine it would be an absolute pleasure to be their colleagues. It's only later that certain elements of discord begin to arise. The person who once seemed so perfect begins to reveal flaws. That harmonious group of coworkers quarrels with one another and indulges in behaviors that irritate us more and more. It's the nature of human relationships to encounter difficulties from time to time. And one of the most troubling areas in which these difficulties can occur is when we're close to the people who are the source of our anxiety. We expect our friends and family to understand and support us even when no one else does. When

everyone we encounter seems to be rude, when we're having problems in our romantic relationships, and when nothing is going right at school or work, we turn to our friends and relatives to make us feel better again. Sometimes their role is simply to listen to us when no one else will. Sometimes we rely on them to tell us the truth about ourselves when we need to hear it. And our friends and family members often demonstrate an uncanny ability to know when each of these approaches is needed, even when we ourselves don't. So, it can be terribly unsettling when we have to be assertive with them about our own needs or feel ourselves attacked by the very people to whom we usually turn for comfort.

If you ever find yourself needing to be your own advocate with people who are close to you, there are twelve guidelines you can follow that often make this process easier and more effective.

1. **Think carefully about what you are going to say before you say it.** We are more likely to say things that we'll regret later if we blurt remarks out in the heat of the conversation. This problem can often be avoided by thinking through the points we will raise in detail before the discussion begins.

Being Intentional

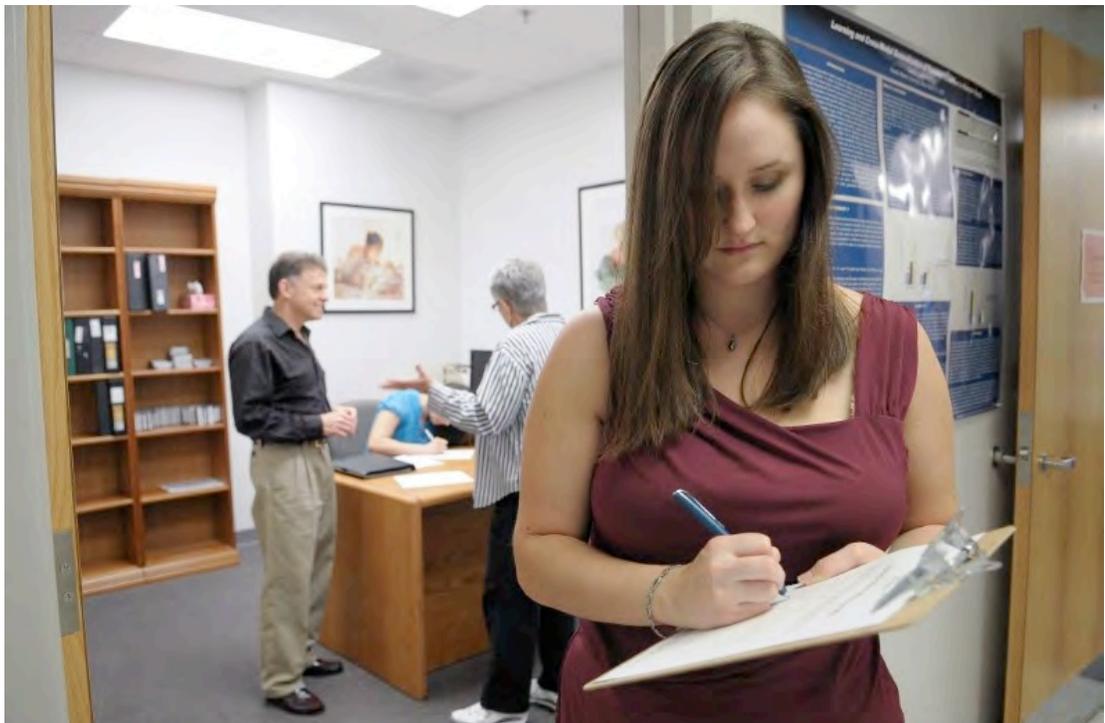
Deciding on what you're going to say before you say it is simply an aspect of that same type of intentionality we've been exploring throughout this course. In Unit Six, we encountered the notion of being mindful about how we spend our time. Successful self-advocacy requires people to become more mindful about how they use the power of their words. In *The Mindfulness Solution: Everyday Practices for Everyday Problems* (2010), the psychologist Ronald Siegel describes how being aware of what we do and say as we do and say things — rather than multitasking or being “on autopilot” much of the time — helps us connect better to other people, reduces our stress, and allows us to cope more effectively with negative feelings. As an experiment, decide that for one week you'll make an effort to plan precisely what you'll say before you say it. (You'll probably need to tell your professors, friends, and family about

this experiment, otherwise they won't understand why you're suddenly pausing a few seconds before you speak.) You won't remember to keep to your resolution 100% of the time, and you'll need to remind yourself of your goal frequently. At the end of the week, see if any of the goals that Dr. Siegel says *should* result from mindfulness have already begun to emerge after this short practice.

2. **Have the conversation in person if at all possible.** Electronic forms of communication make it easy to get in touch with people, but they don't convey nuance and emotions very well. Words often seem harsher than intended in email and text messages. Conversations on the telephone can be difficult when we can't see the other person's facial expressions. If the problem is important enough to solve, then it is important enough to hold the conversation in person.
3. **Focus on the truly important things; let the petty annoyances go.** Anytime we think about the problems we're having with someone, it's natural to start thinking of a whole "laundry list" of grievances we've suffered or behaviors we'd like them to change. Minor issues can get the conversation off-track from the really important problem, so simply focus on what matters most to you.
4. **Fill your statements with first-person forms while using few, if any second-person forms (*you, your, yours*).** Direct remarks to someone can seem even more accusatorial than we want them to be. The discussion will probably be difficult anyway, and you want the other person to focus on the *message*, not your tone or manner. Although the problem may be largely or even wholly the fault of the other person, you will make little progress if you appear to be backing that person into a corner. Make it clear that you want to discuss a matter that's important to you and, you sincerely hope, to both of you together. You're not there simply to criticize the other person for his or her "problem."

5. **When you do need to find fault with someone, talk about that person's *behavior*, not his or her *character*.** You can't change who another person is, and it is extremely difficult for anyone to re-consider his or her basic values. But you can, at times, ask people to change their behavior, particularly when it affects you personally. Most people take less ownership of their behavior than they do of their character or personality. As a result, it can be easier for them to be objective about what they *did* than about who they *are*.
6. **When you discuss the person's behavior, provide one or two clear instances, if necessary, rather than a long catalog of errors.** If someone tells us that our behavior has caused problems for them, it's natural for us to ask, "Can you give me any specific examples?" When this question arises, it can be just as ineffective to reply with too many examples as to have no examples to cite at all. After all, not being able to think of a particular instance makes it look as though you're complaining about something that must not have left a very strong impression on you. But citing too many examples will make it appear that you're a bully and is likely to lead to the question, "Why didn't you ever mention this before?" So, choose your examples *carefully*.
7. **In personal relationships, describe how someone's behavior made you *feel*. In professional relationships, describe how someone's behavior interfered with your *ability to succeed*.** Our personal relationships are based largely on feelings, and it's natural to want to change our behavior if we understand that it's making someone we care about sad, angry, humiliated, frustrated, or anxious. On the other hand, our professional relationships are largely about our ability to achieve some goal, such as learning new material, securing an account, or having a satisfying experience purchasing a product. As a result, if our behavior interferes with someone's successful achievement of that goal, it's natural to want to act differently.

8. **Be willing to discuss specific *consequences* of the behavior you are hoping to change.** Is there a clear instance where, because of the person's behavior, you failed an exam, were too upset to leave your room, couldn't attend an event that was important to you, incurred a large expense, were seriously inconvenienced, looked ridiculous to other people, had to miss a deadline, or suffered some other clear and tangible harm? Use these examples, not to "pile on" complaints about what the other person has done, but to illustrate the impact the other person has had.



9. **Propose a solution.** Remember that the purpose of your conversation is not to make the other person feel bad. The purpose is to improve a situation. So, come to the discussion with concrete suggestions prepared. Vague requests, such as "Treat me better" or "Don't whine so much," are really not very helpful, even if they're the most direct statement of what it is we desire. It's far more productive to suggest specific plans that give the other person an idea of what he or she can do. The type of specific plan you might suggest includes setting aside one night a week when you

agree not to talk about what's going on at work or when you'll do something that you'll both enjoy.

10. **Be flexible in your willingness to compromise on a specific solution.** Remember that your discussion with the person is a *conversation*, not an ultimatum. Your goal is to arrive at a solution, not to secure unconditional surrender. The other person has a right to his or her own feelings and individual perspectives, just as you do. Listen — really *listen* — to what the other person has to say and be willing to admit that you may have contributed to the difficulty as well. Don't willingly accept a solution that strikes you as patently objectionable or unworkable. But go the extra mile in your effort to bring about a solution that meets the needs of both parties. When dealing with a supervisor, boss, professor, parent, or someone else in a position of authority, however, understand that you are not “negotiating” on an equal footing with the other person. In these cases, you should be particularly willing to consider any appropriate solution offered by the other person and demonstrate even greater flexibility in your willingness to compromise.
11. **Where there are mistakes that you've made, apologize sincerely while looking the other person in the eye.** At times in conversations we have about problems with other people, we learn that we've carelessly or inadvertently done something that either made the other person feel bad or interfered with his or her own success. In these cases, the best approach we can take is a sincere apology. A sincere apology is a statement that expresses regret for *the action itself*, not simply for *how it made the other person feel*. You can certainly express sorrow or sympathy for the bad feelings and discomfort that person must have experienced, but that should not be the *sole* reason for your apology. Express genuine remorse for what you've done, don't look away from the person as you're doing so, and then sincerely resolve not to act that way anymore.
12. **Understand that not every problem is fixable.** Using the suggestions above, you'll find that a great many of your problems with people can be

either solved or at least managed in some way. But this won't occur in *all* cases. Sometimes, as much as we love someone, that person has drawn apart from you and wants the relationship to end. Sometimes our rapport with a coworker has declined irretrievably. Sometimes, for reasons that we can't quite comprehend, our friend decides to "move on." These can be troubling situations but, once we've done all that we can or should do, we have to realize that the situation is no longer in our control. The other person has rights, too, and the best thing that we can do is to respect those rights. If that relationship was meant to be, our willingness to demonstrate understanding now can help our relationship resume again someday. If the bond we shared is truly over, it is better to leave the relationship with a sense of dignity and good will than trying to prolong it merely out of selfishness. At times, in other words, the best thing we can say is "I understand."

Interacting with Professors and Administrators

A major element in effective communication with faculty members and administrators at your school is understanding how they view their role and your relationship to them in the organizational structure. That's one of the reasons why the information presented in Unit One and Appendix B is so important. If you interact with a professor in the same way that you might with an unhelpful server in a restaurant — "Listen: I'm the customer here, and I'm basically paying your salary. So, just be sure you *make* time to help me when I need something." — you're unlikely to get what you're looking for. Similarly, if you approach the provost about a billing problem or the Dean of Students about one of your courses, you'll waste both your own time and that of the person you're talking to because he or she won't be able to help you. On the other hand, if you view the professors and administrators at your school as so remote from you that you're hesitant to talk to them at all, they certainly won't be able to address your concerns because they won't even know what they are.

Key principle

Whenever you have a request to make of someone, try to view the matter from the other person's point of view and ask yourself, "How can I make it as easy as possible for this person to say 'yes'?"

For instance, suppose you need a recommendation from one of your professors for a graduate program to which you're applying. What does this person need so that his or her job will be as easy as possible? If the professor is completing an online form, it takes time for that person to fill in his or her name, position, institution, address, email address, phone number, and fax number on the electronic form. Most systems will allow you to complete these routine items for the person who's recommending you so that he or she only has to upload a document or check a few boxes to complete the recommendation. If you take this initiative before the professor is notified that a recommendation has been requested, it saves a great deal of time, and that person may even write you a stronger recommendation as a result. If the professor has to send a written letter, provide a pre-addressed, stamped, envelope to make that process easier. And in either case, consider what the professor will need to know in order to provide the recommendation. Provide a list of the classes you took with the faculty member in case he or she has forgotten. Provide an accurate GPA, even if the professor can simply look it up in the school's database. Offer a résumé that includes information the professor may not know: your service activities, work experience, special skills, and the like. It's even appropriate to offer a bulleted list of what you believe are your greatest strengths and achievements, so that the professor can cite these in the letter. By making it easy for the professor to write the letter, it's more likely that he or she will agree to do so and will create the sort of letter you'd want.

The same strategy applies when you wish to talk to a professor because you're having difficulty in a course. How can you make it as easy as possible for the instructor to help you? If your course has a designated teaching assistant, start by meeting with that person and have a calm, constructive conversation about the areas that are causing you problems. If no teaching assistant has been identified,

learn the instructor's office hours, make an appointment if necessary, and be ready to state clearly and concisely what aspect of the course material is causing you problems. Be as specific as you can about the difficulty you're having and what help you need in order to understand the material.

- Was there a point in the course at which you felt that your challenges really began?
- Are there certain types of problems or exercises that are easier for you in the course, while others cause you to struggle?
- Are you unclear as to when a particular principle is applied and when it's not relevant to an issue?

If the instructor has a lot of students stopping by for help, it may serve as an alert that certain issues need to be clarified for the class as a whole or that the pace of the course should be reconsidered. In other words, your questions may not only be helping you; they may also be helping your fellow students and allowing the instructor to better achieve his or her goals in the course.

While it's true that certain professors can seem quite remote or intimidating, don't allow their personal style to prevent you from seeking the help you need. Most professors are happy to help students in their courses, as long as those students don't come to see them ...

- **... only when it's too late, and the students are hoping to be "bailed out."** It's foolish to wait to seek help until after a poor grade has been received. By that time the damage has been done, and it may even be impossible to save your grade once you've been unsuccessful on an assignment or quiz. But it's equally foolish to wait until shortly before a major quiz or exam is scheduled. The goal should always be to ask for assistance as soon as you realize that you're not understanding the material or can't complete an assignment. Most professors are happy to assist you with understanding one or two concepts at a time; they may get frustrated when students expect them to re-teach an entire unit.
- **... after not attending classes or review sessions.** Many college professors find it difficult to be sympathetic with students who haven't done their part

by coming to class, completing assignments in a timely manner, and taking full advantage of review sessions and other resources that are offered them. Make an effort to learn the material yourself and demonstrate to the professor the steps you've already taken to overcome your own difficulties.

- **... without being able to identify the specific type of help they need.** When you go to see a professor or teaching assistant, try to identify precisely what's causing you difficulty and what you might need explained. It can be very frustrating to assist someone who says, "I just don't get this," particularly when the student's response to "What specifically don't you get?" is "Any of it." Make it easier for an instructor to help you by clearly thinking through what's causing you difficulty and determining at which step in the process your understanding broke down.
- **... because they have placed other priorities ahead of their academic work.** Students, like faculty members, need to balance their academic responsibilities with their family obligations, financial responsibilities, and the other tasks that arise in life. Some students believe, however, that their responsibilities to their families or jobs are so important that they should take precedence over their academic work. They are certainly within their rights to make this choice, but they have no right to assume that the school's standards or requirements will be waived for them as a result. One of the key principles we encountered in the last unit is that **every decision has consequences**. Placing other aspects of your life as higher priorities than your academic performance may well be your own decision, but instructors should not then be expected to waive the consequences.

It's never a good strategy to enter a conversation with a professor in an accusatorial manner, implying that either you or your fellow students aren't succeeding because of deficiencies in the teacher's performance or level of knowledge. Consider how you feel when someone asks you for help: It's only natural for people to feel more disposed to help someone when they haven't received the impression that it's their own failure or incompetence that has led to the other person's need for assistance. Moreover, the instructor's commitment to

other students means that he or she can only allocate a certain amount of time to the problems you're having. The instructor is highly unlikely to spend his or her office hours re-explaining everything that's been covered in the course, compensating for material that should've been mastered in one of the course's prerequisites, or supervising you as you do your homework. You are much more likely to receive the help you need if you come to an instructor with a positive attitude and a few specific questions that help identify your specific challenges. At the end of your conversation, be gracious and thank the instructor for his or her time and help. You may be correct in thinking, "But it's this person's *job* to assist me"; even so, an extra amount of politeness and civility is likely to cause that teacher to go *beyond* the minimum requirements of his or her job in an effort to be of assistance to you. It may even be the case that, if your final score in the course ends up on the borderline between two grades, your demeanor during the conversations will lead the instructor to give you the benefit of the doubt because you were willing to take responsibility for seeking help. At the other extreme, a negative or hostile attitude could work against you, leaving the impression that you have a sense of entitlement to a good grade and are unwilling to take the suggestions you're offered.

Being Analytical

Depictions of college life in literature and film isn't always an accurate reflection of how people interact in higher education. Select one of the following novels or films and analyze the underlying assumptions about faculty-student interactions. What false assumptions, at least in light of your own college experience, can you identify? What artistic purpose may the author or director have had in making these assumptions? Choose from among the following works.

- *Accepted*
- National Lampoon's *Animal House*
- Junot Díaz's *The Brief Wondrous Life of Oscar Wao*
- Tom Wolfe's *I Am Charlotte Simmons*

- Dorothy L. Sayers's *Gaudy Night*
- Mary McCarthy's *The Group*
- Tom Perrotta's *Joe College*
- Kingsley Amis' *Lucky Jim*
- *Old School*
- Zadie Smith's *On Beauty*
- *Paper Chase*
- *PCU*
- *Revenge of the Nerds*
- *Rudy*
- Bret Easton Ellis' *The Rules of Attraction*
- Donna Tartt's *The Secret History*
- *Slackers*
- *The Social Network*
- *We Are Marshall*

Much of the communication you're likely to have with members of the faculty and administration will be in electronic form. Be sure to construct these messages with a high level of formality, even though your messages to friends and family may be written in a very different style. Use the subject line to indicate why you're writing (examples: Request for a Letter of Recommendation, Question about Friday's Assignment, or Petition to Take Additional Credits Next Semester), begin the email message with a suitable greeting (such as "Dear Dr. Smith" or "Dear Dean Carter"), and explain your situation fully but not excessively. An email message to a professor or administrator shouldn't go on for paragraph after paragraph, although it also shouldn't be so terse as to seem abrupt or unfriendly. Be reasonable about when a reply is likely to arrive. Many professors and administrators don't check their email messages on the weekend and, if they do, they may not answer them until the following week. If several weeks go by without a reply, it's okay to send a gentle reminder ("I just wanted to see if you received my message back on September 15th. I understand that you're busy, but I want to be

sure that it wasn't lost or misdirected."); don't nag or demand a response. The person may have numerous other commitments, be away at a conference, need to collect some additional information, or have been ill. Pestering someone with repeated requests is unlikely to make that person feel favorable toward your request. Most professors and administrators don't subscribe to the notion that they're on duty 24 hours a day, so a message sent at 10:30 pm will probably not be answered until at least the morning of the following day. Even if a professor posts his or her cell phone number and demonstrates a willingness to respond by text messaging, it's never a good idea to text a faculty member in the middle of the night. If he or she is sleeping and the cell phone is nearby, the arriving text message may wake the professor, causing a great deal of annoyance if it proves difficult to fall back to sleep.



Members of the faculty and administration vary widely in their attitude towards being called at home. Some don't mind at all and will even encourage you to do so; others regard it as an invasion of their privacy. The best practice is to err on the side of caution: Refrain from calling unless you receive explicit instructions that doing so is fine and know when calls are considered appropriate. Unless

you're told otherwise, it's a good practice not to call any professor at home between 9:00 pm and 8:00 am, since some faculty members have young children who may be sleeping during that time, and different people will have very different practices in terms of retiring for the night. If you have any doubt whatsoever, don't call. Use email instead or stop by the person's office during posted hours. Remember that problems that arise the night before a project is due are probably not going to be regarded as emergencies by faculty members. Your professors are simply going to remind you that you should've started your work earlier and that now you'll need to solve the problem on your own or pay the consequences.

Emotional Intelligence

In Unit Two, we encountered Howard Gardner's idea that intelligence is not a single phenomenon, but that different people can be intelligent in different ways. Aside from critical thinking and problem solving, one of the most commonly discussed forms of intelligence is what is called **Emotional Intelligence** or **EI**. See Gardner (1983) and Gardner (2006). Emotional Intelligence may be defined as the ability to recognize emotions accurately in oneself or others and then to respond appropriately. For instance, in a conversation with someone who's upset over the loss of a job, people with adequate EI would recognize that it's fitting to have sympathy for the person, listen to what he or she needs to say, and avoid attempts to refocus the conversation on oneself, change the subject, or discuss recent successes that would make the other person feel much worse. Even if the loss of the job was this person's own fault, when the experience is still fresh, he or she isn't ready to be reminded how much personal responsibility contributed to this problem, endure a lecture on what *should* have been done, or listen to variations of "I told you so." Emotional Intelligence is what helps us understand that not everything that people do is done for rational reasons alone. Feelings and states of mind can pose obstacles even when all the factual information argues in favor of a particular course of action. Conversely, these same factors may cause someone to proceed with certain decisions even when every aspect of sheer logic cautions against it.

As you can imagine, EI plays an important role in your ability to be a successful self-advocate. You may be convinced that the case you're presenting to a roommate, friend, family member, professor, or administrator is airtight but, if you're not sensitive to the emotional dimensions of the issue, those arguments may go unheeded. For this reason, self-advocacy involves not only the development of a logical argument in favor of your position but also sensitivity to how others involved may be feeling and the ability to make your individual needs complement their emotional reactions. In order to be most effective in defending your convictions and securing what you need, it's important to be sensitive to the convictions and needs of others. Finding areas where your own feelings and outlooks overlap with the feelings and outlooks of others isn't a matter of being



hypocritical, even if at least part of your motivation is to obtain something you want. On an intellectual level, effective self-advocacy means that we pursue this strategy all the time. The assignment a professor gives you and the interests of a funding source for your research are

unlikely to match precisely what you'd prefer to write about and the subject you'd prefer to investigate. Part of being a good student and researcher is identifying ways in which your intellectual interests overlap with or reasonably relate to those of your professor or funding source. But self-advocacy also means finding those relationships on an emotional level, determining how the things you care about relate to what others care about, and knowing where your feelings either correspond to or conflict with those of the people around you. Even more importantly, awareness of how other people feel is an important part of our ability to function successfully as helpful, caring members of our community. Most of us probably know someone who plods on ahead, paying attention only to personal

needs, wreaking havoc out of sheer insensitivity and being dismissed as a poor member of the team, community, or family as a result.

Since Emotional Intelligence is sometimes compared to the notion of the **Intelligence Quotient** or **IQ**, some people may believe that EI is simply something you're born with and not a skill or capacity that you can develop through practice. Nevertheless, there has been research to suggest that we can all improve our level of Emotional Intelligence, becoming more empathetic with the feelings of others and serving their emotional needs more effectively. **Richard Boyatzis**, the H.R. Horvitz Professor of Family Business and Professor of Organizational Behavior at Case Western Reserve University, has conducted a number of studies that confirm how training and practice can enhance EI over time.

Four cadres of full-time MBA students, graduating in 1992, 1993, 1994, and 1995, showed strong evidence of improvement (that is, statistically significant improvement in multiple years with multiple measures of the competency) on 71 percent (five out of seven) of the competencies in Self-Management cluster (Efficiency Orientation, Planning, Initiative, Flexibility, Self-Confidence), 100 percent (two) of the competencies in the Social Awareness cluster (Empathy and Social Objectivity), and 50 percent (three out of six) of the competencies in the Social Skills cluster (Networking, Oral Communication, and Group Management). Meanwhile the part-time MBA students graduating in 1994, 1995, and 1996 showed strong improvement on 71 percent of the competencies in the Social Awareness cluster (Social Objectivity) and 83 percent of the competencies in the Social Skills cluster. Boyatzis (2001) 236.

If Emotional Intelligence can be increased, what are some effective means of achieving that goal? And how can you take on yet another project when you're already busy with coursework, extracurricular activities, your personal life, and all the other demands for your time? **Cary Cherniss**, the director of the Organizational Psychology Program at Rutgers University, and **Daniel Goleman**, a psychologist and leading author on Emotional Intelligence, have found that there are five critical steps to developing EI.

Promoting Self-Awareness

In order to understand what you need to do in order to increase your level of Emotional Intelligence, it's critical

	<p>to understand where you are right now. Cherniss and Goleman recommend assessing your current level of emotional awareness by being scored on a standardized instrument, such as the Myers-Briggs Type Indicator (MBTI) or Minnesota Multiphasic Personality Inventory (MMPI), and using processes similar to the intentionality and reflection that we considered in Units One and Two in order to become more consistently mindful of your own emotional reactions to situations. The goal of this intentionality and reflection isn't to give in to positive and negative emotions more readily, but merely to be aware of them when they occur, an aspect of the type of mindfulness we considered earlier.</p>
<p>Promoting Self-Regulation</p>	<p>Once you're aware of your own emotional tendencies, you can adopt measures to be more in control of them rather than allowing them to be in control of you. As you begin to understand the <i>triggers</i> of your emotional reactions — such as critical words from a partner or parent, your roommate's tendency to leave clutter on the counter, and the like — you'll be more aware of the choice you have in how to respond to those triggers. We sometimes say things like, "He knows all the buttons to push on me," meaning that this person knows how to provoke a strong emotional reaction from you. The more you understand what your "buttons" are, the less power you give others to push them.</p>
<p>Promoting Self-Motivation</p>	<p>If you find that you sometimes respond to triggers in</p>

	<p>emotional ways that you'd like to alter, set yourself the explicit goal of changing these reactions. For example, if you find yourself getting easily depressed or discouraged by certain triggers, decide that, instead of immediately yielding to this emotion, you'll first identify three ways in which the situation isn't really all that bad or three possible benefits that may result. If you find yourself becoming angered by certain triggers, write a brief story about your anger and the negative results it can cause. Then write a second version of the same story in which, by not yielding to your anger, a more favorable ending results.</p>
<p>Promoting Empathy</p>	<p>The first three steps in this process have all been about identifying and addressing your own emotions. The last two steps will broaden that focus to others. The term <i>sensitivity training</i> now often evokes images of "encounter groups," "T-groups" (for "Training Groups"), and other "touchy-feely" techniques associated with the 1960s and 1970s. But, in fact, a major contribution of the sensitivity movement was the recognition that the more we become aware of our own tendencies to stereotype other people because of their appearance, actions, race, or religion, the more we can appreciate their emotional states and intellectual perspectives. Many people find that, if they truly get to know someone individually, it's almost impossible to hate or have disdain for that person. Becoming intentional about your own reactions to people by making a</p>

	<p>conscious effort to get to know those whom you currently fear, dislike, or distrust can help you build empathy with, not only these individuals, but others as well.</p>
<p>Promoting Social Skills</p>	<p>Increasing Emotional Intelligence, like all the other improvements you wish to make in college, requires hard work and repeated practice. People don't improve their social skills just by reading books about this topic; their skills develop the more they practice them. It's natural to try to protect your comfort zone by remaining in it as much as possible. But you're far more likely to have long-term success if you expand your comfort zone. If particular social situations make you uneasy, seek more of them, not fewer. Ask a friend or two to role-play with you to prepare you for situations you find particularly difficult. Don't judge yourself if you make mistakes or still feel uncomfortable after several attempts. Most importantly, don't stop this process if you feel it isn't working. Like any skill worth having, being effective in different social settings takes a lot of practice, and improvements that may seem imperceptible now will become more noticeable later.</p>

See Cherniss and Goleman (2001) 214-217.

Being Imaginative

As we saw in Unit Three, the early twentieth-century artistic movement known as Expressionism held that the goal of art was to evoke an emotional reaction rather than produce an accurate depiction of reality. In many cases, artists sought to achieve this goal by allowing their own emotions, unimpeded by logical analysis, to

“flow out of them” directly onto the canvas, page, clay, or other medium of their art. That type of expression can be a useful complement to instruments like personality inventories as a means of increasing self-awareness of your emotions. Sometime when you find yourself in the grips of a particularly strong emotion, use this expressionistic approach to capture it imaginatively. For instance, you might take a canvas and use the colors of paint that resonate with you at that moment to convey how you feel. Don’t focus on drawing shapes or making something that’s beautiful. Simply use color and whatever brush strokes feel most natural to you to express what you’re feeling right then. If you’re feeling more verbal than visual, take an electronic recorder or blank piece of paper to capture the free flow of your thoughts. Don’t try to tell a story, convey a logical concept, or even speak/write in complete sentences. Just let the words come out as they will. You can also try a similar experiment with dance, acting, music, or any other creative form that strikes you as appropriate to what you’re feeling.

Seeking Help with Occasional Challenges

One of the challenges every college student faces sooner or later involves handling stress or the pressures of balancing academic work and other responsibilities. Of course, a certain amount of stress in life is both unavoidable and beneficial. Stress can be helpful when it makes us test our boundaries, work at a higher level than we thought possible, honor our commitments, meet our deadlines, and avoid situations that would eventually be harmful to us. It’s only when our stress becomes *excessive*, *continual*, or *uncontrollable* that we need to be concerned. It’s a sign that something has gone wrong when *everything* seems to cause us stress or when anxiety arises *for no apparent reason whatsoever*. In addition, you may be suffering from stress if you ...

- ... feel your heart pound or often have noticeable palpitations.
- ... are repeatedly unable to focus on your work or other commitments because you feel you will never get everything done or finish your work to your satisfaction.

- ... have a dry mouth that won't go away, particularly if it becomes more noticeable when you are worried about something.
- ... either can't sleep at all or wake up repeatedly in the middle of the night, unable to put all your obligations out of your mind.
- ... find yourself unable to concentrate in class because you're so worried about your workload that you can't think about anything else.
- ... suffer from a lasting sense of apathy because you feel that nothing you do will matter anyway.
- ... have headaches frequently, particularly if the muscles in your back, neck, or shoulders are extremely tense.
- ... rely increasingly on drugs, alcohol, sex, or gambling to distract you from your work or because you feel you need these things in order to relax.
- ... take refuge in unrealistic hopes that something dramatic will change, thus ending the stressful situation.
- ... miss class repeatedly in an effort to catch up, but end up falling more and more behind as a result.

Make no mistake about it: Several of these warning signs can be symptoms of *other* serious health conditions besides stress. Check with your doctor immediately if you have prolonged instances of heart palpitations, dry mouth, headaches, or insomnia in order to make sure that these symptoms are caused by stress and not some other illness. Moreover, if people who know you have expressed concerns about how you've become increasingly disengaged or reliant on chemical substances and avoidance behaviors, take these concerns seriously and consult with a trained counselor who may be provided by your school, insurance program, or county health department. In other words, the advice that appears below is for the *relatively mild instances* of stress that can affect every college student from time to time, not for those whose anxiety or tension is making them seriously ill or provoking suicidal thoughts.

As you probably already know from experience, simply being told to relax does little to reduce your overall stress level. In fact, studies have indicated that instructing a very tense person to calm down can actually *increase* the amount of stress that person is feeling. See, for example, Wegner, Broome, Blumberg (1997). What *can* you do, then, to help yourself relax when you're facing a great deal of pressure? The following are several possible approaches, not all of which may be applicable to you. So, consider these ideas, decide which of them might be helpful to you, and try applying one or two of them the next time your level of stress seems high.

- **Become more intentional and controlled in your breathing.** You can slow down your breathing by consciously inhaling through your nose and exhaling through your mouth. As your breathing slows, you will often find that you quickly begin to feel more relaxed and in control. Don't try to take *deeper* breaths or to *hold* your breath since a number of clinical studies indicate that deep breathing *increases* a person's heart rate. See, for instance, Ahmed, Harness, and Mearns (1982) and Sroufe (1971). In other words, the important factor is not the *depth* of the breath, but its *regularity*. For centuries schools of meditation all over the world have taught that the first thing students need to do when learning this practice is to concentrate on their breathing, to become aware of both inhalation and exhalation, and to make these cycles more regular. Rapid breathing or "gulping" of air can heighten your level of anxiety and even lead to hyperventilation and panic attacks. See Ley (1985). Regular, calm breathing tends to have the opposite effect: It leads to a greater sense of tranquility and a reduction in heart rate and the other measurable indications of stress.
- **Take control of what you can.** Sometimes we feel stressed because everything appears to be out of our control. Our own feelings and preferences don't seem to matter. While there are certainly many situations in which college students have no control over the work they're assigned or when material is due, it simply isn't true that *everything* is outside their control. Think for a moment about your current obligations and

commitments. Why do you feel responsible for each of these tasks? What are you afraid might happen if you don't live up to that particular obligation? By asking yourself questions like these, you'll realize that there are important differences among the reasons why you feel pressured by your various commitments. In fact, you'll discover that you have control over many more of your obligations than you may initially believe. And just by realizing you have some control over your priorities can help reduce your level of stress.

- **Break large problems or challenges into manageable parts.** Another way in which you can exert control over a situation is to stop regarding your commitments as single, almost unimaginable tasks and to begin thinking of them as a series of small and achievable goals. We've already seen that it can be paralyzing to think of a long research paper that's due in a few weeks when you still have all your other assignments, your job, and your obligations to your family to consider. But if you think of what you have to do as not "one long, impossible-to-complete research paper" but a series of 15 or 20 small steps — all of which happen to add up to a research paper — the whole task can become much more manageable. Small tasks such as finding five good sources, drafting a thesis statement, writing two pages of an outline, writing three paragraphs of your draft, polishing two pages of your final draft, and so on can each seem easy to accomplish in a way that the project, when viewed in its entirety, does not.
- **Understand that people control their reactions to situations far more often than we realize.** We have just seen that you may have more control over your various responsibilities than you realize. Yet certain situations and events will remain outside of your ability to manage them. Even in these situations, however, you still have a choice in how you react to the challenge. When you find yourself under a great deal of pressure, try viewing all the work you have to do as an opportunity to test your character. You've handled tough challenges before, and you've succeeded in overcoming them. Moreover, in order for you to reach your goals, you're

continually going to face a heavy workload and competing priorities; your current situation is good preparation for what lies ahead. The problem you're trying to solve isn't an obstruction to your college education; it's an essential *part* of your college education.

- **Identify situations or environments that seem to trigger your greatest stress.** We encountered the notion of triggers earlier in this unit, and triggers are heavily involved in the generation of stress. For instance, you may observe that you become particularly anxious on days when you meet with one particular professor, have to complete a certain type of assignment, or meet in a campus facility for which you have unpleasant memories or associations. Of course, knowing what triggers



feelings of pressure or anxiety doesn't give you license to avoid these encounters. Running away from problems or developing avoidance behaviors is a less effective strategy for dealing with stress than addressing your concerns head on. For one thing, only rarely does avoidance strategy work in the long term. It may be one thing for you to keep your distance from a friend whose disparaging or sarcastic remarks on exam days always seem to make you more nervous, but this technique won't work when the person who triggers your anxiety is a roommate, professor, or member of your own family. In certain situations, you may be able to talk with the person about how their behavior affects you and effect a change in what that person does or says. In other situations, you may be able to desensitize yourself to certain environments by repeatedly visiting them, first for a

short amount of time, then for longer and longer periods until your anxiety subsides.

- **Stay physically active.** Many different studies have documented the importance of physical activity in reducing stress, decreasing levels of generalized anxiety, and diminishing stress-induced headaches, particularly for children and young adults. See, for example, Salmon (2001), Moraska and Fleschner (2001), Biddle, Fox, and Boutcher (2000), Fox (1999), Clark, Sakai, Merrill, Flack, and McCreary (1995), Calfas and Taylor (1994), and Norris, Carroll, and Cochrane (1992). Sedentary lifestyles have a strong correlation with increased levels of stress, elevated blood pressure, and even certain types of depression. Unfortunately, students who feel pressure from their schoolwork and other obligations frequently reduce their amount of exercise at the very time that exercise is most important. Maintaining at least *some* level of physical activity can help us keep things in perspective and manage stress. Even a brisk walk around campus can be very effective in providing the type of exercise needed to reduce your stress.
- **Get a full night's sleep as often as you can.** Research has also demonstrated a clear correlation between lack of sleep and high stress levels. See, for instance, Hall, Baum, Buysse, Prigerson, Kupfer, and Reynolds (1998), Kant, Pastel, Bauman, Meininger, Maughan, Robinson, Wright, and Covington (1995), and Kollar, Slater, Palmer, Docter, and Mandell (1966). The precise nature of the causal relationship is, however, not always clear: Does lack of sleep increase a person's level of stress or do people tend to lose sleep when they are in very stressful situations? Quite possibly stress and lack of sleep are connected in a vicious circle: When we feel tense, we don't sleep; not sleeping makes us anxious and irritable the next day; since we are tense, we sleep even less the following night; and so on. It's possible to draw several conclusions from this situation. We handle pressure more easily when we're feeling rested; we tend to work better — and thus not get behind — when we've had a sufficient amount of sleep;

being tired can cause us to make mistakes, thus either increasing our stress or causing us to have to redo work even as our obligations and commitments increase.

- **Eat a well-balanced diet.** You already know that proper nutrition is important both for health and your overall sense of wellbeing. That understanding tends to get ignored, however, when the pressure builds and assignments are due. The temptation to eat meals on the run increases. We grab food quickly, eat in a hurry, and barely notice what we had for lunch. In order to keep our energy up, we drink more tea, coffee, or other caffeinated beverages. We may also find ourselves attracted to foods that are high in refined sugar such as candy, pastries, and cookies. But this type of diet can only compound our sense of stress. Caffeine often causes people to feel anxious and on edge. See Totten and France (1995), Landrum (1992), and Sawyer, Julia, and Turin (1982). Refined sugar can bring a sudden energy boost, but it's often followed by a slump that makes it even more difficult to focus and concentrate. The best approach to stressful situations is to maintain the same sort of balanced diet we should be eating even when we are not experiencing any sense of pressure. By eating meals in a more leisurely manner, we give our bodies a chance to calm down and recover from all the effort we've been devoting to our studies, family obligations, and personal commitments.

Being Innovative

Extremely interesting research can be done, not within the confines of any particular discipline, but by blending the approaches of different academic fields. Suppose that you wished to investigate the role that meditation, yoga, tai chi, or prayer had on stress reduction and increasing a person's satisfaction with life. This topic could easily involve neurobiology, philosophy, religious studies, exercise science, medicine, alternative medicine, psychology, physiology, and a number of other disciplines.

1. Since it's difficult, particularly at the undergraduate level, to become proficient in all of these disciplines simultaneously, what strategies might you use to develop a meaningful approach to this topic?
2. How do you go about doing a literature review of prior research on this topic since it involves so many disciplines?
3. Which books, articles, and electronic resources would you consult as reliable sources for background information on this project? What standards would you use to determine whether a particular source should be regarded as reliable?
4. Some scholars might regard the outcomes you're studying — “reducing stress” and “improving satisfaction with life” — as difficult to define or assess. How might you define these outcomes in a manner that would make your results verifiable, reproducible, and significant? Is it necessary to reduce these outcomes to quantifiable measurements in order to conduct meaningful research?
5. If you would involve human subjects in your research, what ethical issues might you need to address? What procedures does your institution have in place for studies involving human subjects?

Seeking Help with Serious Problems

The last two types of problems we explored in this unit, although often very challenging, posed no significant threat to your life, health, or long-term wellbeing. But it's also important to consider what you can do when you *are* faced with a very serious problem. For these types of challenges, keep one thought in mind above all else.

Key principle

When trying to solve a serious problem, it's *always* necessary to seek the assistance of a trained professional. If you think that you can solve the problem by yourself, the probability is very high that you will either not succeed or deceive yourself into believing that the problem has been solved.

Problems that are serious enough to threaten significant harm to oneself or others are always important enough to discuss with a trained professional.

This principle applies both when the serious problem is your own and when the situation involves someone who's close to you. Although you can play an important role in helping to fix or manage the problem, "going it alone" can often make the situation worse. If you're not certain what type of professional would be appropriate for the type of problem you are facing, your primary care physician, your school's counseling center, or a trained social worker in your area should be able to give you a reliable reference.

How do I know whether a problem is a *serious* problem?

As we've already seen, your **first criterion** for the severity of a problem is whether the situation puts you or someone else at risk for significant or lasting harm. For instance, being in an abusive relationship could threaten your life or health if the harm you're receiving is physical, but it could also threaten your long-term wellbeing by damaging your self-esteem or ability to trust others. Addictive behaviors — whether they involve alcohol, drugs, sex, gambling, food, use of the Internet or video games, nicotine, shopping, or anything else — cause threats that can be both physical and social in nature. Eating disorders, chronic illnesses, depression, bipolar disorder, anger issues, and other mental and physical challenges should also be regarded as extremely serious.

The **second criterion** for the severity of a problem is the degree to which it interferes with your ability to engage in a full, rich, and satisfying life. For instance, people vary widely in their need for human contact. Some people love to hug and be hugged to such an extent that they greet even casual acquaintances in this way. Other people feel uncomfortable when their "personal space" is invaded and stiffen whenever they are subjected to hugs by people whom they don't know very well. How you feel about being touched is completely a matter of personal preference and, as long as you make your preferences in this regard known politely and clearly, it's unlikely to have a serious impact on your life. If, however, you are

so averse to being touched that you cannot stand physical contact with *anyone*, your chance of living what most people would regard as a full, rich, and satisfying life will be greatly diminished. It will be all but impossible to be in a loving relationship, to be effective as a parent (or even to *become* a biological parent), or to fulfill the responsibilities of most occupations. For this reason, although the problem doesn't directly threaten your life or health, and though you may not regard it as affecting your own wellbeing, it's an issue that greatly limits the options that are open to you.

Being Reflective

We get better at solving problems, just as we improve our social skills, through practice. In your academic work, repeated practice with problems in calculus, chemistry, and engineering help you become more adept at seeing how general rules apply to specific situations. Something similar occurs in dealing with problems in our daily lives. Develop a list of five to ten problems or challenges you've encountered in your life. Identify the two or three of them that were the most serious or difficult to address. Then consider the approaches that you used in trying to find a solution. Which approaches proved to be most effective? Which approaches were futile? Which approaches actually seemed to make the problem worse? Using the principles of inductive reasoning that were discussed in Unit Four, can you extrapolate any general principles from the individual problems you had to address?

How can I tell whether *I* have a serious problem?

Problems sometimes develop to the point where they become serious because the person who has them is unaware of the affect the problems are having. Ask yourself these questions in order to determine whether one of your problems may be serious enough to seek professional help.

1. Has the problem caused you to miss work or school on more than one occasion?
2. Have you repeatedly tried to solve the problem on your own but failed?

3. Do you ever feel that you have no control over the problem but that, at least in some ways, the problem controls *you*?
4. Have you ever injured yourself or someone else because of this problem?
5. Have you had to lie about the problem, such as misleading someone about its existence, severity, or frequency?
6. Do you ever feel a sense of shame, guilt, or regret because of this problem?
7. Do you do things to hide the existence or severity of this problem from your family or friends?
8. Has more than one person expressed concern to you about this problem? Did an expression of concern ever make you feel angry or defensive?
9. Has the problem ever cost you a friend or caused you to begin associating with people who either have or “understand” the same problem?
10. Has the problem ever caused you financial worries?
11. Do you feel that the problem is intensifying or getting worse?
12. Do you yourself suspect that the problem may be serious in nature?

If you answered “yes” to five or more of these questions, then it’s quite likely that your problem is serious. If you answered “yes” to nine or more of these questions, then it’s all but certain that you have a serious problem. Begin a discussion of this issue with someone on whom you can rely for sound and unbiased judgment.

Don’t be afraid that merely by having a discussion about this problem the other person will lose respect for you or feel that you’ve failed in some way: Everyone faces challenges in his or her life, and you’re demonstrating good sense and courage by trying to determine the severity of your problem. If you remain concerned about what the other person will think about you, seek advice from a knowledgeable person whom you’re unlikely to see on a regular basis, such as a member of your school’s counseling center or a trusted mentor. The person with whom you have this initial chat may not be the professional whose advice you seek in solving the problem. Remember that, at this stage, you’re still trying to determine whether you *have* a serious problem; developing a reasonable plan to address the problem, if it indeed exists, can come later. If the person with whom you have this initial conversation knows you well, don’t be surprised if you hear

something along the lines of “I was wondering when you’d get around to talking to me about this.” That sort of reaction is itself supporting evidence that your problem really is serious. It’s time to explore ways of solving the problem.

What should I do if I suspect that someone I care about has a serious problem?

If you ever wonder whether another person’s problem is truly serious, chances are very good that it is. Our vague instinct that something is wrong is often based on indicators that, although they may be subtle, suggest the problem is cause for concern. As you think about your friend or family member, ask yourself ...

1. Has the person’s behavior changed substantially for the worse in any way? In particular, does the person seem to act now in a more inappropriate, impulsive, sullen, or secretive manner than he or she did before?
2. Has the person been responsible for injury to him- or herself or to another person?
3. Has the person been arrested on more than one occasion? Have any of these arrests included shoplifting or driving under the influence?
4. Does the person seem to need money more desperately than before? Has the person repeatedly asked for a loan?
5. Has the person’s appearance, grooming, or cleanliness declined? Has the person gained or lost a significant amount of weight in a short time?
6. Does the person want to be alone more than before?
7. Has the person brought up the subject of suicide or early death in a context where you wouldn’t have expected this topic to arise?
8. Has the person mentioned having had trouble sleeping on a number of occasions?
9. Does the person appear to have lost his or her sense of coordination or to have become clumsier?
10. Have you caught the person in a number of lies?
11. Has the person started to develop a new set of friends and to have discarded or ignored earlier relationships? Does the person seem vague or evasive when asked about these new friends?

12. Has the person's performance at school or work declined?
13. Has the person been involved in more than one car accident within a short period of time?
14. Does the person seem strangely calm after having been excessively concerned about problems for some time?
15. Does the person talk in a negative or demeaning way about him- or herself?

If you have answered "yes" to four or more of these questions, the person in question may well have a serious problem. If you have answered "yes" to seven or more questions, it's extremely likely that the person has a serious problem. Keep in mind, however, that these questions are not intended to *diagnose* the problem or to identify its causes; they merely serve as indicators that there is an issue needing to be addressed. For instance, a person may have had a number of accidents (either in a vehicle, while working with equipment, or simply engaging in day-to-day activities) for several different reasons. The person may have had diminished capacity due to intoxication or a health problem. The person may be depressed and thus careless or indifferent to the prospect of suffering harm. Or there may be some other factor at work that will only become apparent when the person is seen by a qualified professional. For this reason, just as you shouldn't assume that you can solve your own serious problem on your own, you should not presume that you can provide your friend or family member with all of the help that he or she needs. The degree to which you're concerned about the person is no replacement for the training and technical knowledge that a physician, counselor, or social worker can bring to the situation. You could inadvertently make the matter worse or cause the person to become even more secretive about the problem. There could be legal implications resulting from an inadequate attempt to solve a problem for which you don't have the proper training. Your goal should be to get the person *access* to help, not to try to provide it yourself.



No matter whether a serious problem is our own or that of someone dear to us, everything else in our lives can seem insignificant as a result. Fortunately, a large

number of resources are available that can help us in dealing with serious problems. Note that the key words here are “dealing with,” not “solving.” As we’ve seen, not every problem is solvable. Illnesses are sometimes incurable. Those we love sometimes prove unwilling or unable to solve the problems that are causing them harm. Even in these cases, however, a well-informed support group can help us cope with situations that may initially seem overwhelming. From time to time, everyone must cope with problems of various kinds. In these situations, we often learn more about ourselves than we could gain from many courses or books. It’s almost always futile and frustrating to search for the *reason* why we’ve been forced to deal with a serious problem. But it’s almost always consoling and enlightening to discover aspects of ourselves that can only be revealed at times of our greatest challenge.

EXERCISES

1. Reflect on the last few situations in which you noticed that you were stressed or felt under a great deal of pressure. What physical sensations do you most closely associate with this experience? Are there particular steps that you take in order to relax or deal with stress more effectively? What is your best suggestion to a fellow student on how to cope with stress that was not mentioned in this chapter?
2. Suppose a very close friend of yours did each of the following things. Would it **a) not matter at all, b) destroy your friendship entirely, c) require the two of you to have a serious conversation, d) severely strain but not destroy your friendship, or e) lead you to take some other action?** If you answer (e), specify what action you would take.

Your close friend ...

- ___ i. ... got drunk.
- ___ ii. ... got so drunk that he or she needed help getting home.
- ___ iii. ... got so drunk that he or she had to go to the hospital.

- ___ iv. ... is an alcoholic.
- ___ v. ... had several sexual partners on the same day.
- ___ vi. ... has a sexually transmitted disease.
- ___ vii. ... skipped class.
- ___ viii. ... changed major.
- ___ ix. ... cheated on the person with whom he or she had a committed relationship.
- ___ x. ... didn't show up when the two of you had something planned because "something else came up."
- ___ xi. ... neglected to thank you after you had performed a huge favor.
- ___ xii. ... borrowed a large amount of money from you (i.e., large enough to have been a real sacrifice for you) and delays paying you back.
- ___ xiii. ... had sex with one of your ex's.
- ___ xiv. ... had sex with that particular one of your ex's whom you regard as your most important past relationship.
- ___ xv. ... has entered a committed and exclusive relationship with that particular one of your ex's whom you regard as your most important past relationship.
- ___ xvi. ... underwent a 180° change in his or her political views.
- ___ xvii. ... hates children.
- ___ xviii. ... hates small animals.
- ___ xix. ... never recycles.
- ___ xx. ... is about to fail a course.
- ___ xxi. ... did something for which he or she could get arrested.

- ____ xxii. ... hid illegal drugs in your room without telling you.
- ____ xxiii. ... slipped illegal drugs into your food or drink without telling you.
- ____ xxiv. ... “borrowed” something small (such as a pen or a few sheets of paper) without telling you.
- ____ xxv. ... “borrowed” something valuable from you without your permission.
- ____ xxvi. ... didn’t do anything to defend you when other people were ridiculing you behind your back.

3. Imagine that a student whom you know quite well from one of your classes suddenly begins exhibiting signs of a serious problem. This person loses a great deal of weight, starts missing class more and more frequently, changes from being clean and well-dressed to demonstrating poor hygiene, is rude or evasive when addressed, asks you repeatedly if you can make a rather substantial loan, and leaves class several times “to use the restroom.” What course of action occurs to you as an initial impulse? What *should* you do in such a situation?

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Unit Nine:

Choosing a Major

Learning Objectives:

1. To understand the notion of the academic major and how it relates to the rest of a student's undergraduate program.
2. To consider why some of the reasons students have for choosing their majors cause them to regret their decision later.
3. To explore more effective strategies for choosing a major.
4. To learn how to prepare an academic plan as a tool for improved learning and timely graduation.
5. To examine some of the most effective strategies for selecting which courses to take.

What Majors Are and Are Not

The structured sequence of courses in a discipline that helps students progress from a basic to an advanced baccalaureate level of knowledge is usually called an **academic major**. At some schools, however, alternative expressions — such as *concentration*, *emphasis*, *track*, or *degree program* — may be used. It can thus be confusing sometimes that, while at one institution terms like *concentration* and *major* are synonymous, at others they each have a special meaning. For instance, at certain colleges or universities, an emphasis, concentration, or track may refer to a particular specialty *within* a given major. That is to say, a student might major in business administration, with a concentration in management, or pursue a major in art, with an emphasis in photography. Similarly, while some schools use the expression *degree program* to refer to the specific area that a student pursues in depth, others use this term to refer to the entire baccalaureate course of study, consisting of a major, a minor, the general education program, and electives. In addition, the size of an academic major can vary considerably, with 8 courses or 24 semester credit hours generally considered the minimum for a major, and practically no limit placed on the maximum number of credit hours required. For

this reason, in pre-professional programs, it's not at all uncommon for majors to require in excess of 70 credit hours in addition to general education requirements, electives, and academic minors. Moreover, because academic majors are such an integral part of American higher education, they tend to be given a significant amount of attention when students are considering which school to attend. Some students completely lose interest in a particular college or university because it doesn't offer the major that they want or provide a certain course within their intended major. Other students falsely assume that, once they're in college, the only courses they'll be taking are those that lead to their major. But these assumptions are based on a misunderstanding of what most faculty members and alumni would define as the real purpose of college .

Academic majors actually don't go back very far in the history of higher education. The opening lines of *Faust* by **Johann Wolfgang von Goethe** (1749-1832) are:

<i>(sigh)</i> Philosophy, law and medicine. Even — unfortunately — theology.	<i>Habe nun, ach! Philosophie, Juristerei und Medicin, Und leider auch Theologie!</i>
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Faust's lament here refers to the four main academic programs found in European universities during the Middle Ages and early Renaissance. Not all universities offered all four programs, but once a student was enrolled in one of these "faculties," there was nothing else to choose. You didn't major in analytic versus linguistic philosophy or pursue a different medical program if you were going to become a podiatrist instead of a neurosurgeon. As universities developed, more options became available, but these choices developed only slowly and in certain areas. In 1824, "[t]he University of Virginia opens. Students are offered eight possible fields of study ranging from anatomy and medicine to ancient languages. Degree programs within each field are completely prescribed. However, nondegree programs that allow students to choose whatever courses they please are offered." Gaff and Ratcliff (1997) 68. Then, more than fifty years later, "[t]he Johns Hopkins catalogue of 1877-78 makes the first known reference to the terms *major* and *minor*." Gaff and Ratcliff (1997) 72. In other words, a college education wasn't always about choosing a major that would help students prepare for a

specific career. It was only with the proliferation of elective courses and more specialized academic fields that universities embraced the idea that students should pursue a specific emphasis within an overall degree program.

Certainly, none of this history means that majors aren't important in college *now*. Choosing a major is an extremely weighty decision, and every student should approach this decision with a great deal of preparation and care. Within your major, you'll have an opportunity to pursue certain topics in depth, learning far more about one discipline's methods and approaches to understanding the world than you could have learned if you had taken survey courses alone. In many disciplines, too, completing a major in that area makes it easier to obtain access to post-graduate programs in the same field. Nevertheless, even while majors are significant, they're rarely the "life defining" decision that many students assume.

Key Principle

The specific major students choose is often far less important than they believe. In fact, for the vast majority of students, it doesn't really matter *what* their major is.

This statement seems so counter-intuitive to what we constantly hear about college that it deserves some explanation.

- One of the roles of an undergraduate education is to introduce students to a wide variety of disciplines they may not have encountered in their earlier schooling or work experience. Because they're exposed to interesting new fields, many college students change their majors *three or more times* before graduation. It often happens that the very student who selects an institution specifically because it offers a certain major will end up studying a completely different field within a year or two. That's why it's rarely a good idea to select a college or university to attend simply because "it has my major." By choosing a school based on the availability of just one discipline, you may not be giving enough attention to all the other factors that could have made a different school the best possible choice.

- It's rarely the case that a college graduate remains in the same job throughout his or her entire life. In fact, it's not unlikely that many college-educated people will pursue four to six different careers before they retire. Observe that phrasing carefully: Students will probably have, not just a number of different *jobs*, but a number of different *careers*. It's likely, therefore, that a significant part of your professional life is going to occur in a field that may not be related at all to your academic major.

Being Analytical

Consider one of the sentences you just read: *It's not unlikely that many college-educated people will pursue four to six different careers before they retire.*

Many authors phrase that idea even more categorically. They may even justify this claim by referring to research on this topic, although the research in question is either not cited at all or described only vaguely.

- Experts with the Bureau of Labor Statistics estimate that the average worker will change careers (not jobs) five to seven times in a work life. (<http://www.wssu.edu/campus-life/student-affairs-administration/career-services/career-services-guide/career-planning-and-job-searching/default.aspx>)
- Liberal arts colleges provide the kind of education you will need to succeed in life – no matter what career you choose. Statistics indicate that most of you who enter college at this time will change careers seven times! You could start out as a lawyer, become a teacher, then a politician, then a journalist. (<http://www.washjeff.edu/presidents-office>)
- According to research from the Department of Education, Science and Training, most Australians will change career seven times in their life. (<http://www.reinventyourcareer.com.au/first-steps-to-change-your-career/>).
- Statistics indicate that today's professionals will change careers 7 times before they retire. (<http://mariashriver.com/blog/2012/01/considering-career-change-inside-look-field-education>)

But many authors are skeptical of such claims.

- Jobs researchers say the basis of the number is a mystery. "Seven careers per person sounds utterly implausible to me," says Ann Stevens, professor and chair of the economics department at the University of California, Davis. Yet the estimate has had extraordinary staying power. One reason is that no one knows for sure the true average number of careers. The U.S. Bureau of Labor Statistics, the Labor

Department's data arm, doesn't track lifetime careers. Even so, the figure is erroneously attributed to BLS so often that the agency includes a corrective memo on its website, explaining that “no consensus has emerged on what constitutes a career change.”

(<http://online.wsj.com/article/SB10001424052748704206804575468162805877990.html>)

- The average graduate will change careers seven times in their working life. Sound familiar? Well, it's an urban myth. No data – here in Australia, in the UK or the US – have been collected regarding the number of times a person changes professions in their working life. For one thing, it's hard to define a career change. Is it a change in occupation, job title, or field?
(<http://www.upstart.net.au/2012/01/19/career-changers-making-the-move/>)

Critical thinking can help us analyze these claims.

- By conducting a little Internet research (HINT: It really doesn't take very long), can you determine how the claim that the average worker will change careers X number of times arose and became attached to the U.S. Bureau of Labor Statistics?
- What are some of the ways in which a similar claim may have become associated with the Australian Department of Education, Science and Training? (HINT: A possible lead may be taken from the words “urban myth” used in one statement above. Do a bit of investigating into what urban myths are, how they're spread, and why they may evolve over time.)
- If the claim is false, why is it so commonly believed and repeated?
- Even if it may or may not have been independently verified, does the claim appear reasonable?
- If you were interested in conducting a study to determine the *actual* number of times workers change their careers, what steps would you need to go through in order to obtain valid results?
- If you were interested in conducting a study to determine the most likely number of times college students today may change their careers before they retire, what steps would you need to go through in order to obtain valid results? What assumptions would you need to make?

- With the rapid development of new technologies and the expanding amount of knowledge that's generated every year, many college graduates will end up working in fields that haven't even been invented yet. For this reason, developing the ability to be adaptable and to learn in new environments may be far more important for students today than pursuing any particular academic discipline.
- The increasing amount of information that's continually becoming available means that, even if students study nothing other than a single subject throughout their entire undergraduate careers, they end up merely scratching the surface of that discipline. Many college graduates discover that what they really needed to know in order to succeed in their careers was taught to them in graduate or professional school or once they were on the job, not in their undergraduate programs.
- A large number of college experiences aren't intended to be *simply* preparation for a vocation, but preparation for students to live a rich and meaningful life. While a satisfying career is certainly a significant part of a full and engaging life — and many students regard it as the most important part — it can limit the college experience unnecessarily to view education merely as a pathway to a vocation. On the other hand, if you regard college as an opportunity to become the *sort of person* you want to become, you may realize that it's important to focus on a large number of opportunities in addition to your major. Those opportunities may even occur outside of your coursework itself.



Now, remember: None of these observations is intended to imply that majors are insignificant, merely that choosing a major doesn't lock you into or out of as many

experiences and opportunities as you may believe. When you choose a major, you'll be selecting a particular field of study that you'll pursue in some depth for about two or three years. You won't be making an irrevocable decision that determines who you are as a person. There will still be lots of opportunities for you to pursue different paths after you graduate. Students who major in English literature become doctors. Students who are pre-med majors end up heading multi-national corporations. Students who receive a bachelor of science degree in engineering become poets. In other words, you may find your entire college experience more rewarding if you take your major seriously, but not *too* seriously. Majors offer you an opportunity to learn more about a specific field; they don't paint you into a corner for the rest of your life.

If you're a non-traditional student who's already amassed a great deal of life experience, you're probably already aware of the following key principle. But if you're a traditional-age college student, the truth of this principle may seem hard to believe, even though you're likely to see it in operation repeatedly throughout your life.

Key Principle

Decisions that result in either a birth or a death are irrevocable. Almost every other choice you make in life can be modified later.

It can sometimes seem, in other words, that because you've already made a choice about a given relationship, life style, or field of study that you have closed all other doors and committed yourself to a single, inalterable direction. While this perception is common, it's rarely true, and it's certainly not true when you're choosing a major. Don't assume that simply because you study one discipline, you can't pursue a life's ambition in another field. Many people do. And you may even end up becoming a more well-rounded person because of the path you've followed.

How Not to Choose a Major

As we'll see in a moment, there are many good ways of selecting a major. But there is also one extremely bad reason: **Students often choose inappropriate majors**

because they see them simply as a way of obtaining job security, a high income, or status in the world. A major is, after all, not a guaranteed method of achieving any of those results. Despite all the articles you may have read about the “Top Ten Jobs for the Future” or the “The Best-Paying Jobs for College Graduates,” most of these predictions are little more than guesswork. They rely on current trends, extrapolating from what’s happening now in order to make assumptions about the future. But presuming that what is true of the present will continue to be true indefinitely is a dangerous practice. Many people have lost a lot of money in stocks because they thought that a bull market or a bear market was likely to go on forever. The same thing is true in careers. As we saw earlier, the job market is changing constantly. New fields emerge; other fields become obsolete. Even popular books and movies can create fads in certain fields such as journalism, archaeology, or forensic science that prove to be unsustainable. Moreover, even if it *were* true that studying a certain discipline is likely to bring you fame and fortune, you may find that your daily routine on the job is all but unbearable unless you’re working in an area where you take genuine pleasure. It may seem trite to say that people who do what they love for a living never “work” a day in their lives, but this cliché does have a great deal of truth to it. You’re far more likely to feel satisfied in your life by pursuing a career you enjoy than you are if you take a job simply because of the benefits it brings you. Indeed, you may even do better in terms of income and job security by working in a field you love than you would in one you don’t enjoy. After all, it’s easy to be dedicated, energetic, and creative when you’re doing something you find pleasant. So, rather than choosing your major because you think it will be an entrée to wealth or status, it’s usually better to find a field that gives you satisfaction and then try to identify a way in which you can earn a satisfactory living from that pursuit.

Being Imaginative

Suppose you had a group of friends, each of whom was interested in majoring in one of the fields listed below. The courses in that discipline interest the person, he or she has investigated what it’s actually like to be a professional in that field, and the academic requirements are well within this person’s abilities.

But each of your friends has the same problem. “It’s just that creativity is so important to me,” your friend tells you, “and I can’t think of any possible way that I’ll be able to be creative in this field. Maybe it’s not the right choice for me after all.” Before he or she gives up on a major that otherwise seems so appropriate, you want to suggest ways in which it’s possible to be creative in that discipline. What do you suggest to your friend who is thinking about majoring in:

- a. Accounting
- b. Engineering
- c. Pre-med
- d. Classics
- e. Political Science
- f. Health Care Administration
- g. Criminal Justice
- h. Construction Management

Another way in which some students make a mistake in selecting a major is by examining a discipline too narrowly. Very bright, academically gifted students often follow a pre-med track as undergraduates because they associate being a doctor with high intellectual achievement. Nevertheless, unless these students are also compassionate individuals who can tolerate the intense atmosphere of the operating room or clinic and remain extremely calm under pressure, other fields are likely to be far more appropriate for them. In a similar way, students may be interested in an education major or in working to become a college professor because they have a great love of learning. But unless this passion is combined with an interest in working with children or young adults, a desire to share as well as a desire to learn, and a willingness to participate in all the other duties teachers have — from preparing lesson plans to serving on multiple committees — other options may be preferable. It can be unwise to select a major simply because you enjoy *part* of that discipline or are attracted to the lifestyle that seems to accompany a given career. After all, no one should decide to become a doctor simply because

he or she likes to play golf. Although every field of study and every profession will include some activities that those who work in it enjoy more than others, most students make better decisions when they investigate what prolonged study in a discipline actually entails before deciding that that will be their major. Moreover, even though we've seen that starting in one career is no guarantee that you'll remain in it throughout your life, you should attempt to learn what the day-to-day activities of professionals in a certain field are before making that career your ultimate goal.

Many scholars have conducted research into the way in which students decide to major in a discipline. For example, Lori Carter, a professor of computer science at Point Loma Nazarene University in San Diego, California, conducted a study to explore why so many students who demonstrated a high likelihood of success in the study of computer science decided to major in other fields. She distributed surveys to 836 students in high school calculus and pre-calculus courses (423 female, 363 male, 50 no gender indicated) from nine different high schools in Arizona and California. They were asked about their skill level in using computers, likelihood of attending a four-year college or university, likelihood of majoring in computer science, and impressions of what it is that computer science



majors learn. She discovered that, while both men and women shared the same negative impressions about computer science, their positive impressions and

levels of familiarity with computers varied significantly by gender. Both male and female respondents said that their top three negative impressions of this field were

(in order) the need to sit in front of a computer all day, their established commitment to another major, and their preference for a more people-oriented discipline. But men often listed many more positive associations with computer science than did women and placed their interest in computer games at the top of this list. For women, interest in computers was usually related to how this technology could help them in other fields. In addition, 13% of the men had taken formal training in the use of computers versus only 3% of the women, and 78% of the men had performed a major computer-related activity (such as upgrading an operating system or installing a graphics card) on their own, while only 41% of the women had done something similar. Carter concluded that, in order to attract larger numbers of qualified majors, computer science programs needed to offer more interdisciplinary courses (so that students could see the relevance of computing to other disciplines), dispel the notion that computer science majors did nothing but sit in front of the computer all day, make computer science courses more fun and creative, and find ways to make course activities more people-oriented. In short, Carter's conclusion was that it's often the responsibility of the discipline, not the students themselves, to make certain that the right majors are chosen for the right reasons. Carter (March 31, 2006).

Elaine Regan and Justin Dillon, both of the Department of Education and Professional Studies at King's College London conducted 20 focus groups with 119 participants (70 female, 39 male), asking them about the factors that led to their choice of majors. In the course of the focus group discussions, it became clear that women who chose to major in one of the STEM disciplines (see Unit One) frequently cited two reasons that either could not or did not apply to the men in that field.

- Some women sought to major in mathematics or the sciences specifically because they saw these fields as male-dominated and believed that they would either stand out more easily or have access to more opportunities than they would in fields like education or the humanities that they saw as already dominated by women.

- Some also were interested in the STEM disciplines because they saw careers in these fields as more likely to produce the level of income needed to support a family, even if they had to work part-time during their child-rearing years.

Regan and Dillon concluded that

The females in the group sought to reconcile their STEM choices with other areas of their life and their future life. Family was a key feature of their choice-explanations and gives insights into the relationship between choice of undergraduate degree and developing identity – mother and/or career woman. Expressions of who they are and their desires for the future illustrate a view of inhabiting a masculine STEM world, but with gendered options and possibilities open to them as women choosing STEM.

http://www.heacademy.ac.uk/assets/documents/stem-conference/Physical%20Sciences/Elaine_Regan.pdf

For this reason, it's clear that the factors entering into the choice of a major are extremely complex and that the way in which these choices are made may not be the same for all students regardless of background and gender.

Suggested Approaches to Choosing a Major

If what we have seen so far can be described as the *wrong* reasons for choosing a major, what are some of the *right* reasons? As we explore possible answers to this question, remember that you have plenty of resources available to help you decide. Your college or university almost certainly has such offices as an Advising Center, a Center for Learning and Student Success, or a Career Placement Center where a great deal of information can be found about various majors and how these fields might open doors for you. They may have surveys and inventories that can help you learn more about yourself and your goals in life, such as the **Myers-Briggs Type Indicator (MBTI)**, the **Keirsey Temperament Sorter**, the **DiSC Personal Profile**, the **Strong Interest Inventory (SII)**, the **System of Interactive Guidance and Information (SIGI)**, the **Birkman Career Style Summary**, and the **Princeton Review Career Quiz**. Other instruments available in these centers may help you explore your values, skills, satisfaction in various environments, academic strengths and weaknesses, aptitude, and other aspects of your individual

needs and abilities. In addition to these resources that may be available on your campus, you should know that a number of excellent books contain guidance on how to select a major. Your bookstore, library, or interlibrary loan may be able to provide you with copies of such resources as Andrews (1998), Gordon and Sears (2003), and Princeton Review (2007). Finally, the College Board maintains an extensive database of frequently updated information about a large number of majors online at College Board: Major and Career Profiles (2007).

Students who are trying to decide which college or university to attend often pay an extended visit to several institutions. By spending a day or more at a school, they get to know the students who are already enrolled there and ask themselves whether the students they meet are similar to the sort of person they'd someday like to become. You may have made a number of these college visits yourself before selecting the school where you're studying right now. Choosing the right major often involves a similar process. While you may be attracted to a discipline because you liked an introductory course, it can be important to gather more information before you select that field as your major. Visit the department. Chat with as many faculty members as you can, learning their backgrounds and what first attracted them to this discipline. Meet current majors who are close to graduation and determine whether you can see yourself in their place within a year or two. Learn what graduates plan to do after they leave the institution in order to see whether those plans appeal to you. Be sure to ask about employment potential, but try not to become fixated on financial matters alone. Discover the difference that people who work in this field can make in the lives of others. Find out how students who have pursued this discipline have had their lives positively transformed by their experience. Try to determine, not just where past majors have gone to graduate school or received offers of employment, but what type of lives they led. Throughout this process, ask yourself whether the answers that you are hearing are meaningful to your goals, and whether they can help you develop new, more challenging goals for the future. Can you envision yourself in this environment for an extended period of time?

Students often select the majors that give them the most satisfaction when they consider who they are as people and what their values are in their search for a suitable major.

- Are you the sort of person who does your best work on your own or do you thrive on the exchange of ideas with members of a group?
- How well do you function under pressure or tight deadlines?
- Do you enjoy extended periods of research, writing, public speaking, solving problems, showing compassion to others, employing quantitative methods, coping with ambiguity, reading complex material, displaying creativity or innovation, demonstrating leadership, interacting with young children, assisting the elderly or disabled, facing difficult challenges, working under pressure, exerting physical effort, or seeing immediate results?
- Do you receive more satisfaction from making plans or putting plans into effect, making it up as you go along or having a clear set of expectations, talking to people electronically or face-to-face?
- What have you always felt that you're better at doing than your friends or peers? What subjects and activities cause you greater challenge?
- Make a list of three to five things that, if you don't accomplish them in your lifetime, you'll feel that you have missed out on something truly essential. What do these objectives tell you about your core values?

Then, based on the insight that you receive from these questions, explore whether the rewards, values, and opportunities offered by various majors accord well with who you are now and who you want to become. Talk both to a student who's already pursuing this major and to a person who works in this field. Find out what a "typical" day is like for both of them. What are their favorite aspects of this discipline? What are their greatest frustrations or disappointments? Do they feel that they've had to sacrifice anything or have missed anything by pursuing this discipline? Do they have any regrets? What's the one thing they most wish they'd known when they were just starting out in this field? Compare their answers to what you decided you liked best or needed most in your life. Do the goals that you

set for yourself appear to fit in well with what you are learning from the people who are actually majoring in that discipline or working in that field?

Being Innovative

The role that an academic major plays within a student's academic program varies by discipline, culture, and historical period. Begin a research program by fleshing out what you learned in this unit about when the concept of the academic major first occurred in higher education, where it was introduced, and why. Then examine the typical undergraduate curriculum taken by a student in another society somewhere in the world that interests you. In the college environment of that other culture, how much emphasis is placed on each of the following?

- a. The academic major.
- b. Individual tracks or emphases within that academic major.
- c. General education or courses intended to provide a well-rounded academic experience.
- d. Free electives.
- e. Academic minors or secondary fields.

Based on what you learn, how might you conclude that the purpose of an undergraduate education is viewed differently by the other culture than it is by our own society? Is that difference related to who pays for higher education (such as the individual, the government, or some combination of the two) within that society? What research methods will you adopt in order to reduce the likelihood that your own preconceptions and unconscious biases affect your interpretation of the results?

There has also been a good deal of research conducted into how students select their majors.

- Claude Montmarquete, Kathy Cannings, and Sophie Mahseredjian used an **econometric model** to explore “the extent to which the choice of college major depends on the student's expected earnings in that major as opposed to other areas of concentration that could have been chosen.”

Montmarquette, Cannings, and Mahseredjian (December 2002) 544. An econometric model uses statistical analysis to study possible relationships among a series of variables, including those that consist solely of **probabilities** and **random chance**. Econometric models are particularly useful in studying human behavior where such factors as free will and unconscious impulses make it impossible to predict results with absolute confidence. For this reason, while econometric models usually cannot tell us what any one person will do in any specific situation, they can guide us in understanding what results are likely to occur in what proportions, if we have a sample of sufficient size. A key component of econometric analysis is the **linear regression**, a statistical method that was mentioned in Unit Three.



We test the hypothesis that abilities influence the perceived probability of success in a major and we explore the role of family background and family culture on the determinants of college major. We also use the model to determine whether distinct groups exhibit significant differences in their choice of college major. In the next section of the paper, we develop a model of a decision-making process in which the student's expected earnings in a major is the central determinant of the choice of a major. Montmarquette, Cannings, and Mahseredjian (December 2002) 544.

The three researchers discovered that among the factors most likely to affect choice of major — at least in 2002 — were gender, prior family experience with college (e.g., having an older brother or sister who went to college), expected earnings, and estimated likelihood of graduation within five years. They also had some seemingly counterintuitive results. Students who are

supported by loans were “less likely to choose business or science than education or liberal arts.” Montmarquette, Cannings, and Mahseredjian (December 2002) 551. Our initial hypothesis may have been that students who pay for their own education would select majors depicted by the media as having better job prospects. But perhaps a degree in education was seen as a *safer career path*, while a degree in the liberal arts was seen as a *safer path to graduate school*. **Can you think of alternative explanations? If so, how would you go about testing those hypotheses?** Students who came from large metropolitan areas were more likely to major in the liberal arts than education, while those who came from two-parent households did the reverse.

- Kelly Parkes and Brett Jones used a different method to examine why students at seven institutions chose to pursue a career in music performance. They contacted 1,358 students and asked them to complete an anonymous online questionnaire. 270 students provided answers, a 20% response rate. The online form included an open-ended question about why students became interested in a career in music performance. The authors of the study then independently coded the responses by grouping them into 13 categories that they both agreed were acceptable. **Inter-rater reliability** (see Unit Three) for the coding was 90.9%. As a result of their study, Parkes and Jones discovered that, for students pursuing a major in music, enjoyment of the activity itself far outweighed practical considerations like job security. There was also a significant portion of students who majored in music performance because they saw themselves as “musicians at heart”; in other words, they often chose their concentration based on how they viewed themselves, not because of the indirect benefits (money, security, fame, peer recognition, and the like) that could accrue from their choice of career. Nevertheless, there were significant differences between students who were majoring in music *performance* and those who were interested in music *education*. For example, the latter group was more likely to have been influenced by a specific role model (what we might call the *Mr. Holland’s*

Opus Effect) and thus to want to have that effect on some future student. Parkes and Jones (May 2011).

- Veerle Germeijs, Koen Luycks, Guy Notelaers, Luc Goosens, and Karine Verschueren wanted to examine the decision-making process that students use in order to select a major. They distributed two questionnaires to 665 students (300 male and 365 female) from 25 high schools in the Flanders region of Belgium. 422 students (168 male and 254 female) completed both questionnaires, a response rate of 66.5%. The participants also received a follow-up survey or were telephoned after their second year in college and asked various questions about their adjustment to college and commitment to the major they had selected earlier. 373 students answered these questions — the authors provide no gender breakdown of this group — a response rate of 56% of the original group. Several different reliable and verified scales were included among the survey questions, allowing the authors to evaluate the respondents on six tasks related to making decisions about majors: awareness of the need to make a decision about a major, self-exploration and self-knowledge, broad exploration (what other majors are available?), in-depth exploration (what can I learn about the majors of most interest to me?), how far along each respondent was in the decision-making process, and commitment to or confidence in the choice of major. The researchers discovered that the students in their study could largely be grouped into four clusters (the labels used are those chosen by the researchers):

1. **Achievement:** This group consisted of respondents who scored reasonably high in how far along they were in the decision-making process and very high in all types of exploration (self, broad, and in-depth exploration) as well as awareness of the need to make a decision about a major. These students were thus taking advantage of many different strategies as they made their decisions. 20.6% of respondents.

2. **Foreclosure:** The respondents in this group scored reasonably high in how far along they were in the decision-making process and commitment to or confidence in a particular major but fell only in the intermediate range in all types of exploration (self, broad, and in-depth exploration). These students had thus “foreclosed” on some options because they were firm in their decision without having done much investigation. 32% of respondents.
3. **Moratorium:** These respondents scored reasonably high in all types of exploration (self, broad, and in-depth exploration) but low in how far along they were in the decision-making process and commitment to a particular major. They thus appeared to be postponing their decision. 15.9% of respondents.
4. **Diffusion:** These respondents scored reasonably low in every task except for self-exploration, where they fell in the intermediate range. They thus did not appear to be heavily invested in the process of choosing a major at all. 31.5% of respondents.

In other words, it’s misleading to speak in general about “how college students select majors” because decision-making approaches vary so widely. Moreover, nearly a third of the respondents demonstrated relatively little involvement in the tasks that colleges and universities typically associate with the process of selecting a major. This last result may indicate that there’s need to provide college students with better training in the appropriate ways to make important decisions, or it may indicate that students choose majors by processes not included among the six tasks examined in this study and that more information is required.

We’ve seen a number of studies in this unit that use different research methods to examine the question of how undergraduate students select their majors. Naturally those that we’ve considered represent only a small sample of such studies, and new research is being conducted all the time. Suppose you decided to examine five academic articles written during the past twelve months on

how students make decisions about their majors. Suppose, too, that you wanted these five articles to represent five distinctly different methods of research.

1. How would you go about finding the articles?
2. Since you want to find *academic* articles, how would you determine whether they meet suitable, accepted standards for scholarship?
3. What criteria would you use to decide whether the articles used “distinctly different methods of research”?

Once you have identified your articles and verified that they meet the requirements we’ve outlined, it would be very useful to read them with the following question in mind: What assumptions were made by the researcher(s) in conducting this study? It’s impossible to engage in any scholarly study without making at least some assumptions. At the very least if you don’t assume that your hypothesis is testable or your question answerable, you won’t get very far in your research. But scholars also make a whole range of assumptions (consciously or not) as part of every study. Some scholars are very candid about their assumptions when they publish their research. Others believe that their assumptions will be obvious. (You might say that this belief, too, is just one of their assumptions.) As you read the summaries of the research included in this unit and/or examine the five new studies that you’ve found, do any of the researchers appear to be making any of the following assumptions? (Note: The question isn’t whether you think these assumptions were justified, merely “Who made each of these assumptions?”)

- Students select their own majors rather than having their majors selected for them.**
- Students decide to major in subjects they’re good at.**
- Students *should* decide to major in subjects they’re good at.**
- Students in college largely fall between the ages of 18 and 22.**
- Students select their majors because they believe that certain majors will provide a pathway to specific careers.**
- Students select majors in the same way regardless of nationality or subculture.**

- Students select majors at the same point in their careers regardless of nationality or subculture.**
- Students select majors in ways that do not change over time.**
- Students select specific careers because they believe that they will result in larger incomes.**
- Students pursue higher incomes because they believe that having more money will lead to a better life.**

Remember that, simply because an assumption is made, it doesn't necessarily invalidate the research. As we just saw, **all scholars make assumptions all the time**. In fact, you might consider a **conceptual framework** (see Unit Three) itself to be a type of assumption. Nevertheless, you should always be aware of your own assumptions in any scholarly project and candidly address those assumptions that your reader or audience might not take for granted.

Developing an Academic Plan

Once you've selected your major, in order to complete its requirements and graduate in a timely manner, you will then need to develop an **academic plan**. A well-constructed academic plan helps you think about your educational goals holistically, not simply in terms of which courses you want to take right now or the job you hope to have after you graduate. You can prepare the basics for your academic plan by asking yourself such questions as these:

- What are the possible academic majors that I'm considering?
- Is pursuing a **double major** possible at my institution and right for me?
- Does my school have a **combined bachelor's/master's program** that could speed my progress through graduate school?
- Is it possible to seek a minor in an area different from my major? If so, what field would balance my major particularly well?
- What are the **core** or **general education requirements** at my institution?
- Which electives might give me an opportunity to pursue a secondary interest, learn about something I might never otherwise encounter, or balance my curriculum?

- Will I need to complete a **thesis, senior project**, or some other type of “**capstone experience**” before I graduate? If so, are there courses and experiences I need to have in order to be prepared to do so?

After gaining a general sense of how your academic plan might develop on the basis of how you answered these questions, consider other issues that could enrich or complicate the goals you have set.

- Is an opportunity to **study abroad** desirable or necessary for my program? If so, when is the best time to schedule this opportunity in my academic career?
- Is an **internship** desirable or necessary for my program? If so, when is the best time to schedule this opportunity in my academic career?
- How might I complement my coursework through other **experiential activities** such as **service learning** or volunteer activities?
- If I’m a full-time student, what will my summers be like? Will I use summers to work so that I can help pay for my education? (If so, are there work opportunities that would better help me achieve my goals for my life and career?) Will I use that time for travel? Will I take courses during the summer in order to help get ahead in my program or to keep from falling behind?

Once you have some general ideas about issues such as these, you can begin taking your first steps toward sketching out your academic plan. Remember that an academic plan will never be “set in stone.” No one ever follows precisely the plan that they develop at the beginning of their academic program. Courses that were supposed to be offered during a given term may end up being canceled. Interests change, and new interests develop. People declare a different major. Exciting new opportunities arise. Challenges related to health or family sometimes intervene. So, you should certainly expect your academic plan to evolve between now and the time you graduate. Nevertheless, having an academic plan is important because it helps you meet degree requirements in a timely manner, become ready for opportunities when they arise, and avoid being blindsided by the unexpected. So,

let's sketch out the first few ingredients that your academic plan will need, beginning with your general education requirements.

General education requirements, core requirements, distribution requirements, or graduation requirements refer to those courses that all students must complete regardless of their individual academic program. If you're a student in an institution that has a strong programmatic focus, such as a conservatory or business college, these requirements are likely to represent only a very small part of your overall curriculum. If you attend a liberal arts college or an institution that follows the Great Books tradition, general requirements may constitute an extremely large part of your program; you may not even *have* majors at your institution. Nevertheless, no matter whether these core requirements are large or small, one of the purposes they serve is to ensure that students are prepared with the skills they need in order to succeed at their advanced coursework. For this reason, courses in composition and mathematics are frequently included among these requirements. It's a temptation for many students to put off fulfilling their core requirements, particularly in subjects they don't like or believe will be difficult for them. This practice is frequently a mistake since it deprives students of the very skills they'll need later in their academic programs. Moreover, taking a difficult core course early gives students sufficient opportunities to retake it if they're unsuccessful the first time they attempt it. If they postpone taking the course until shortly before the anticipated completion of their degree, they may end up having to delay graduation for a semester or more in order to retake that course. For this reason, it's usually best for students to begin planning an academic program by learning the specific general education requirements in place at their institution, and then seeking to fulfill as many of these requirements as possible within the first year or two of study.

Your school will list the minimum number of credits required for a baccalaureate degree on its website or in its official catalog. That will help you calculate how many credits you need to complete each term in order to graduate when you wish. If, for instance, you're attending a college or university that operates on the semester system and has a 120-credit-hour requirement, you'll need

to complete at least 15 credits each semester in order to graduate in four years without attending summer school or making up additional credits in some other way. At a school where most courses are three credits each, this means that you have to enroll in at least five courses each semester. If you're an excellent student and you find college-level work easy, you might be able to complete six courses (18-20 credits) successfully each semester. If school is difficult for you or you are balancing it with heavy commitments to a job or family, it may be necessary for you to complete only four courses (12 credits) a semester; this reduced load will make it impossible for you to graduate in fewer than five years, unless you take two additional courses each summer.

With this information in mind, ask whether your institution provides a planning form for an undergraduate degree either in hard copy or electronically. If no such form is available, you can use a spreadsheet program or create your own form by dividing a sheet of paper into boxes, with one box for each semester you expect to complete in college. If you've already completed one or more semesters, be sure to create boxes for these terms as well. Then, in each box, draw one line for each course that would be taken in that semester. In other words, for the case



of a student who expects to complete exactly 120 credits in a standard four-year program, the sheet of paper would have eight boxes (one for each semester), and each box would have five lines. Once the outline for your basic academic plan is complete, begin filling in your requirements in a systematic manner.

1. If you've already completed some college work, write the name of each course you've already completed on one of the lines on your form. Remember to include credits that you transferred in because of Advanced Placement coursework or similar educational opportunities.
2. Using a highlighter, outline the name of any course you've already taken that fulfills one of your general education requirements.
3. Find out the number of credit hours your institution requires for its general education program. Including both the courses you've taken and the blank spaces on your form, highlight the number of spaces you'll need in order to complete your general education requirements. For instance, you may discover that it takes at least 42 credits of general education to fulfill the core curriculum at your school. If most courses offer three semester hours of credit, you'll need to take 14 courses to complete your general education requirement. You would thus highlight a total of 14 lines on your worksheet. Group these highlighted lines as much as possible toward the beginning of your academic program. For instance, if this is your first year in college and you're already enrolled in five courses, three of which satisfy general education requirements, you would highlight those three courses, then do the same for perhaps four of the five lines for next semester, four lines for the semester after that, and three lines for the following semester. You can then see very clearly how many general education courses you'll need to take in order to fulfill all these requirements within your first two years. It may be very tempting to include more electives early in your schedule or to get a head start on your major. But doing so could easily postpone several graduation requirements until your junior or senior year, the very time when the

courses in your major are likely to be most challenging and when your workload will be the highest.

4. If you have already selected a major, next find out the minimum number of credit hours required to complete that program. If you don't know what your major will be, look at three or four different programs and average the number of credit hours they require. For instance, suppose you are interested in a program that requires a minimum of 51 credit hours to complete. At three credits per course, this major will require you to complete at least 17 courses in order to graduate. Choose a different color of highlighter, and mark 17 more lines on your academic plan. But this time, cluster your marks, not at the beginning of your academic plan, but at the end. For instance, you might highlight four of the five lines drawn under your last semester, all five in the previous semester, and four out of five in each of the previous two semesters.
5. In the example we've been considering, you now have an academic plan with 14 lines highlighted for general education requirements, 17 lines highlighted for your major, and nine blank lines. (If you've already completed coursework that counts neither for general education nor for your major, you'll have fewer than nine lines left.) Those nine lines represent all the flexibility you have to accomplish anything else you want to do in your undergraduate program — pursue a minor, take electives, start over in a new program if you change majors, and the like — without taking an overload, enrolling for additional courses in the summer, or delaying your graduation. It's these courses that you'll need to plan most carefully.

Being Intentional

Develop a formal academic plan using the structure just outlined. Then see if you're surprised by the results. For instance, will it take longer to complete your degree than you anticipated? Will you have to take more credits each semester than you had hoped? Show your academic plan to your advisor or a faculty member in the discipline of your likely major: Does this person

consider the plan reasonable? In other words, does it involve a workload typical of most students in the discipline? Are the courses you need likely to be on the schedule when you need them?

There are also a number of electronic academic planners that can automate much of this process for you. Sometimes academic planners are part of an institution's degree audit system, which tells students what requirements still remain before they complete everything needed for their degrees. Other academic planners are either sold or made available without cost. When you select an electronic planner, make sure that it doesn't just give you daily or monthly schedules (like the planners we used in Unit Six), but extends all the way through what you'll need to do in order to complete all degree requirements. Do some investigation on what types of electronic degree planners are available to you. If you were to select one now, which one would you choose? Why?

Selecting Courses to Fit Your Academic Plan

With your academic plan now as your guide, refer to it whenever you select courses. As you learn more about the specific requirements of your institution or intended major, you may find that you need to revise your plan further. For instance, your major may not allow you to take more than a certain number of courses in that field during any given term. Certain majors, too, have a single capstone course or thesis preparation course that must be taken by itself, after all other program requirements have been fulfilled; in this case, you would need to take the course along with four electives or courses in your minor during your final semester. But even though you are likely to modify your academic plan several times throughout your undergraduate career, it'll provide you with valuable information about the rate at which you're making progress and what you still need to accomplish in order to achieve your goals.

Being Reflective

Find a student who hasn't yet graduated but who has already changed majors four or more times. Have a conversation with this student to find out what factors led to each change. If he or she were beginning college all over again, are there things he or she would do differently? After this conversation, reflect on what the other student has shared with you. Is there anything about his or her experience that you can relate to your own situation? If not, what accounts for the differences? If so, how might the student's experience affect your own selection of a major?

Your next step is to choose specific courses to fill in on the various lines and highlighted areas of your academic plan. There's a great temptation to do this by going to the college catalog and filling in the names of courses that both sound interesting and fulfill the specific requirement that you have indicated. While this can be a useful exercise, you should realize that your results will then become even more tentative than your academic plan itself. Some courses aren't offered every semester. Some courses may be planned but have to be rescheduled because the professor in charge of the course received a **sabbatical** (a paid period in which the faculty member is freed from teaching in order to focus on research or some other activity). Some courses have **prerequisites** (courses that must be completed before you're allowed to enroll in subsequent courses), requiring them to be taken in a particular order. Even where no formal prerequisites exist, it may be *advisable* to take the courses in a certain sequence. Other opportunities may arise because a new faculty member is hired or a visiting professor serves on the staff for a limited time. In other words, there are many reasons why simply taking courses from the catalog and fitting them into your academic plan may produce a schedule that looks good on paper but is impossible in reality. A more productive approach is to consult an actual **course schedule** (the document or website that lists the specific courses that will be offered in a given term, the times at which they are offered, and the faculty members teaching them), sit down with an academic advisor, and discuss a realistic but flexible plan for selecting courses. The advisor may be able

to tell you the rotation on which specific courses are offered, such as every semester, every year, every two years, or only on demand. The advisor should also be able to assist you with understanding prerequisites, **corequisites** (courses that must be taken simultaneously), and courses that are best taken only later in your academic program.

Key Principle

In the end, advisors can only give you their best professional *advice*. The person who's ultimately responsible for your academic program is *you*. For this reason, it's always a good idea to double-check the information that any advisor offers you with the course catalog or the chair of a specific program. Institutions rarely if ever exempt a student from requirements because that student had received poor information from an advisor.



We sometimes develop false impressions of particular fields from the way in which they're depicted in movies and on television. We may think of the counseling psychologist as the person who gets paid simply for chatting all day with a group of eccentric but not severely troubled patients. We may think of lawyers as tireless defenders of the oppressed or falsely accused, of archaeologists as daring adventurers, of fashion designers as elegantly dressed young urban professionals, of doctors as godlike geniuses who easily diagnose even the most obscure conditions (all the while engaging in one romantic encounter after another with their interns), and of police investigators as steely-eyed professionals whose lives are filled with intrigue, suspense, and danger. The truth of the matter is that very few of the people who actually work in these fields resemble their fictional counterparts. The information you gain from other students already majoring in various disciplines and from people with carriers in those fields can help strip away some of these false impressions and to determine whether they are living lives that would be right for you.

Exercises

1. Select the academic discipline that, if you were required to choose a major *today*, you would want to pursue. Then visit your college's website or advising office to learn the answers to the following questions.
 - a) How many credits are required to complete this major (either at the institution you already attend or at an institution you would seriously consider attending)?
 - b) Which specific courses are required for students majoring in this discipline?
 - c) In order to pursue a career in this discipline, would you have to continue in professional or graduate school after you receive your bachelor's degree? If so, how long do those post-graduate programs usually last?
 - d) To the best of your ability to determine, what is a typical starting salary for a person who is just beginning work in this field?
 - e) If you had to select only one adjective to describe the students who major in this discipline, what would that adjective be? What made you select that particular word?
2. Identify five people who graduated from college more than ten years ago and who don't work in the field of higher education. Find out what their undergraduate major was and whether their current careers can be regarded as closely connected to those disciplines. See if you can determine whether most people are more or less likely to be working in a field closely related to their academic majors the longer it's been since they graduated from college.
3. Asking people to talk about themselves produces very different results in different parts of the world. Some people will identify themselves by their family, their village, their ethnicity, their religion, or their nationality. In America (and many other western countries), people often identify themselves by their profession.

- a) To what extent do you believe this tendency Americans have to identify themselves by their profession affects the importance many students attribute to their major?
 - b) If someone were to invite you to talk a little about yourself, how long into the conversation would it be before you'd identify your (intended) major?
4. On September 12, 2012, Governor Rick Scott of Florida sent a letter to each new college freshman in his state, saying in part, "Throughout your journey in higher education, have a goal in mind. What do you want from your career? ... Demand a return on your investment of time and money to improve your skills and education. Use your time in college to obtain the skills and degrees employers desire — utilize your college's career services office; attend job fairs and talk with employers about the skills, degrees, and experiences they consider important, and talk with recent graduates about their experiences in the job market. The skills you learn and the individuals you meet will be valuable when applying for a permanent position." In this unit, however, you were discouraged from seeing college simply as preparation for a career. Which point of view do you find yourself agreeing with more? (You're free, of course, to disagree with the perspective outlined in this book, if that's your true conviction. Just be sure to have a cogent argument to back up your point of view.) Why is attending college so commonly associated with preparing for employment?

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Distinction in the Community – Social Transition

Unit Ten:

Diversity

Learning Objectives:

1. To examine the role that diversity plays in higher education.
2. To discover that issues of diversity often create complex challenges for college students.
3. To understand the similarities and differences between diversity and multiculturalism.
4. To use the concept of multiculturalism as an example of ambiguity in learning, scholarship, and making decisions.
5. To explore how diversity and multiculturalism provide rich sources for research, scholarship, and creative activity.

The Role of Diversity in Higher Education

Colleges and universities provide environments where a high degree of diversity is vital to their very mission. That diversity appears in many ways. First, there's academic diversity. The academic fields represented by a modern university are quite broad, and so are the specialties represented within those fields. Second, there's diversity of methodology. The scholarly approaches taken by the fields and specialties represented at a university are heterogeneous, helping to move our knowledge forward and avoid groupthink. But just as important as this academic and methodological diversity is for higher education, so, too, must we try to develop **diversity of the community** within which scholars study, perform research, and engage in service. It's this third type of diversity that we will explore in this unit.

In higher education, diversity of community may be defined by the presence of two factors: representation and inclusion. Representation means that all the groups covered by the **protection clause** of that institution's equal opportunity statement are found among the students, faculty, and staff. Inclusion means that these groups also function as full members of the community; their presence isn't

simply tolerated; rather the complex nature of the community is fully embraced. In other words, while many people associate the word ‘diversity’ with *racial* diversity, a truly diverse academic environment demonstrates its diversity in many ways. A typical equal opportunity statement at an American college or university promises protection, not merely to those of all racial backgrounds, but also to those who may differ from the majority population in terms of religious belief, sexual orientation, political stance, and so on. The following is a hypothetical example of a protection clause that might be adopted by an American institution of higher education. For various reasons of history, tradition, or mission, the statement in use at your college or university may be slightly different, though it is likely to include several of the same elements.

This institution is committed to providing people with opportunities regardless of their economic or social status, and it will not discriminate against any member of the community on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, gender, sexual orientation, marital status, age, veteran status, or physical or mental challenge.

A truly diverse academic community in this context would consist of administrators, faculty members, and students whose composition roughly reflects that of society at large — or at least reflects the composition of the school’s primary service area — in each of those categories. It means that, at our hypothetical school, you would have friends and instructors who are similar to you as well as those who are quite different from you. Some of your colleagues and faculty members would be politically conservative, others would be quite liberal, and many would fall somewhere in between. Some of the people you encountered would be convinced of the inerrancy of their faith, others would be extremely skeptical of all religious belief, while still others would have a perspective that lies somewhere along the spectrum between faith and skepticism. You’d meet people who drive the latest luxury cars and who live in exclusive, gated communities; you’d meet others for whom every day is a financial challenge and who struggle to meet their

financial obligations every single month. You'd study alongside people who succeed in nearly every challenge of their lives and those who fail at one endeavor after another. You'd learn from the experience of procrastinators as well as from excessive planners, from people who believe that military service is the highest calling in life and from those who believe the armed services promote unnecessary violence. You would study alongside superb students who are far older or far younger than you are, as well as with people who believe that every idea you take for granted is hopelessly naïve or wrong. Even if you examine only the educational benefits that would occur in an environment like the one just described, consider how



rich this type of educational atmosphere would be! It's one in which you'd learn how to defend your own ideas, modify your perspective when a change is warranted, be diplomatic about your disagreements with another person, appreciate the myriad complexities that characterize human society, understand the motives of people who come from various backgrounds, and welcome the idea that you'll need adaptability and continued learning throughout your life. There are probably few better definitions of the well-educated student of the twenty-first century than someone who excels in this type of highly diverse intellectual and social environment.

For all these reasons, colleges and universities often make great efforts to ensure that their student bodies are sufficiently diverse and that students are aware of the importance of the environment in which they're living and studying. At times that emphasis can seem a bit heavy-handed to students, many of whom have been in highly diverse academic environments since pre-school. But a study of American higher education from its origins until the last few decades of the twentieth century reveals how recently universities embraced the notion of diversity as an important part of their educational mission. Certain universities long served only particular races, and even many universities that were open to everyone tended to attract only people from similar ethnic and social backgrounds. Wealthy students tended to go to certain schools, students from working class families went to others, and there were only limited opportunities for adults with full-time jobs to complete their degrees. The result was that specific mindsets or worldviews were perpetuated by different kinds of institutions. And with society facing problems that were best addressed by people communicating with those different from themselves, that situation was unhealthy. There are, however, several exceptions to this picture of all institutions of higher education as diverse in both community and academic focus. Some institutions prefer a more focused approach, including targeting certain audiences in order to fulfill their missions.

Single-sex institutions accept only men or only women, at least for certain programs, in order to provide what they regard as a better educational and social environment. Kristen Renn of Michigan State University and Jesse Lytle of Mount Holyoke University conducted a qualitative study of 46 self-identified student leaders at 23 women's colleges around the world. The students were asked open-ended questions about why they decided to attend a single-sex institution, why they were interested in leadership, and similar issues. The responses were then clustered according to patterns that seemed to emerge. For example, "three fourths of participants responded with expectations that their education would bring benefits to their future lives and careers, translated into elevated social status and salaries." Renn and Lytle (2010) 221.

[M]any of them selected single-sex education because of the opportunities it offered for leadership development, and many believed

that women-only institutions provide greater opportunities for involvement than coeducational institutions. They felt they were supported as leaders and as women, they learned communication and other leadership skills, and they developed confidence. Renn and Lytle (2010) 221.

Moreover, many single-sex institutions claim that students, particularly those at the traditional college age of 18 to 22, learn better when they have fewer romantic or sexual distractions. Thus the website of the all-male Hampden-Sydney College in Virginia states

A single-sex classroom removes social pressures and encourages lively debate amongst students and professors. Many students report that it is much easier to develop efficient study skills at Hampden-Sydney than it is at a larger, co-ed institution. Moreover, graduates enjoy becoming a part of the loyal alumni base which actively supports students who are seeking career advice. <http://www.hsc.edu/Admissions/FAQ/Life-on-Campus.html>

Not all scholars are persuaded by these arguments, however. In the *Duke Journal of Gender Law & Policy*, Cynthia Fuchs Epstein, a professor of psychology at City University of New York, summarizes the reasons frequently given in support of same-sex education (particularly for women) as follows.

The justifications offered for the maintenance of sex segregated institutions include the physiological and psychological differences between men and women (with some emphasis on assumed differences in self-esteem); the benefits to women of learning in an all-female environment; the consequences of discrimination against women in mixed-sex institutions; the complications of sexual attraction between males and females in mixed-sex institutions; and the preservation of segregation as an interest of the State in "diversity." Epstein (spring 1997) 107-108.

She then proceeds to introduce a number of studies from fields such as psychology, sociology, and gender studies that challenge each of these assertions, concluding that

... spokespeople for many of the women's colleges, advocates of separate-sex education in public schools, and other segregated institutions show that even though women have demonstrated their ability to think, learn, and pursue high-powered careers and a wide range of other social roles, it is still acceptable to define them unilaterally, stereotypically, and ideologically. By referring to fictions masquerading as facts, by simplistically and irresponsibly regarding men and women as having distinct traits, and by denying the extraordinary diversity within each

category of men and women, stereotypes are perpetuated. Epstein (spring 1997) 118.

Furthermore, a **longitudinal study** (on this type of study, see Unit Three) conducted by Michele Hoffnung of Quinnipiac University in 2011 examined 120 women who graduated in 1993 from three selective American colleges (two single-sex, one coed) and found that there was no statistically significant difference between women who attended single-sex and coed institutions in their:

- Levels of career attainment.
- Personal and household income.
- Amount of experience in STEM disciplines.
- Age at which they married and started their families. Hoffnung (2011).

Hoffnung concluded that

The finding of no significant difference on any of the career and family outcomes seems to reflect very positive developments. Years ago, the most prestigious U.S. colleges were all single sex. Now almost all are coed. In addition, almost all coed colleges have women's studies programs, with courses that focus on women and gender. Hoffnung (2011) 691.

On reading these different views about whether single-sex education is truly valuable at the college or university level, each person is likely to have his or her own "gut reaction." But developing an evidence-based approach to making decisions means going beyond instinct to apply logic and proof in support of our conclusions. Let's review the conclusions and assertions we've seen in these studies and apply several tests to them. The first test involves the critical thinking approach we explored in Unit Four.

- **Do the authors of the statements make any unstated assumptions or rely on any implied premises?**
- **Consider the background and home institution of each author (when you can determine it through an Internet search or tracking down the original source from which the quotation was taken). Does that background or home institution suggest that the author may have relied on any additional unstated premises because of the worldview associated with that particular**

environment? Or would we simply be relying on our own unproven assumptions that everyone who works at a liberal think tank must be a liberal while those who work for a conservative organization must be conservative?

- Can you identify any statements of opinion that the author presents as though they were statements of fact?
- Are there any terms that the author appears to be defining or using in an unusual manner?
- If the author uses any deductive reasoning, try to restructure his or her premises and conclusion in the form of a syllogism.
- Can you distinguish any logical fallacies in these statements?

The second test that we'll use involves examining the author's research protocols.

- What sample size did the author use in drawing conclusions?
- How would you determine whether that sample size is appropriate for the type of conclusions the author draws?
- What was the *provenance* — i.e., the social, economic and cultural background — of the sample used in the study?
- What impact might that provenance have on the study's conclusions and their reliability?
- Does any author make statements that are completely unsupported by evidence?

The third and final test that we'll apply involves creative rather than critical thinking.

- If you were to conduct your own study into the question "Does single-sex education have value for college students today?" how would you construct this research project?
- How would you focus the question in order to make the study:
 - Possible to conduct at all?

- Possible to be conducted by an undergraduate student?
- Possible to be conducted by an undergraduate student with the resources available to you?
- How would you go about performing an adequate literature review to determine how much is already known about this topic beyond what has been presented in this chapter?
- Are there any reasons why you'd need to receive IRB approval (see Unit Three) before conducting your study?
- Do you find that any of the studies presented in this chapter are similar to how you would conduct your research? If so, how would you improve them so as to make their conclusions more reliable and persuasive?
- Do you find it more useful to "start from scratch" by creating a study that uses an approach unlike any seen in other research projects about the value and impact of single-sex education? If so, how do you reply to someone who questions why, although many scholars have studied this issue for many years, you feel you are qualified as an undergraduate to develop your own research approach?

Being Innovative

In addition to single-sex education, another area in which some colleges and universities feel it's important to be focused rather than diverse comes in the area of religious belief. In the United States, all schools with a specific religious focus are private institutions. Unlike public colleges and universities, a private institution receives little or no direct funding from the state. One advantage of attending a private institution is that it's not subject to as many governmental requirements and policies as you find at a public institution. These schools are thus free to approach their curriculum from the perspective of a particular religious tradition without giving "equal time" to other points of view, unless they choose to do so. Some schools based in a specific religious

heritage treat all perspectives and values equally; others, including many seminaries and Bible colleges, see their role as supporting a particular set of spiritual values. Approach the question of religious education in much the same way as we did single-sex education.

- What's your "gut reaction": Do you feel that higher education which examines questions only within the values of a specific faith has significant value for certain students? Why or why not?
- Now that you know what your "gut reaction" is, how would you go about making certain that your initial biases don't color the results of your study?
- Find the mission statements of five or more colleges and universities that make clear the extent to which the values and beliefs of a particular religious tradition will guide what is studied there and how it is studied. Do these mission statements make any claims about why such an approach is valuable or important? Can you think of any way to test or disprove those claims?
- Conduct a literature review on the impact of religious versus secular education on students' lives. What aspects of this issue were studied? Which research methods were used? How would you describe each researcher's conceptual framework?
- Apply the three tests to these studies that we just applied to those dealing with single sex education.
 1. Critical thinking.
 2. Analysis of research protocols.
 3. Creative thinking in proposing improved or alternative studies.
- How would you go about distinguishing the value of religious education for the *individual receiving it* from the value it has for the *society in which it is provided*? How might one study the larger societal impact of single-religion higher education?

Addressing Complex Issues within Matters of Diversity

We've seen that, although diversity of many kinds is important for colleges and universities, the type of diversity most people have in mind when they hear this term involves adequate representation of those categories protected by an institution's statement of non-discrimination. The premise is that this sort of diversity will enrich the environment in which students live and learn. But at the same time that it tries to achieve these goals, an emphasis on diversity can also pose a number of challenges. For one thing, it can compel people to make difficult choices among competing sets of values. Consider the following hypothetical situations.

1. A Student Government Association at one institution prides itself on having achieved two ambitious goals: Its membership is so diverse that it reflects the student body extremely well, and it is committed to the highest principles of democracy, allowing every voice to be heard and every vote to count. Increasingly, however, the students at this institution find these two principles to be in conflict. Although the voting members of the Student Senate are quite diverse, one ethnic and religious group still holds a clear majority, as it does in both the student body and the community surrounding the school. One year, when a calendar of activities is developed, the Student Senate is criticized by several minority religious groups who allege that key activities too frequently conflict with their holy days, making it impossible for their members to participate fully in campus events. In addition, two-thirds of the speakers who are invited to campus reflect the political outlook of two-thirds of the student body and the community, increasingly angering the remaining one-third. Moreover, 2% of the students at the school experience severe physical challenges and, in order to meet the accommodations needed for these students to participate in campus events, the Student Government Association discovers that it would have to devote its entire annual budget to making these accommodations for many years. Although the Student Senate considers a

number of alternative models for proportional funding and explores modifying the schedule in a way that reflects the diversity of the student body, the majority of the voters defeats these proposals every time. Is there any solution for the Student Government Association to consider that doesn't abandon its commitment to either democracy or diversity?

2. A college's equal opportunity commitment states that the school won't discriminate against individuals who suffer from mental challenges. Several students at the college have afflictions that cause them to engage in behavior that makes some of their classmates uncomfortable. When the students raise concerns to their RAs or the school's administration, they are told to be more tolerant of individual differences; one of the purposes of a college education, the students are reminded, is to learn to be more understanding of the idiosyncrasies of others. Nevertheless, several students are alarmed by the increasingly irrational statements made by one specific student, and they mention these issues to the college's Counseling Center. These students are told that, due to the privacy regulations mandated by the Health Insurance Portability and Accountability Act (HIPAA), the Counseling Center isn't at liberty to discuss whether any particular student is receiving treatment. Moreover, the Counseling Center also notes that unusual remarks alone aren't sufficient grounds for the Center to require a student to come in for evaluation. Several days later, the student who had been acting peculiarly kills a teacher and several students during class. Did the school place so much emphasis on the rights of this one student that it was negligent about its responsibility to protect other members of the community? If so, where does one draw the line between the rights that members of a diverse community have to act, believe, and speak as they wish and the rights of others to be safe? If the student had never killed anyone, would the school still be under an obligation to take some sort of action with regard to him or her?
3. A medical school has an equal opportunity statement, which specifies that no one will be discriminated against on the basis of creed or religion. After

two terms at the institution, a student converts to a religion that forbids blood transfusions, the use of any kind of medication, all surgical procedures, and steps that would relieve pain, which the religion regards as “a gift from God.” The medical school concludes that these new beliefs would make it impossible for the student to complete its program. The school tries to persuade the student to transfer or to withdraw, but the student is adamant about remaining until graduation. Since the student’s beliefs prevent participation in activities that the school claims are essential to its curriculum, it fails the student. The student then sues the school, claiming that it failed to adhere to its own equal opportunity policy. Was there any compromise or solution possible in this situation?

As the examples above illustrate, issues of diversity often cause individuals and groups to choose among several competing principles or to infringe on the rights of certain people in order to defend the rights of others. For this reason, many matters of diversity will require us to adopt those decision-making strategies we examined in Unit Seven. Look back at the three hypothetical situations above and consider how you might apply each of the following decision-making systems to them.

- 1. Cost-Benefit Analysis**
- 2. Best-Case Scenario/Worst-Case Scenario Analysis**
- 3. Peter Drucker’s Six-Step Approach**

In addition, since issues of diversity frequently bring two or more values into conflict, it can sometimes be useful to approach these situations schematically. For example, let’s identify the values that are in conflict in our first hypothetical situation. Keep in mind that you don’t have to agree with all these values; our goal in this exercise is merely to outline the principles that shaped this particular case study.

- A. A student government association should strive to be as diverse as the student body it serves.**
- B. Every voice should be heard.**
- C. Every vote matters.**

- D. **The will of the majority should be respected.**
- E. **The rights of the minority should not be restricted by the tyranny of the majority.**
- F. **Equal time should be allocated to different political opinions.**
- G. **Campus speakers should reflect the diversity of the institution.**
- H. **Access to campus events should be provided regardless of physical challenges.**
- I. **The budget of the student government association should be used to bring the greatest good to the greatest number of people.**

Outlining the values that lie behind the scenario is useful because it helps us identify possible ways of addressing the conflict. For example, the way in which the case study is written — “A Student Government Association at one institution prides itself on having achieved two ambitious goals. ... Increasingly, however, the students at this institution find these two principles to be in conflict.” — gives us the impression that the problem to be solved looks something like the diagram in **Table 10.1** at the back of this unit. But if you approach the situation in that way, it’s very difficult to find an adequate solution. So, although the Student Government may initially believe that their values of representation and the right to be heard are in conflict, they aren’t really. At least, they don’t have to be. We can easily imagine scenarios where having a highly diverse student government actually *promotes* the likelihood that every voice will be heard and every vote will matter. In fact, that goal is probably one of the primary reasons for having a highly diverse student government association in the first place. So, the phrasing of the scenario itself has led us into a **false dichotomy**: The belief that there is a choice between two and only two alternatives. As we’ll see in a moment, many more than two alternatives exist in this case, and there are more than two values at work.

Let’s begin with that last observation: How many different values and assumptions can we identify in this particular scenario? Even though the summary we read presented “Every voice should be heard and every

vote counts” as a single principle, it’s actually a composite of two different ideas. A mother may feel that the preferences of her young children should be heard when considering what to have for dinner, but that’s quite different from giving everyone an equal vote. Moreover, there are some problems with definitions at work in this case study. What exactly does “every vote counts” mean? Does it mean that everyone’s vote is equal, as we just assumed? Or does it mean, “everyone has the right to vote,” “every issue we vote on is important,” or something else? The case study itself doesn’t tell us and, without that information, different readers are likely to interpret the words in different ways.



Finally, we notice from our outline that not two, but at least nine different principles are at work in this scenario. (Your own analysis may identify even more values at work in this conflict.) The problem is that many of these values are simply **implied assumptions**. For example, suppose that the difference in political outlook described in the case study was that two-thirds of the student body saw themselves as liberal, one-third as conservative. The assumption of many liberals might be, “Since we represent two-thirds of the student body, two-thirds of the speakers should

represent our point of view.” The assumption of many conservatives might be, “Both sides of an issue should be given equal time, regardless of the political outlook of the student body.” In other words, without bringing these assumptions into the open and discussing them, the conflict may reach a stalemate; each side is basing its case on an assumption that’s not clear to the other side. But by outlining the principles as we’ve done and considering them individually, we can also see that a tenth value is operating here, at least for some of the students.

J. The purpose of a campus speaker is to support what you currently believe, not to challenge those beliefs.

Why can we conclude that that assumption must have been present? Well, if that value were not implied, the conflict may not have existed at all. For instance, if that value were inverted — **The purpose of a campus speaker is to challenge what you believe, not to support your current beliefs.** — there might have been a *different* conflict: You might have had the liberal majority clamoring for conservative speakers and the conservative minority insisting that most speakers should be liberals.

By analyzing the situation instead of accepting what we read at face value, therefore, we realize how simplistic our initial schema in **Table 10.1** really was. Try, then, to create a more nuanced depiction of how the different values of this scenario relate to one another by using the diagram in **Table 10.2**. Each of the values described above is represented by a different circle. Identify the relationships among these values by using:

- a **solid line** to connect those values that overlap (i.e., they say roughly the same thing either in whole or in part).
- a **dotted line** to connect those values that don’t overlap but harmonize with one another or are still related to one another in some way.
- two **opposed arrows** ($\rightarrow\leftarrow$) to depict values that appear to be in conflict with one another.

Although your diagram may well not be identical to those of other students, the sheer number of lines and arrows you'll produce will illustrate how challenging it can be to reconcile competing values. In addition, one flaw you might observe in **Table 10.2** is that *all the circles are of equal size*. Your own personal code, however, might dictate that some values on the list are *much* more important than others. For this reason, an additional approach you might take would be to design your own version of **Table 10.2**, but containing circles of different size to emphasize the varying importance of these values to you. For instance, you might feel that Value B (making different voices heard) is such an important value that its circle almost fills the page, with several other values depicted *inside* it. On the other hand, you may feel that Value F (*equal* time for different perspectives) is so insignificant relative to the other values that it should be depicted as a mere speck. By diagramming your own values in this way, and then comparing your results to those of other students, you can develop a clearer sense of how to proceed with solving the challenge that appeared in this case study. At the very least, you'll have a clearer sense of what the underlying issues are.

This same analytical and visual approach can be used for the other scenarios outlined above, as well as for various aspects of your coursework and research. When facing an impasse over how to proceed in solving a problem or approaching a question, breaking the issue down into underlying elements that are either known or assumed (being careful to distinguish these two categories) and then depicting them graphically to explore their relationships can sometimes point you in the direction of how you might proceed.

Being Intentional

Now that we've explored a bit about what diversity is and how it can lead to complex challenges, let's explore how these issues may affect you at your own college or university.

- What does diversity mean at your own school? In other words, is your college or university fairly homogeneous in terms of any of the following categories: race, color, ethnic origin, national origin, creed, religion, political belief, gender, sexual orientation, marital status, age, veteran status, or physical or mental challenge?
- If it is not homogeneous in one or more of those categories, does that seem to be a result of coincidence or intentional planning? Does that diversity appear to be *embraced* by your school, merely tolerated, or not really much of an issue at all?
- Do you sense any possibility for conflicting values to come into play at your school like those we saw in our case studies above? If so, which values might come into conflict? For example, what might occur if the beliefs of one or more religious groups conflict with the beliefs of others about people's sexual orientation?
- What approaches can you think of that may help resolve such conflicts?
- What approaches can you think of that may help *avoid* such conflicts?

The Similarities and Differences Between Diversity and Multiculturalism

One term that's likely to arise during any discussion about diversity is *multiculturalism*. Many people use these two words interchangeably. The value of a diverse environment, someone might say, is that it exposes students to the views of multiple cultures and plays a significant role in broadening their perspectives. That's a perfectly acceptable practice, and you may encounter it often during your studies. But you should also be aware that other people use these terms in slightly different ways.

1. **The word *diversity* may apply to a broader range of issues than does the term *multiculturalism*.** As we saw earlier, higher education environments can be diverse in many different ways. The sheer breadth of academic programs provides a certain degree of diversity, as do the ranges of age among its students, the political

views of the professors, the gender differences of staff members, the marital status among all members of the community, and the presence or absence of physical and mental challenges among members of the student body, faculty, staff, and administration. When most people think of *multicultural* richness, however, they're more likely to have in mind diversity in race, ethnicity, and economic status than those other kinds. In other words, diversity is a concept that can *include* multicultural diversity, but it can also go far beyond it. The United Nations Educational, Scientific and Cultural Organization (UNESCO) refers to this usage of the word *multicultural* as **demographic-descriptive multiculturalism**. See *Multiculturalism: A Policy Response To Diversity* (1995).

2. **The word 'multiculturalism' may imply a value judgment that the term 'diversity' does not.** Peter Kivisto, the Richard Swanson Professor of Social Thought at Augustana College, argues that the word *multiculturalism*, when used in certain contexts, "encourages cultural pluralism, accepts structural pluralism, and necessitates civic assimilation." Kivisto (2002) 110. *Diversity*, in this sense, is a *descriptive* term: Environments are either diverse or not and, while much diversity is desirable, other types of diversity — such as classrooms that contain both students who are healthy and those who have highly contagious diseases — are not. For this reason, a scholar might define a subculture as diverse if its representation of classes protected by the federal government doesn't differ from its surrounding culture by more than one-half of one standard deviation. (Please note that this definition may not be optimal or even adequate; the point is merely that such a definition is *possible*.) On the other hand, *multiculturalism*, in certain usages, is meant to be a *prescriptive* term: It represents how the author believes society *should* be composed. A truly multicultural community, in this sense, is the opposite of "melting pot" conformity. People are allowed to

have extremely different viewpoints and backgrounds, and this type of diversity is highly prized. The community may even adhere to **the principle of cultural relativism**, the notion that no culture is better than any other, merely different. (See Unit Three.) UNESCO refers to this usage of the word multicultural as **ideological-normative multiculturalism**. See *Multiculturalism: A Policy Response To Diversity* (1995).

Being Imaginative

Suppose your school were to adopt a new graduation requirement that every student must “have significant exposure to the distinctive subcultures of the United States or of another society in order to contribute more effectively to the multicultural environment in which we live.” How might you design innovative ways for students to meet this requirement?

- Would you have them take one or more courses? If so, what would these courses be like? Would all students take the same course(s) or would there be options?
- Would you address this requirement outside the classroom with co-curricular or extracurricular activities? If so, how would you enforce the requirement? What would you hope students would gain from these activities?
- Can you develop some more innovative ways to achieve the goal of the requirement without adding more courses or mandatory activities to a student’s curriculum?

3. The word ‘multiculturalism’ may refer to a specific political and social policy that has arisen in response to a region’s diversity. Because of their belief that diversity is desirable in and of itself, some societies may decide to preserve the traditions, beliefs, heritage, and languages of their various subcultures rather than to urge the enforcement of an established religion, official language, common belief system, and other aspects that could result from a

practice of assimilation. For instance, the recognition that both French and English cultures are simultaneously Canadian or that the Maori culture would be cherished and protected in New Zealand is at times referred to as a *policy* of multiculturalism. In this sense, the word *multiculturalism* is applied to a specific way in which someone responds to a society's diverse nature. UNESCO calls this concept **programmatic-political multiculturalism**. See *Multiculturalism: A Policy Response To Diversity* (1995).

What we need to remember is that these differences between the terms *diversity* and *multiculturalism* don't apply to every context. It's important to pay very close attention to how an individual writer or speaker seems to be using these words. Nevertheless, in situations where a distinction between the two words is implied, the author is usually adopting one of the three special meanings of multiculturalism outlined above.

Let's examine several texts that use the word *multiculturalism* and try to identify what the author means by that term. The first passage that we'll examine is from an essay by the British author Antony Lerman that appeared on the *Comment is Free* section of the news website *The Guardian*.

Multiculturalism as a political project has been blamed for promoting segregation and not integration, legitimising moral relativism and inculcating a culture of victimhood that creates expectations of entitlement and special treatment.

But there's a fundamental problem with this indictment. The culprit is a fantasy, a straw-man multiculturalism. Look at some of the key texts on multiculturalism and you will find quite the opposite of a philosophy of separateness. Far from "putting people into ethnic boxes," multiculturalism, Professor Bhikhu Parekh [of the University of Hull] claims, is "about intercultural fusion in which a culture borrows bits of others and creatively transforms both itself and them." It doesn't call for "policing of borders" but rather "integration which recognises group identities and heritage" (Professor Tariq Modood [who teaches sociology, politics, and public policy at the University of Bristol]). ...

I am certainly not arguing that multiculturalism is in any sense perfect. An idea based on intercultural fusion must have a limited shelf-life if the basic premise works. And even back in the late 1990s some of the

proponents of multiculturalism were arguing that majority and minority were changing each other and producing “hybridity.” This could lead to a fresh social synthesis that does not lead back to assimilation but forward to some new waystation: “the acceptance of irrevocable mixture as a starting point, rather than as a problem,” said [Scottish journalist] Neal Ascherson, quoting [author and political theorist] Tom Nairn.

But we’re not there yet. ... In trashing multiculturalism, we’ve thrown the baby out with the bathwater. Giving birth to something new, if it ever happens, will be a painful process.
<http://www.guardian.co.uk/commentisfree/2010/mar/22/multiculturalism-blame-culture-segregation>.

When we encounter a passage like this one, our first impulse may be to assume that the author is using the word *multiculturalism* exactly as we would. And that assumption may well be correct. But if it isn’t, we could easily believe that the writer is making certain truth claims that he isn’t and misunderstand the whole purpose of the passage. So, let’s combine the critical thinking strategies we explored in Unit Four with an approach sometimes called **close reading**: a careful, word-by-word analysis of a passage that seeks to identify levels of meaning that ordinary quick reading might overlook. [For more on close reading, see Brummett (2010).]

1. What do we know about the author and any unstated assumptions he may be making? We’ve identified him above as a British author, but what else can you learn about Antony Lerman? If you hadn’t had this information, what clues are there in the text that the author is not an American? Have you detected any similar clues in other passages that you’ve read in this book?
2. What do we know about his sources? To get you started, we’ve given you a bit of background on Bhikhu Parekh, Tariq Modood, Neal Ascherson, and Tom Nairn, but what else can you learn? If in the original passage these authors weren’t identified with the information in brackets, what might a reader have missed by not knowing who these authorities were?

3. What does Lerman seem to mean by the expression *moral relativism*? Is that definition similar to or different from how we defined this term in Unit Three?
4. What clues about Lerman's use of the term *multiculturalism* do you have when he calls it:
 - a. a political project?
 - b. intercultural fusion?
 - c. integration which recognizes group identities and heritage?
5. What is the effect of Lerman's use of the passive voice in the first sentence? In other words, what does it conceal? (If you're having difficulty answering this question, try rephrasing that sentence with the verb in the active voice.)
6. What does Lerman mean by the expression "a straw-man multiculturalism"? (If you're uncertain, look back at the definition of *straw-man* argumentation in Unit Four.) Where in the text may Lerman be engaging in some straw-man argumentation himself?
7. Why do you think that Lerman used the phrase "even back in the late 1990s"? (What was happening in politics, the economy, and society during the late 1990s in Britain?)
8. What does Lerman seem to mean by the term *hybridity*? Does he imply that hybridity is good, bad, or neutral?
9. Based on your answers to all these questions, what appears to be Lerman's conceptual framework? (See Unit Four). How would you summarize his thesis in a single sentence?

The temptation, when performing this type of close reading, is to shift from *critical analysis* to simply *being critical*. In other words, we may find ourselves starting to think, "Aha! The author just committed a logical fallacy. Therefore, the entire thesis must be wrong. What other flaws can I now use to pick this discussion apart?" But that's a temptation we should avoid. Remember that use of a fallacy doesn't prove that an argument is *wrong*; it simply fails to prove that it's *right*. The author may make the case in a dozen other ways, and we'd be foolish to ignore the strength of those arguments simply by focusing on the one or two that

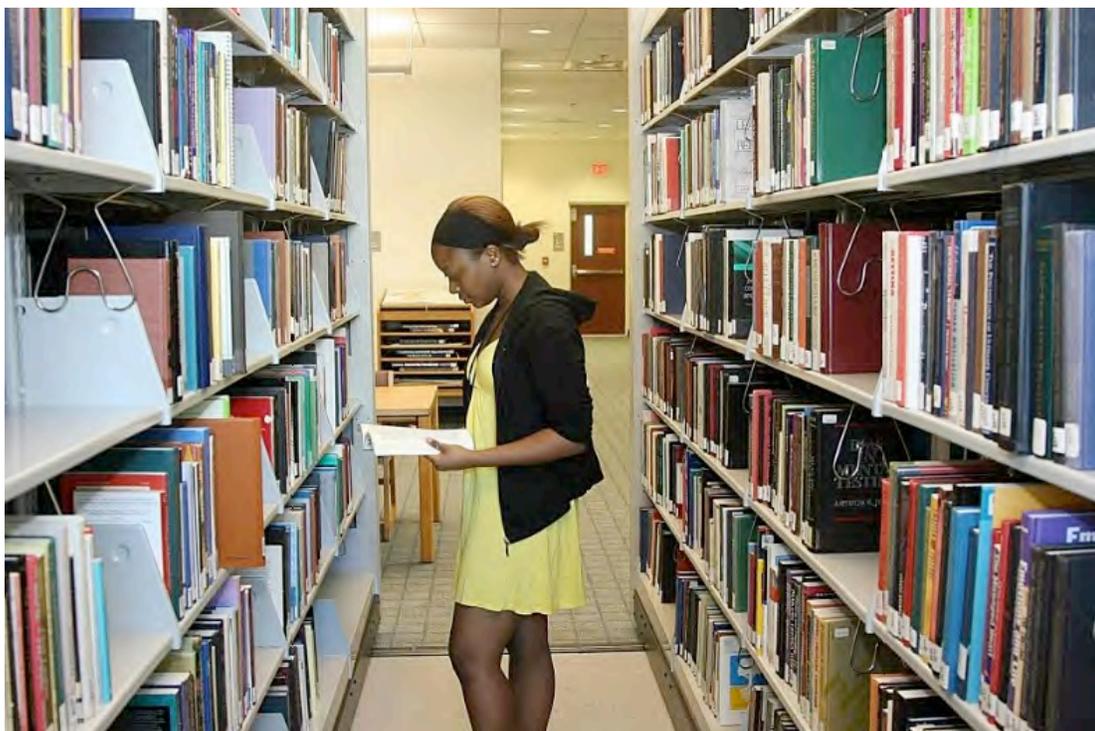
we can easily attack. In other words, the point of this type of close reading isn't to be pretentious and nitpick every minor flaw we can find in someone's discussion, but rather to understand all the factors — both stated and unstated — that led to the author's conclusion and to improve our own skills at building a case in our writing and speech. With this principle in mind, let's look at a second passage about multiculturalism, this one from Samuel P. Huntington's book, *The Clash of Civilizations*.

Some Americans have promoted multiculturalism at home; some have promoted universalism abroad; and some have done both. Multiculturalism at home threatens the United States and the West; universalism abroad threatens the West and the world. Both deny the uniqueness of Western culture. The global monoculturalists want to make the world like America. The domestic multiculturalists want to make America like the world. A multicultural American is impossible because a non-Western America is not American. A multicultural world is unavoidable because global empire is impossible. The preservation of the United States and the West requires the renewal of Western identity. The security of the world requires acceptance of global multiculturalism.

Does the vacuousness of Western universalism and the reality of global cultural diversity lead inevitably and irrevocably to moral and cultural relativism? If universalism legitimates imperialism, does relativism legitimate repression? Once again, the answer to these questions is yes and no. Cultures are relative; morality is absolute. Huntington (1996) 318.

1. How does Huntington appear to use the word *multiculturalism*? Does he appear to favor it or oppose it? Which specific words in the passage lead you to that conclusion?
2. What can you learn about Samuel P. Huntington that indicates what some of his unstated assumptions may have been?
3. Based on this passage and any other information you can learn about Huntington, how would you describe his view of the United States? Of the world?
4. What does Huntington appear to mean by the phrase *Western identity*?

5. Both Lerman and Huntington speak of *moral relativism*? Does there seem to be any similarity in how they use this expression? Any differences?
6. What does the phrase “universalism legitimates imperialism” mean?
7. Although Huntington’s book is often referred to as *The Clash of Civilizations*, as we called it above, its full title is *The Clash of Civilizations and the Remaking of World Order*. What does the subtitle add to our understanding of the book’s subject?



8. Reviewers sometimes misquote this full title and call the book *The Clash of Civilizations and the Remaking of the World Order*? (See, for example, http://www.hks.harvard.edu/fs/pnorris/Acrobat/Fox_Clash.pdf and <http://www.tnr.com/book/review/just-unjust-peace-daniel-philpott>. An Internet search will provide many other examples.) What does the addition of the definite article add to the title that’s missing from Huntington’s original version?
9. Based on your answers to all these questions, what appears to be Huntington’s conceptual framework? How would you summarize his thesis in a single sentence?

After seeing how this combined approach of critical thinking and close reading can be used to improve our understanding of two passages, use these techniques to examine one further excerpt, a section of David Brook's essay, "The Death of Multiculturalism," originally published in *The New York Times* on April 27, 2006.

In 1994 multiculturalism was at its high-water mark, and Richard Bernstein wrote "Dictatorship of Virtue," describing its excesses: the campus speech codes, the forced sensitivity training, the purging of dead white males from curriculums, the people who had their careers ruined by dubious charges of racism, sexism and ethnocentrism. ... [Now,] Multiculturalism is in decline for a number of reasons. First, the identity groups have ossified. The feminist organizations were hypocritical during the Clinton impeachment scandal, and both fevered and weak during the Roberts and Alito hearings. Meanwhile, the civil rights groups have become stale and uninteresting. Second, the Democrats have come to understand that they need to pay less attention to minorities and more to the white working class if they ever want to become the majority party again. Third, the intellectual energy on the left is now with the economists. People who write about inequality are more vibrant than people who write about discrimination. Fourth and most important, 9/11 happened. The attacks aroused feelings of national solidarity, or a longing for national solidarity, that discredited the multiculturalists' tribalism.

How does Brooks use the term *multiculturalism* in this passage and how does he draw his conclusions about it? Remember when analyzing this passage to use similar approaches to those we adopted for the first two excerpts.

Addressing Ambiguous Issues within Matters of Multiculturalism

Just as we saw with diversity, a community's commitment to multiculturalism can give rise to conflicts between different goals or ideals. Consider, for instance, the following hypothetical situations.

1. Both ideological-normative and programmatic-political multiculturalism argue that it's inappropriate for dominant cultures to compel other cultures to assimilate. Suppose that a specific subculture practices female circumcision resulting in numerous cases of genital mutilation, infection, and death that aren't paralleled among the male population. As a result, women within the subculture are suffering disproportionately because of

this traditional practice. Which value takes precedence: the multicultural rights of the women or the multicultural rights of the ethnic minority? Is it only acceptable for a majority culture to refrain from imposing assimilation if no harm is done? If so, who determines what constitutes sufficient harm that intervention or assimilation is warranted? If not, is it ethically permissible for members of the dominant culture to take no action when women are harmed?

2. Most advocates of multiculturalism would agree that members of subcultures should be allowed to practice their traditional religions. Suppose one of these subcultures practices human sacrifice. Is it justifiable to prevent this practice? If the traditions of the subculture are respected, is multiculturalism a sufficient justification for allowing people to be killed? Does your answer depend on whether the victims are willing or unwilling participants in this rite? Does it matter if the victims were randomly abducted members of the subculture? What is the overriding principle or set of values that govern your answer?
3. Members of a subculture in a society insist that studying mummies at a local university constitutes desecration of its traditional burial sites and violation of its religious principles. The subculture demands that all mummies, including those on display at the university's museum, be returned for reburial. Scholars at the university, none of whom are members of this subculture, claim that studying these mummified remains could provide valuable clues about epidemiology in the area; this information could be used to save numerous lives, including those of the subculture. Moreover, the scholars claim, exhibits in the museum clearly demonstrate that the university's mummies belong to an entirely different indigenous people, which died out long before the modern subgroup arrived in the area. As a result, the group that has issued the demand has no ancestral connection with the mummies they want handed over to them. The subgroup counters that they have a spiritual connection to *all* indigenous peoples in this area.

How do you mediate the dispute? What effect might the **Native American Graves Protection and Repatriation Act** have on this issue?

At colleges and universities, these “hypothetical” situations aren’t really all that hypothetical. In 1997, John Leo, a senior fellow at the conservative think tank known as the Manhattan Institute for Policy Research, decried the tendency of some college students not to condemn the Holocaust because doing so would require an unacceptable moral judgment of Nazi culture. Leo then went on to note that these multicultural attitudes are hypocritically applied.

In the new multicultural canon, human sacrifice is hard to condemn, because the Aztecs practiced it. In fact, however, this nonjudgmental stance is not held consistently. Japanese whaling and the genital cutting of girls in Africa are criticized all the time by white multiculturalists. Christina Hoff Sommers, author and professor of philosophy at Clark University in Massachusetts, says that students who can’t bring themselves to condemn the Holocaust will often say flatly that treating humans as superior to dogs and rodents is immoral. Moral shrugging may be on the rise, but old-fashioned and rigorous moral criticism is alive and well on certain selected issues: smoking, environmentalism, women’s rights, animal rights.
http://www.usnews.com/usnews/opinion/articles/970721/archive_007451.htm

The question each person needs to decide, therefore, is: **Which values must be universally enforced throughout all of human society and which are matters of local, cultural choice?** That question poses challenges both in our day-to-day decisions as we take a stance on various social issues and in the way we approach important academic topics throughout our collegiate careers. Consider, for instance, the law passed that went into effect in France in April of 2011 that bans the wearing of a full-face veil except in places of worship. You may confront this policy on a number of different levels.

- You may wish to travel to or even study in France where the law could affect you directly.
- You may be asked your position on this issue, particularly if you travel to a Muslim country.

- Similar laws may be proposed where you live, prompting you to ask whether such a ban is constitutional in your own country.
- A course in sociology, anthropology, or world cultures may cover this issue in class or as part of your reading.
- A research project in a history course may ask you to consider the evolving role of the veil in European society and the issues leading to the French law.
- A friend may accuse you of hypocrisy if, for instance, you support the ban on wearing veils but not crosses or yarmulkes/kippahs, oppose the ban but support laws outlawing female circumcision, or try to find a middle ground between the rights of an individual and the rights of a subculture to enforce its own traditions.



In other words, issues of multiculturalism provide an excellent source of material for analyzing complex academic and personal questions. They give us many instances of competing rights, competing truth claims, and competing ethical principles. Here, as an example, are two arguments, one in favor of and one opposing the French law against wearing veils in public.

The burqa is harmful not only to the wearer but to others as well. The sight of women in burqas can be demoralizing and frightening to Westerners of all faiths, including Muslims, not to mention secularists. Their presence visually signals the subordination of women. Additionally, the social isolation intrinsically imposed by the burqa may also be further magnified by the awkward responses of Westerners. Several Ivy League college students mentioned that classmates in burqas and dark, thick gloves make them feel “very sad,” “pushed away,” “uneasy about talking to them.” “When one woman is asked to read aloud, she does so but her heavy gloves make turning the pages slow and difficult.” The students feel sorry for her and do not know how to relate to her.

A burqa wearer, who can be as young as ten years old, is being conditioned to endure isolation and sensory deprivation. Her five senses are blocked, muted. Sensory deprivation and isolation are considered forms of torture and are used to break prisoners. Such abuse can lead to low self-esteem, generalized fearfulness, dependence, suggestibility, depression, anxiety, rage, aggression toward other women and female

children, or to a complete psychological breakdown. <http://www.phyllis-chesler.com/899/ban-the-burqa>

If women are forced to do something against their will, the law already protects them in democratic countries. But what evidence exists, suggests that in Europe most burqa-clad women do not act from a sense of compulsion. According to the DCRI report in France, the majority of women wearing the burqa do so voluntarily, largely as an expression of identity and as an act of provocation. A second French report by the information authority, the SGDI, came to similar conclusions. Burqa wearers, it suggested, sought to 'provoke society, or one's family', and saw it as a 'badge of militancy', and of 'Salafist origins'. The burqa ban will only deepen the sense of alienation out which the desire for such provocation emerges.

The burqa is a symbol of the oppression of women, not its cause. If legislators really want to help Muslim women, they could begin not by banning the burqa, but by challenging the policies and processes that marginalize migrant communities: on the one hand, the racism, social discrimination and police harassment that all too often disfigure migrant lives, and, on the other, the multicultural policies that treat minorities as members of ethnic groups rather than as citizens. Both help sideline migrant communities, aid the standing of conservative 'community leaders' and make life more difficult for women and other disadvantaged groups within those communities. Kenan Mailik at <http://kenanmalik.wordpress.com/2011/04/11/against-the-burqa-ban/>

By this point in the course, you should have a clear idea of how to begin assessing statements like these and evaluating their persuasiveness. But suppose you wanted to do more. Imagine you wanted to explore the impact the veil ban had on French society in the period after it passed. How would you go about studying this question differently if you undertook this research project in each of the following courses?

- a. **HIST 2024 Contemporary French History**
- b. **WST 3190 Women's Studies: Contemporary Social Issues**
- c. **PSY 2110 Social Psychology**
- d. **LAW 4120 Modern European Law**
- e. **FRE 3030 French Literature and Film**
- f. **HPM 4368 Contemporary Issues in Public Health**

- g. RLST 1110 Modern Islam
- h. ANTH 3665 European Subcultures: An Anthropological Approach
- i. PCST 2290 Peace Studies and Conflict Resolution
- j. FASH 2112 Cultural Issues in Fashion Design
- k. POLS 3480 Modern European Politics
- l. ART 4560 Advanced Techniques in Three-Dimensional Art

In framing your answers, don't just look at the course names. Also examine the course *numbers* as a way of gaining information about the *depth* to which you'd probably be expected to conduct your research in that class. In what other college-level disciplines might this topic arise? Is there any way in which you could construct a study that would draw on most if not all of these disciplinary approaches? In deciding your own stance on this issue, what factors do you consider and which values do you regard as most significant?

Being Reflective

Think back to the last time you had a serious, substantive discussion with someone whose cultural values were fundamentally different from your own. How did the conversation unfold? Did you try to persuade one another about the correctness of your points of view? Did you simply "agree to disagree"? Did anything the other person said anger or disturb you? Did you come away from the conversation feeling more or less sympathetic towards the other culture's perspective and ideals?

Research and Creative Activity about Issues of Diversity

Diversity and multiculturalism are interesting areas in which to perform undergraduate research since they span so many fields, are constantly changing, and have numerous theoretical as well as practical aspects. We just saw twelve different courses in which you might encounter a single multicultural issue. As political developments occur throughout the world, the challenges and opportunities of a diverse cultural environment change as well. Yesterday's

minority population in one region may become tomorrow's dominant culture, and the implications of these shifts are often difficult to predict. Moreover, the many theoretical and abstract dimensions of multiculturalism have a very practical dimension in terms of how we live our lives. Where do we draw the line between patriotism and chauvinism? At what point does cultural pride end and a sense of ethnic superiority take over? We're confronted daily with truth claims about issues of diversity in a way that doesn't occur in certain other academic fields. As a result, diversity and multiculturalism provide excellent raw material for scholarly projects, and they help us see the transition between our academic pursuits and our day-to-day lives.



For example, in June of 2012, political columnist George Will described higher education's preoccupation with diversity as one of the factors that was actually *lowering* the quality of a university education in the United States. Indeed, Will claimed that diversity efforts are really misnamed since they eliminate more diverse curricular options and compel students to focus almost exclusively on their own identities.

UC San Diego, while eliminating master's programs in electrical and computer engineering and comparative literature, and eliminating courses in French, German, Spanish and English literature, added a diversity requirement for graduation to cultivate "a student's understanding of her or his identity." So, rather than study computer science and Cervantes, students can study their identities — themselves. <http://www.post-gazette.com/stories/opinion/perspectives/george-f-will->

subprime-college-crisis-the-higher-education-bubble-will-eventually-burst-too-639871/#ixzzlyQlucZhc

Suppose a group of your fellow students wanted to explore further the contention that an increasing emphasis on diversity and multiculturalism actually narrowed rather than broadened students' academic experience. How might you advise each of the following students to revise his or her study so as to make the results more reliable?

- A. Student A intends to count the number of courses listed each year in the college catalogs of five universities from 1940 through the present and plot the changes over time.**
- B. Student B is going to interview several people, at least one of whom went to college in each decade from the 1950s through the present and collect oral histories focusing on the breadth or narrowness of the course choices available to them.**
- C. Student C wants to collect student enrollment data from all American and Canadian colleges and universities from the 1930s through the present, tracking the number of different courses available, enrollment trends in those courses, and changes made in General Education requirements.**
- D. Student D proposes giving a survey to assess factual knowledge and attitudes about diversity to a cohort of ten people who graduated from college each year from 1950 through the present to learn how understanding of and feelings about diversity issues have changed.**
- E. Student E wishes to write a short story about two college students from different generations, one from the 1950s and one from the present, to contrast their different experiences with diversity.**

Based on the constructive criticism you just provided, what principles of valid research can you extrapolate from these examples? In the following space, outline five of these principles that you'll follow in your own research as a college student.

Principles of Sound Research Practice

fall into this category. Consider, for example, what steps you'd want to go through to make sure your findings held up to scrutiny if you were assigned each of the following research projects in a class.



1. A university has a policy that does not allow students of different genders to share the same residence hall room. Its rationale is that, although it can't prevent students from engaging in sexual activity, it doesn't want to create an environment that appears to condone or encourage it. When challenged about this policy, a university spokesman replied that the policy is not in place so that the school can police morals; it's trying to reduce the spread of STDs, prevent the type of disruption that occurs when couples who share a room break up during a semester, and promote a living/learning environment that emphasizes academics, not romantic relationships. The school is then hit with a lawsuit on the part of heterosexual students who claim that homosexual students are now being given rights that they themselves are being denied. Your assignment is to explore how other institutions deal with this issue, what the legal outcome of the lawsuit is likely to be, and how the university can draft a policy that achieves the school's original intent while avoiding as many legal and procedural challenges as possible.
2. A women's college has a strict policy that only women may enroll in its courses and live in its residence halls. A biologically female student with only one semester to complete before graduation announces that s/he self-identifies as a man, has adopted a male name, and expects to be treated as a

man from this point forward. The student also files a grievance with the college, alleging that there aren't a sufficient number of men's restrooms on campus and that this lack of facilities has caused a severe hardship. The college decides to enforce its policy of single-gender enrollment and residence, expels the student, and evicts the student from the residence hall. Because the student comes from a poor family that has disowned the student due to this very same gender identity issue, the student is now homeless. A group of faculty members argues that the school has been excessively strict in its policy, particularly in expelling a student with only one semester of school left and in evicting a student with nowhere else to live. Your assignment is to find a way to resolve this issue and to develop a policy that avoids similar problems in the future.

3. A university has a non-discrimination policy that forbids intolerance of the religious beliefs held by any student or faculty member. An excellent student is in a program in which the courses Biodiversity: Sustainability and the Variety of Life and Cosmology: The Origin of the Universe are required. The concept of evolution is heavily integrated into all the material, assignments, and exams of the biodiversity course, while nearly everything done in the cosmology course assumes that the age of the universe is roughly 14 billion years. This student's religion requires a belief that the universe was created about 6,000 years ago and that humans did not evolve but were specially created by God. The student asserts a religious right to incorporate these beliefs into the work of both courses. The professors have argued that mastery of the material requires demonstration of *knowledge about*, not necessarily *belief in* other views, but the student resists this compromise. The university administration has proposed allowing the student to substitute different courses; the faculty has insisted, however, that these two courses are absolutely integral to the student's program. The administration then proposed allowing the student to switch into a different program, but the student has claimed that making this move compulsory is a violation of the non-discrimination policy. Your

assignment is to discover how similar situations have been resolved elsewhere and to propose a policy for the university to follow in the future.

Being Analytical

One particularly divisive issue relating to diversity and multiculturalism is the question of marriage equality (i.e., legalizing same-sex marriage).

Remembering that critical analysis doesn't necessarily mean "being critical of," examine the following passage of a student editorial in MIT's newspaper *The Tech*.

Some have compared the prohibition of homosexual marriage to the prohibition of interracial marriage. This analogy fails because fertility does not depend on race, making race irrelevant to the state's interest in marriage. By contrast, homosexuality is highly relevant because it precludes procreation. ...

Some argue that the link between marriage and procreation is not as strong as it once was, and they are correct. Until recently, the primary purpose of marriage, in every society around the world, has been procreation. In the 20th century, Western societies have downplayed the procreative aspect of marriage, much to our detriment. As a result, the happiness of the parties to the marriage, rather than the good of the children or the social order, has become its primary end, with disastrous consequences. When married persons care more about themselves than their responsibilities to their children and society, they become more willing to abandon these responsibilities, leading to broken homes, a plummeting birthrate, and countless other social pathologies that have become rampant over the last 40 years. ...

The biggest danger homosexual civil marriage presents is the enshrining into law the notion that sexual love, regardless of its fecundity, is the sole criterion for marriage. If the state must recognize a marriage of two men simply because they love one another, upon what basis can it deny marital recognition to a group of two men and three women, for example, or a sterile brother and sister who claim to love each other? Homosexual activists protest that they only want all couples treated equally. But why is sexual love between two people more worthy of state sanction than love between three, or five? When the purpose of marriage is procreation, the answer is obvious. If sexual love becomes the primary purpose, the restriction of marriage to couples loses its logical basis, leading to marital chaos. Kolasinski (February 17, 2004).

While the situations encountered in this unit often involve competing interpretations of right and wrong, their complexity makes them typical of many questions you'll encounter in your college courses. Struggling with difficult or

ambiguous issues causes us to gain a better understanding of ourselves and our values at the same time that they help us improve our thought processes. When we understand why others may answer certain questions differently from us out of their own beliefs and priorities, we can gain respect for the ways in which various people interpret the world and become less arrogant of our own infallibility. Self-esteem, confidence, and assertiveness are positive qualities that we often admire. On the other hand, excessive self-assurance can cause us to reject alternative points of view or limit our capacity to learn. Discovering where being secure in one's beliefs ends and being too sure of one's opinions begins can be yet another important benefit of a well-rounded college experience.

Exercises

1. If you were to write a diversity pledge that would be recited by every student, faculty member, and administrator of your school, what would it contain? Do the values that appear in your code reflect what you actually believe or what you feel you *should* believe? Why should the values contained in your pledge be important to your school?
2. The First Amendment to the United States Constitution begins, "Congress shall make no law respecting an establishment of religion." The federally recognized holidays of the United States, which are approved by Congress, include Christmas, a holy day in many Christian denominations that isn't celebrated by many non-Christians. Using the principles of diversity and multiculturalism that were discussed in this unit, how might someone argue that this inconsistency is harmful and inappropriate? How might someone use the same principles to argue that there's actually no real inconsistency at work here or that, if an inconsistency exists, it's neither harmful nor inappropriate?
3. Identify a question or problem for which you believe there is no one correct answer or solution. (Don't settle for simple examples, such as mathematical problems for which there are two or three correct answers.) If you were

then required to do so, how would you begin to answer your question or solve your problem?

4. A professor in one of your courses says the following. “Single-sex education made sense back in the day when colleges and universities were male-dominated, and there were few leadership positions open to women. But now women are a clear majority of the students in American higher education, and no campus leadership positions are closed to them. So, not only is single-sex education an outdated relic but these days we really need an Affirmative Action program for men at American universities.” How would you respond?
5. Some people would argue that students attending a college where ethical issues were taught only from the perspective of a single religious tradition limits the experience of those students; by not encouraging students to develop their own opinions about various issues, they claim, the college fails in one of higher education’s most basic responsibilities. Others contend that, in a diverse environment that prizes religious freedom, the students have every right to experience whatever type of education they wish; in fact, the diversity of American education is increased by having both secular and highly religious colleges and universities. Where do you find yourself standing on this issue?
6. In Unit Three, you were encouraged to use your first year experience in college as an object of a scholarly project. As you probably realized by now, even something as apparently focused as *your* individual college experience is an extremely broad topic. How might you focus such a study now in order to make your results more meaningful? Keep in mind the critiques you made of the hypothetical studies in the last section of this unit.

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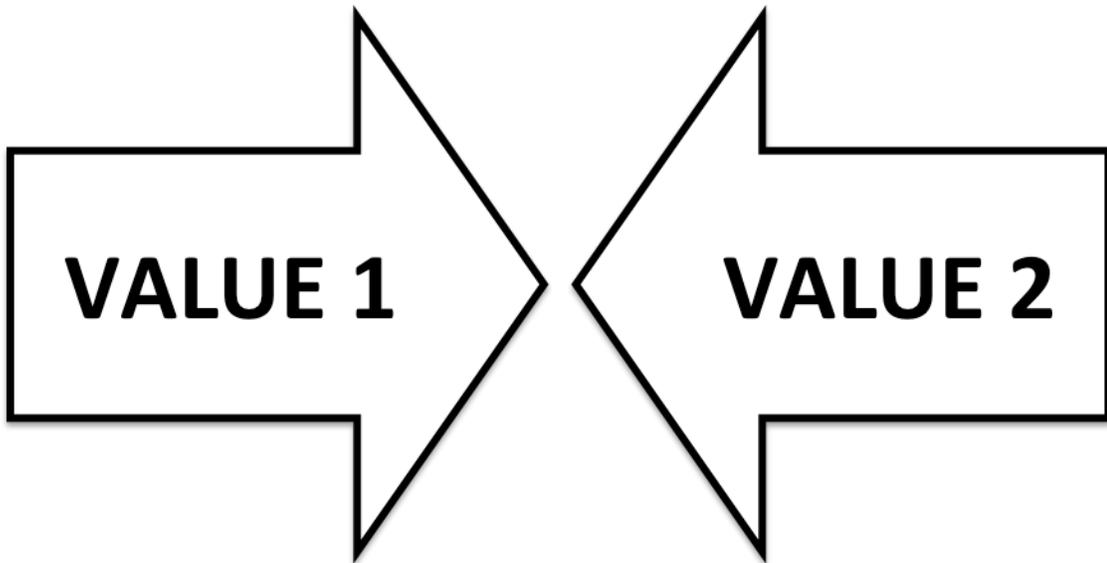
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Table 10.1

A False Schematic of the Conflict

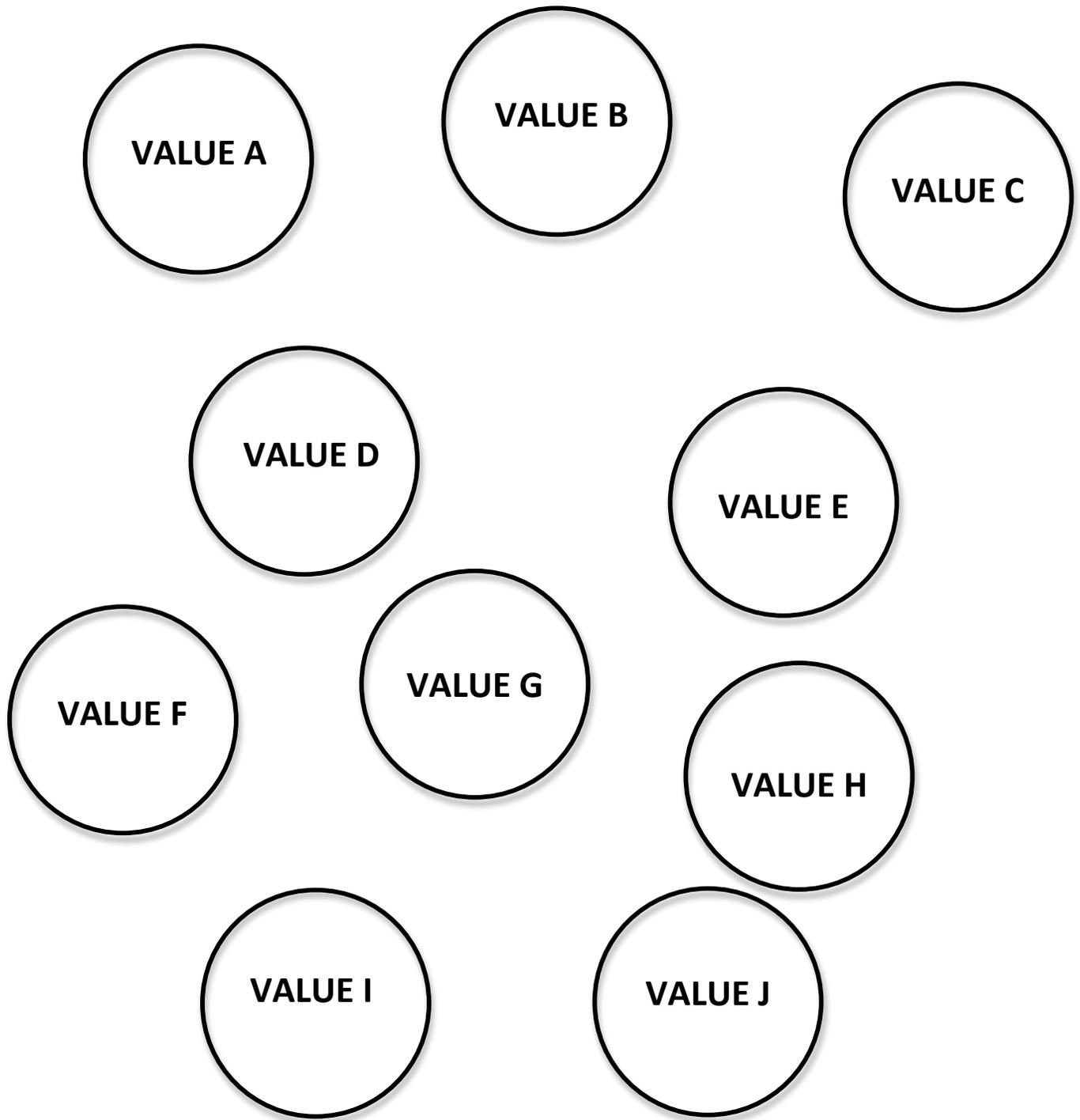


VALUE 1 = A student government association should strive to be as diverse as the student body it serves.

VALUE 2 = Every voice should be heard and every vote should count.

Table 10.2

Towards a More Appropriate Schema of the Conflict



Unit Eleven:

Living in a Community

Learning Objectives:

1. To appreciate how the various communities in which we live serve as important resources for us.
2. To understand how a residence hall provides a laboratory for learning not just a place for living.
3. To introduce the concept of a living/learning community.
4. To examine service learning in greater depth.
5. To explore the advantages and disadvantages of computer-based social networking.

The Importance of Communities as Resources

You're already a member of many different communities. Your family forms one community. The city or town in which you live provides you with another. Your college or university creates still another community. In fact, your school may even consist of many different communities simultaneously since the people with whom you associate in your classes may not be the same people you get to know in clubs, on athletic teams, or in the residence hall. In addition, social networking sites give you access to a **virtual community**, a special kind of group that's becoming more and more important. And you may be a member of dozens of *other* communities depending on your interests, religious beliefs, political affiliation, and other activities. In this unit, we'll discuss several of the communities to which college students often belong and explore the special opportunities, responsibilities, and challenges that result from these different communities.

The Advantages of Being Part of a Community

The communities we live in bring us many advantages. In order to explore the truth of this statement, let's engage in a brief thought experiment. Read over the following disturbing — but unfortunately not uncommon — scenario and decide how you would respond.

It's 1:00 am. The day's been long and tiring, but you finally arrive back home. You're so exhausted that all you want to do is relax and go to sleep as soon as possible. But, as soon as you arrive, you discover that your entry door has been kicked in. Looking inside, you see your possessions thrown about in a heap. It's clear that you've been robbed. The main entry door can't be locked — it's been torn off its hinges — and one of your windows has been broken.

Think through all the steps you now need to take until you can go to sleep that night. Also prepare a list of the most important things you'll need to do the next day.

- 1. Whom do you contact first? Whom do you contact next? Why do you take these actions in this particular order?**
- 2. How do you handle the situation if you're living in a campus residence hall?**
- 3. How do you handle the situation if you're living all by yourself in an apartment?**

This thought experiment has several purposes. First, it compels you to think logically about the process you'll need to follow in order to solve a difficult problem. For instance, how do you go about determining what's missing? How do you discover whether the person who robbed you is still there? Whom do you notify, and in what order? Second, the exercise also forces you to consider *how* you might acquire the information and help you need quickly when you're upset and under pressure. For instance, if you're living alone in an apartment, how do you find someone who can secure the door and window in the middle of the night so that you can either sleep there or leave the apartment secured while you find somewhere else to spend the night? What do you do about any credit cards that

may have been stolen, checking account numbers that may have been compromised, or your social security number and other personal information that could leave you vulnerable to identity theft? If your apartment is in a community that's still rather new to you, how do you even begin to find out where the resources are that can help you solve this problem? Do you have a telephone book? How do you check for information online if your computer has been stolen or you're too afraid to enter your room? The more you know about your community, the more resources you'll have that can help you answer these questions. You'll know the best way to reach the local police department, how to contact your bank and credit card company, where to look for a 24-hour locksmith, what services a carpenter or contractor can provide for you, and so on. You'll also find out how to reach a therapist or social worker if you're so upset that you need to talk to a professional counselor.

Burglaries and other disasters aren't the only times when it can be very beneficial to know who does what in your community. Learning about services and cultural opportunities that are available can be useful for its own sake. Take a moment and see how you would answer the following questions about resources and opportunities near your college or university. Considering your *present location*, where is the best place in this area to do each of the following.

- _____ 1. **Get a really good cup of coffee.**
- _____ 2. **Call to have a pizza delivered.**
- _____ 3. **Go out with some friends for a meal that won't be too expensive.**
- _____ 4. **Go out for a meal when you're celebrating or want a special treat.**
- _____ 5. **Eat various types of ethnic food.**
- _____ 6. **Get the best ice cream.**
- _____ 7. **Buy clothes, if you need something in a hurry.**
- _____ 8. **Buy clothes, if a special occasion is coming up.**
- _____ 9. **Get medications or have a prescription filled.**

- _____ 10. Buy paper, toner/ink for your printer, or other basic school supplies.
- _____ 11. Find software, cables, or other computer equipment, when you don't have time to order it online.
- _____ 12. Buy a funny greeting card for a friend's birthday.
- _____ 13. Browse through vinyl recordings or CDs.
- _____ 14. Rent a movie.
- _____ 15. Take a walk when you want to clear your thoughts.
- _____ 16. Pick up some groceries when you need something in a hurry.
- _____ 17. Buy groceries when you're trying to save money.
- _____ 18. Shop for gourmet foods and other specialty items that are unlikely to be found at a regular supermarket.
- _____ 19. Have a birthday cake personalized.
- _____ 20. Have some dry cleaning done.
- _____ 21. Buy gas.
- _____ 22. Get a car washed.
- _____ 23. Apply for a passport or get your passport renewed.
- _____ 24. Have a passport photo taken.
- _____ 25. Have your cell phone repaired or replaced.
- _____ 26. Have a flat tire repaired or replaced.
- _____ 27. Have your car fixed when it has a serious mechanical problem.

- _____ 28. Replace your driver's license if it's stolen.
- _____ 29. Work out if campus health facilities are closed for an extended period.
- _____ 30. File an insurance claim if your car is damaged.
- _____ 31. Register to vote.
- _____ 32. Go to a movie.
- _____ 33. Hear a live band.
- _____ 34. Attend a performance of a symphony orchestra.
- _____ 35. See a professional sporting event.
- _____ 36. Watch a play performed by professional actors.
- _____ 37. Play tennis.
- _____ 38. Play golf.
- _____ 39. Get birth control information or supplies.
- _____ 40. Shop for a gift when you don't have a specific idea in mind.
- _____ 41. Find a doctor if you can't use campus health services.
- _____ 42. See a dentist for an emergency.
- _____ 43. See a dentist for a regular cleaning or routine appointment.
- _____ 44. Have your hair done.
- _____ 45. Get a bicycle repaired.
- _____ 46. Make color photocopies.
- _____ 47. Hear a stand-up comedian.
- _____ 48. Purchase an electric tool for a project.
- _____ 49. Go for a swim.
- _____ 50. Book an airline ticket if you can't do so online.

- _____ 51. Place a newspaper advertisement to sell something.
- _____ 52. Try out several different kinds of cameras before buying one.
- _____ 53. Have a car unlocked if you lose your key.
- _____ 54. Have a broken window replaced.
- _____ 55. Have a plumbing emergency taken care of late at night.
- _____ 56. Get or call a cab.

Being Reflective

At the beginning of this unit, we saw that we're all members of many different communities simultaneously. Try to identify at least five communities in which you play an active role. Don't forget those communities that result from family, birthplace, religion, politics, ethnicity, age, philosophical outlook, athletic interests, hobbies, academic focus, location of residence, and everything else that can help a person better understand *you* as an individual.

For some of the goods and services mentioned above, you may feel "Well, I'll never use *that*, so I don't really need to know about it." But just identifying sources of things you'll *need* isn't the point of the exercise. The purpose of thinking through these questions is getting to know your community better, learning what's available in your area, and gathering information in case someone asks for your advice or a recommendation. In much the same way, even though you may not need this information right now, where is the location of the nearest ...

- _____ 1. ... police station?
- _____ 2. ... fire department?
- _____ 3. ... public library?
- _____ 4. ... Social Security Administration office?
- _____ 5. ... vehicle registration office?

- _____ 6. ... airport?
- _____ 7. ... train station?
- _____ 8. ... museum (of any kind)?
- _____ 9. ... off-campus art gallery?
- _____ 10. ... off-campus bookstore?
- _____ 11. ... state park?
- _____ 12. ... national park?
- _____ 13. ... florist's shop?
- _____ 14. ... office of the County Health Department?
- _____ 15. ... office of the district's representative to the
U.S. House of Representatives?
- _____ 16. ... branch of your bank?
- _____ 17. ... branch of *any* bank?
- _____ 18. ... ATM?
- _____ 19. ... hospital?
- _____ 20. ... urgent care center?
- _____ 21. ... jeweler?
- _____ 22. ... place of worship, if you have a faith of
preference?

When you know the resources of a community, you'll feel more at home there. Moreover, the time to locate the nearest hospital or police precinct isn't when you're in the middle of an emergency; it's before you ever need the services they provide. In addition, the more you know the area in which your college or university is located, the less likely you'll feel that there's nothing to do there when you have free time. Even fairly small communities usually have many opportunities that can interest college students, if you only make the effort to find them.

Finally, there's one last aspect of your local community you need to know: the names of the people who've been elected to serve you. It may not always seem particularly relevant to know which congressional representative serves the district

where your school is located if you're attending college in a state different from your home. But if you ever study abroad and have a problem related to your passport or visa, that information could suddenly become *very* important. In a similar way, you may not be particularly interested in the name of the local mayor if you never expect to live in that area after you graduate. But this person could become much more significant to you if you ever have trouble getting a permit for an event that involves a campus organization you're chairing. Government



officials make decisions every day that have a direct effect on your experience as an undergraduate. So, fill in the following grid with information about the political offices listed there. While it's important for any college-educated person to have access to this information, the real value of this exercise is discovering where to *find* these names, since many of them will change from time to time. At the bottom of the grid, keep track of where you located this information and compare the sources you consulted to those used by other students. In addition, complete this assignment for both your permanent address and where your school is located. If the answers are the same, just write "same" in the box that refers to your home address.

Important Names and Information: Governmental Representation		
	For Your School Address	For Your Home Address
Governor		
U.S. Congressional District Number		
U.S. Congressional Representative		
U.S. Senators	1. 2.	1. 2.
State Representatives and/or Senators	<i>May be several names.</i>	<i>May be several names.</i>
Mayor		
Sources used in this exercise	<i>May be several.</i>	<i>May be several.</i>

The Residence Hall as a Learning Community

Not all students live in their schools' residence halls. But those who do often find that there are both advantages (convenient access to campus events, planned social events, an easy way to meet fellow students) and disadvantages (more rules and restrictions, less privacy, and a common — though, as we'll see in a moment,

usually incorrect — perception that residence halls are more expensive than sharing an apartment) to this arrangement. Residence halls usually offer students access to a wider range of services than would be available to them at home or in their own apartment. Even so, it's up to the student to take full advantage of everything the community has to offer. For this reason, if you live in a residence hall, there are several important guidelines to follow.

- **Don't isolate yourself in your room.** Get out. Meet people. Go to parties, club meetings, performances, and other events on campus. Students benefit from balancing their studies with a wider span of activities. You need “social time” just as you need “alone time.” If you're a very private person and can't find any other reason for getting out of your room, make a regular habit of doing at least part of your studying in a public setting or common room. Even though it may be difficult for some students to believe at first, too much isolation can be detrimental to their education. Grades suffer when *all* a student thinks about is coursework and how best to prepare for the next test. After all, it's not *only* the students who party too much who end up having trouble in their courses.
- **Familiarize yourself as soon as possible with any written guidelines or policies on residence life that have been developed by your institution.** As restrictive as certain residence hall policies initially appear, they have been developed to promote a sense of order and civility throughout the community. Rules exist, not because your college or university is treating you as a child, but because you're expected to act as an adult. One of the ways in which adults establish a sense of community is to make sure that all members of the group understand rights *and responsibilities*. Your residence hall's policies simply set out for you what its expectations are in this regard.
- **Be sure that you get to know the residence hall staff.** Resident assistants (RAs) and members of the housing staff can be valuable resources in terms of information about the campus, community, and life in general. Most members of the residence staff at colleges and universities enter this profession because they genuinely enjoy working with students and are

eager to help them succeed. Don't hesitate to talk to them because you think your question may be "stupid" or that the staff can't help you. Residence hall professionals have dealt with nearly every type of problem before,



and they'll be able to direct you to the appropriate person if they can't help you themselves. The residence hall staff sees its role as providing assistance in *all* aspects of how to make the transition first to college and then to life beyond college. But the members of the staff can't help you unless you get to know them and bring your concerns to them.

- **If there are residence hall programs, be sure to participate in them.** Residence hall programs, particularly those that are organized by RAs, provide great opportunities to meet new people in a structured environment. On most campuses, RAs coordinate various informational, social, and community service opportunities, often based on suggestions made by the residents. Participating in these programs is a guaranteed way to meet new people without having to throw your own parties or plan your own events. Besides, even if you were to organize a large number of social activities yourself, you'd probably end up only inviting the people whom you already know, not the new groups of people you're likely to meet at a residence hall event.
- **Consider applying for a position as Resident Assistant.** Serving as an RA can develop your leadership potential, help you meet new people, give you an advantage when applying to graduate school or for employment, make your education more affordable, and provide you with an opportunity to do something truly significant. In fact, even if you *aren't* selected as an RA, the

mere process of applying and interviewing for the position will be an excellent experience that can help you with other opportunities later.

- **If you're not a member of a formal living/learning community (see below), reflect carefully about what you're experiencing and learning from life in a residence hall.** Keep a journal about residence hall life. Maintain a blog. When given open-ended essay topics in your courses, write about your residential experiences. Discuss with other students what they gain from living on campus. Being intentional about your life at college means asking, "What am I taking away from this experience that has relevance elsewhere in my life?"

Remember that your college experience, especially in housing, is only as good as you make it. At nearly all colleges and universities, formal programs are organized to help students succeed outside the classroom as well as in their studies. Take advantage of these programs, and then try to help the next generation of college students that will follow you.

Most college students begin their academic program with relatively little thought about how their residential experience provides an important part of their undergraduate education. They may have been attracted to a particular college or university because of the facilities available in the residence halls there, but it's only the very rare student who gives much consideration to the educational benefits that can result from the residential experience. Some students prefer to forego the residential college experience altogether and to commute to their classes from home. While this option is important for students who couldn't otherwise afford *any* type of college experience or balance it with such demands as family life, a full-time job, or other obligations, it should be recognized that many benefits of an American undergraduate experience are sacrificed when coursework isn't combined with life in a residence hall. Other students choose to live on their own or with a small group of friends in an apartment near the college or university, developing their skills at making independent choices and taking responsibility for setting their own schedules. These are valuable skills, to be sure, and every responsible adult must sooner or later develop them. Nevertheless, there's one

argument for life in an apartment and without a campus meal plan that the vast majority of students discover to be false: that living off-campus will be less expensive than living in a residence hall. This myth is so common that it deserves its own key principle.

Living off-campus and preparing meals either alone or with roommates is almost always significantly more expensive than life in a residence hall and with a campus meal plan.

In other words, live off-campus if you need to experience independence. Live off-campus if it's the only way for you to complete your college education in a timely manner. Live off-campus if you want to gain experience in making independent choices, balancing a budget, and taking responsibility for your own decisions. But don't live off-campus if you believe that you'll save money in an apartment or by preparing your own meals. The cost of this decision, you'll probably discover, is extremely high, not only in terms of the money you'll be spending but also the extra time you'll need in order to buy food and other essential items, prepare your meals, commute, and pay bills. Living "on your own" can be very time-consuming, and it's not at all uncommon for students to find that their grades suffer when they move out of a residence hall for another type of living environment.

There's also another reason why life in a residence hall can be an extremely valuable part of an undergraduate education: A substantial amount of what a student learns in college is the result, not only of the courses they take, but also of the experiences they have outside of class. There is, in other words, an important *pedagogical role* that life in a residence hall plays, and that role has been increasingly well documented by researchers who study the academic experience. See, for example, Buller (2008). As a result, colleges and universities that once gave scant attention to residence life are now directing resources and a great deal of energy to enhancing their housing programs. For many universities around the world, residence halls are entirely separate from the academic side of the institution. In Germany, for instance, residence halls (*Wohnbeime*) are frequently maintained by a

student union (*Studentenwerk*) that has no official ties with the university itself. In the United States, residence halls were long known simply as **dormitories**, a term derived from the Latin verb *dormio/dormire* (“to sleep”), suggesting that their primary purpose was to give students a place to rest from their studies. But as the contribution of housing programs to undergraduate education became better understood the expression *residence hall* began to eclipse *dormitory* as the most common expression used on American college campuses. In other words, your residence hall is much more than the place where you sleep at night or relax between classes. It can be the center of your social life and, although this may surprise you, a very important part of your college *education*.

Being Imaginative

Suppose you were to create a fictional work set in a college residence hall today. First, consider what medium you’d chose for your work: graphic novel, short story, movie, television program, radio program, podcast, play, dance, or something different. Then decide on the approach you’d take in the work. Would it be a comedy, tragedy, melodrama, suspense drama, mystery, documentary, mockumentary, or some other format? Finally, think about your characters. Would there be a protagonist, villain, love interest, and supporting cast? What point would you be trying to make through your work?

How can a residence hall serve as a laboratory for learning and research?

Too often colleges and universities fragment the undergraduate experience by drawing a sharp line between a student’s academic life and the co-curricular, extracurricular, and residential activities that are available. Part of the reason for this unnecessary division is merely a product of the reporting structure adopted by most institutions. As you can see in Appendix B, the units responsible for Academic Affairs and Student Life frequently report to different deans or vice presidents. In some cases, Academic Affairs, Student Life, and Housing all fall into separate units of the institution and may only hold joint meetings on very rare occasions. It’s no wonder, then, that the educational experience of most



undergraduates seems initially to have very little to do with where they live, which clubs they join, and what recreational activities they pursue. This situation is particularly

unfortunate since the undergraduate residential experience has a very important educational function. The reason why this role is so significant may become clearer if we look at the way in which most institutionally supported residential programs differ from life in an apartment, at home, or in other environments available to undergraduate students.

- Residence hall experiences have far greater similarities to situations that students will encounter on the job after graduation than do experiences in other types of residential environments.** Despite the increasing variety of work environments that exist today, it's still true that the vast majority of workers in North America are employed by a company, hospital, law firm, school, or some other type of complex organization. In settings like these, employees typically have three different types of colleagues: those with whom they work closely, often on a daily basis; those with whom they work regularly, perhaps meeting them once a week or a few times each month; and those with whom they work rarely. The residence hall provides students with exposure to precisely the same three categories of individuals: roommates or suitemates with whom they interact on a daily basis; those who share their wing or floor and with whom they tend to interact weekly or monthly; and the other residents of the hall with whom they interact more rarely. This situation is distinctly different from what you'll encounter

in an apartment setting (where you may only know the other people who share your apartment and where there are unlikely to be regularly scheduled social opportunities with others who live nearby) or at home (where family relationships create a distinctly different dynamic from what you encounter in the workplace). As a result, residence halls play an important educational role in helping you prepare for your professional life after college.

- **Residence halls typically provide a structured support for the solution of problems; you'll rarely encounter this type of support in other residential environments.** Conflicts inevitably arise in any type of residential setting. Individual differences and preferences, while important to our appreciation of human diversity, produce tensions from time to time. (See Unit Ten on the issue of diversity.) For instance, if you live in an apartment, you usually have to fall back on your earlier experiences or trial-and-error when you want to resolve a conflict with a neighbor or roommates. At home, family structures develop their own ways of solving problems over an extended period of time; these approaches are unique to each family and rarely can be applied to other types of social situations. Most residence halls are different, however. They have well-defined support structure that can *teach* you techniques of conflict resolution and provide you with support or assistance if those techniques don't work. Resident assistants (RAs) and hall directors often offer guidance in mediation, intervention, and negotiation that can be valuable educational experiences in and of themselves. In truly difficult situations, these members of the professional staff can intervene directly to help resolve the matter. Whereas in other types of living arrangements a conflict over, for instance, music that's played too loudly becomes an *impediment* to optimal learning, in a residence hall it becomes an *opportunity* for learning. Many students thus realize after graduation that the approaches to conflict resolution they use repeatedly throughout their lives were developed, not in a credit-bearing course, but during their time in a residence hall.

- **The combination of choice and restriction typically encountered in university residence halls provides significant development for students in such areas as leadership, collaboration, adaptability, taking initiative, and creative problem solving.** Unlike other kinds of living environments, university residence halls provide a *structured* compromise between freedom and restriction. In other words, certain activities are allowed, others are forbidden, and still others are mandatory. That very combination provides a fruitful environment for learning. Leadership opportunities may be more easily avoided if you're living in a private apartment or at home where, depending on your family, people may be less likely to challenge your decisions. (After all, family members and roommates have probably learned to cope with your habits and idiosyncrasies in a way that neighbors and suitemates in a residence hall may not.) Residence halls, on the other hand, are particularly good at developing your skills in leadership, collaboration, and adaptability by creating situations where you *can't avoid* participation, thus compelling you to achieve goals you may not have otherwise imagined possible. Moreover, the residence hall provides good preparation for similar experiences in the workforce where you'll likewise face a combination of freedom, restriction, and compulsion. Your family may have to tolerate your bad behavior from time to time. Your friends may be willing to cut you some slack. But the residence hall staff, like your future bosses and colleagues, will only tolerate so much before you either are forced to "play by the rules" or find another place for yourself ... if you can.

The preceding three points first appeared in Buller (2008) 1-2.

Living/Learning Communities

There have been a number of efforts to enhance the residential experience for college students, make its benefits more systematic, and develop a closer connection between classroom and experiential learning. Among the most common of these efforts has been the rise of **learning communities** and **living/learning**

communities. Although some institutions treat these terms as though they were synonymous, they can also be used with very different connotations.

- A **learning community** is a specially selected cohort of students who take one or more of their classes together. The idea of a learning community is that it'll help the group of students make the transition to college more easily by providing them with a "built-in" social network, an easily identified source of study partners, and a group of peers who are undergoing similar experiences at the same time. While a learning community is possible in as little as one class (usually a required freshman course, such as composition, a first year seminar, or an orientation course), the concept works best when the same group of students take two, three, or even four of their courses together. Seeing familiar faces in class and after class can help more reserved students overcome the difficulty of making new friends at college, broaden the basis of shared experiences for the cohort, and make it easier for the learning community to recognize when one of its members is having difficulties.
- A **living/learning community** carries this basic concept of the learning community one step further by having members of the cohort live near each other in a residence hall, thus facilitating social connections and conversations outside of class. In highly developed living/learning communities, students may even take one or more of their courses right in the residence hall, underscoring the close connection between the learning that occurs both in and outside of the classroom.

In many cases, students who participate in a learning community or living/learning community do better in their courses than comparable students who aren't associated with such a community, are less likely to transfer to another institution before they graduate, and state that they're generally more satisfied with their undergraduate experience. Students who participate in living/learning communities are also more likely to assume leadership roles in their classes and in campus government, feel that they've made a smoother social transition to the college environment, and have a better record of attending and participating in

classes. See Castro-Cedeno (2005), Smith, MacGregor, Mathews, and Gabelnick (2004), Stassen (2003), Pike (1999).

It should be noted, however, that these effects are most noticeable in traditional-aged college students, particularly those who join the learning or living/learning community immediately upon entering college. Transfer and non-traditional students have their own set of needs and interests in communities that doesn't always overlap that of traditional college students. For instance, we've already seen that transfer students may know quite a bit already about how colleges and universities work, as well as the various strategies needed to succeed there. The type of community that can most benefit transfer students, therefore, is one that helps them negotiate the unique environment of *this particular* college or university, which may differ in many ways from their previous schools. At some colleges, the offices that handle certain student issues, such as financial aid and advising, may operate in wholly different ways from what you'd find elsewhere. A student may come from a school in which the financial aid office (which oversees



need-based support) and the business office (which deals with billing for tuition and fees) were highly integrated, providing a sort of “one stop shopping.” But his or her current institution may have offices that, for whatever reason, are wholly separate. A community of students who have “been there and done that” can help smooth the transition to this new environment in ways that even the best orientation or first-year-experience program can't. Similarly, coursework that was easy at one school because there was a great deal of student support may suddenly seem more difficult because the student's new school expects people to be more independent in how they learn. A solid community of transfer students who have had or are having similar experiences can become a valuable learning community,

providing its members with mutual support and the advice they need to succeed in their new environment.

Non-traditional students are far less likely than traditional students to live in a residence hall, so the most familiar sort of “living-learning community” is frequently not appropriate for them. But they do have other needs and challenges that could be addressed through a different type of community support. For example, many non-traditional students are trying to balance their schoolwork with raising their families, working long hours at a job, or caring for aging parents. By forming a community with those in similar situations, they can receive moral support from people who know what they’re going through, as well as concrete forms of aid such as collaborative childcare, carpooling, and adult daycare. Due to the changing nature of the student body today, many colleges and universities are facilitating the formation of these student-to-student support communities. In cases where that institutional support isn’t present, however, developing a network of assistance for transfer and/or non-traditional students can be a valuable student leadership project or the focus of a community service learning activity.

Being Intentional

No matter what age you are now, try to envision your life five, ten, and twenty years in the future. What communities are you likely to be involved in then that aren’t yet important to you? Are there any steps that you can or should be taking now in order to be prepared to become an active member of those communities at a later date? For instance, some traditional-aged students may think, “In ten to twenty years, I’ll have children of my own. Even though participation in a formal religious community isn’t very important to me now, I’ll want to be active in my faith for the sake of the children.” This type of intentionality helps us apply critical thinking to our own motives. Why, if a formal religious environment is a good thing for these students’ future children, do the students see little value in this community for themselves now? Be as candid and objective as you can in analyzing your own motivation, even if this line of inquiry takes you into areas that you find a bit uncomfortable.

Service Learning**“Well, you know, we all want to change the world.” The Beatles, “Revolution,” 1968**

In Unit Three we saw that engaging in service learning is quite different from performing service alone. To review this important concept, **service** may consist of any activity we perform for the benefit of others. Preparing packages of supplies for the homeless, stuffing envelopes for a fundraiser, and shoveling the driveway of an elderly neighbor are all examples of service, but they don't provide a significant opportunity for *learning*. **Service learning** takes place in carefully planned situations where students have an opportunity to contribute to the benefit of others by employing some knowledge or skill developed in connection with their academic work, building on their knowledge through that activity, and then *reflecting on* what they learned as a result of the service performed. To put it another way, service benefits the people we serve, while providing us with satisfaction that we've done something worthwhile. Service learning, on the other hand, benefits the people we serve, while providing us with both satisfaction and a significant development of our knowledge or skills. Of course, any act of service can increase our knowledge accidentally. The important difference is that service learning increases that knowledge *intentionally*. For instance, in a graphic design course, students might develop logos, brochures, and website designs for a project aimed at enhancing adult literacy in their area. In doing so, they might plan to learn from the group they're serving which materials were particularly effective and which failed to create the impact they desired. Students in a technical writing course might draft a grant proposal for a local food bank, while learning from the comments of the reviewers how to improve their grant writing skills. Students in a federal government course might develop summaries that clarify as objectively as possible the stance of various candidates on issues relevant to the community, while enhancing their own knowledge of how local issues affect national campaigns. Although some element of learning is bound to occur almost naturally in each of these cases, the experience truly becomes service learning when the instructor

designs the course in such a way that students *must* reflect on their service experience and learn from it. They may be asked questions like, “How would you have designed your website differently if you had known in advance what your clients would say on their evaluation surveys?” or “What was the common theme that appeared in the comments of the grant reviewers that will help you prepare proposals in the future?”

In addition to the distinction between service and service learning, there are other important terms you’ll encounter in courses that encourage experiential learning.

- **Social entrepreneurship** is the application of techniques commonly used by business entrepreneurs (developing business plans and models, creating start-up enterprises, taking calculated risks, securing start-up funds, and launching a sustainable enterprise) with the objective of making a significant social contribution rather than simply turning a profit. Examples of social entrepreneurship include inventing products that serve a public good (such as increasing automotive safety or assisting the physically challenged) and activities that support a social program in an ongoing manner (such as one that improves adult literacy by offering paid services to those who can afford it and using that money to support a free program to those who can’t afford it).
- **Civic engagement** consists of activities designed to promote participation in public life. Civic engagement thus encompasses everything from being involved in improving one’s local community to active participation in political processes at the national level. Although civic engagement doesn’t necessarily have to include service learning, almost all comprehensive programs of civic engagement incorporate some aspect of community service, volunteer work, and active social involvement into their activities. When these service projects also add intentional components of reflection and development to the academic program, they become true service learning opportunities.
- **Service requirements** are policies at certain colleges and universities that

mandate student participation in service projects as a prerequisite for graduation. While some people reject this notion of “mandatory volunteerism” as a contradiction in terms, many institutions see it as a means of developing good habits they hope students will continue after graduation. It should be noted, however, that even a required level of service isn’t the same thing as service learning unless there’s also an expectation that students will reflect on their experience and improve their knowledge, skills, or attitudes as a result.

- **Alternative Spring Break** is an activity sponsored by many colleges and universities where students spend their mid-semester vacations, not partying or relaxing, but engaging in various service activities. The students might spend their break building homes under the supervision of Habitat for Humanity™, aiding the victims of a flood or earthquake, clearing trash or debris from a polluted area, setting up projects to combat illiteracy, and the like. Many alternative spring break programs provide participants with “service credits” that can be documented on either their academic or extracurricular transcripts. At certain schools, the students also keep journals, prepare short films about their experiences, or document their activities online as part of a supervised service learning program.

Being Innovative

In 2010, Robert Bringle, Julie Hatcher, and Richard Muthiah conducted a study to determine whether students who had a service-learning experience in their first year of college were more likely than other students to persist in college and enroll at that school for a second year. You can find their study in either of the following sources:

- <http://www.freepatentsonline.com/article/Michigan-Journal-Community-Service-Learning/255178769.html>

- Bringle, R.G., Hatcher, J.A., & Muthiah, R.N. (June 6, 2010). The role of service-learning on the retention of first-year students to second year. *Michigan Journal of Community Service Learning*. 16.2, 38-49.

Obtain a copy of this study and then examine it as you would if you were using it as part of a literature review.

1. What were the authors' credentials that qualified them to conduct this research?
2. Based on what you can learn about the authors and their backgrounds, do you believe there are any unstated assumptions they may have brought to their research project?
3. On the basis of what you can learn from their published article, did the authors examine previously published research related to this topic? In other words, do they appear to have done a proper literature review?
4. What was their methodology?
5. What was their sample size?
6. What were the limitations on their study?
7. What were their conclusions?
8. Do their conclusions seem warranted in light of the research they conducted?
9. What possibilities for future research might develop out of this study?

Based on your answers to these questions (particularly the last question), how would you design a research project to carry their work further?

How can you find out if credit for service learning is available at your school?

Although it's possible that your school may have a course specifically titled "Community Service Learning" or something similar, most courses that involve this type of experiential education aren't obvious from their titles or catalog

descriptions. For this reason, students who are interested in locating service learning courses may have to do a bit of investigation. Your advisor may be aware of courses that include a significant service-learning component. The Dean of



Students Office, Academic Support Services Office, or Internship Office may maintain lists of courses that include service learning. Doing an Internet search on your institution's site, using such phrases as "service

learning" or "civic engagement," may also provide you with the information you need. Talk to your friends and to upper-level students to find out which courses include service learning. Finally, if there don't seem to be courses on your campus that involve service learning, talk to a faculty member who seems to have interests in such areas as social justice or environmental issues about *starting* a service learning initiative. Helping to create a program of this sort can be an important act of service at the same time that it demonstrates your leadership role. If you decide to start a community service initiative at your school, there are plenty of excellent examples available to inspire you.

- **Florida International University** maintains a website called "101 Ideas for Combining Service & Learning" that offers creative suggestions for incorporating community service learning projects into such disciplines as art, biology, English, philosophy, sociology, and many others. See www.fiu.edu/~time4chg/Library/ideas.html.
- **Virginia Wesleyan College** has a well-organized initiative in community service learning with its own center, handbooks on how to start new projects, guides on documenting community service, and summaries of successful service activities. See www.vwc.edu/student_life/comm_service/.

- **Boise State University** operates an office of service learning as part of its Center for Teaching and Learning. The BSU service learning initiative includes an excellent set of questions that can be used as the basis for a reflective journal or blog on a service project (servicelearning.boisestate.edu/index.cfm?fuseaction=content.view§ion=16&page=46), maintains an easily searchable database of current courses that have a service learning component, and provides an opportunity for students and faculty members engaged in service learning to speak of their experiences to others.
- **Mary Baldwin College** adopted the theme of “Learning for Civic Engagement in a Global Context” when it prepared its Quality Enhancement Plan (QEP) as part of a 2007 reaffirmation by the Southern Association of Colleges and Schools. The resulting QEP document summarizes best practices from other institutions, creates a plan to evaluate the success of service learning projects, and discusses the strategy of incorporating service learning and civic engagement in all the school’s majors. See www.mbc.edu/strategic_plan/docs/qep.pdf.
- Since 1996, the **University of Michigan** has sponsored the Ginsberg Center for Community Service and Learning, which has as its mission “to engage students, faculty, and community members in learning together through community service and civic participation in a diverse democratic society.” (ginsberg.umich.edu) The center identifies courses at the institution with a service-learning component, develops its own publications on community service (including the *Michigan Journal of Community Service Learning*), and trains faculty in ways to incorporate service learning into their courses.
- The **University of California-Berkeley** operates a Service-Learning Research and Development Center that developed the widely used Evaluation System for Experiential Education (ESEE), which assesses the effect that service-learning activities have on students, faculty, educational institutions, and communities. In addition, the center offers small grants to faculty members who wish to develop, improve, or evaluate service learning

courses and maintains a directory of research initiatives in the area of service learning.

Reviewing the websites and publications of these and other collegiate centers of service learning will provide you with more than enough ideas to establish your own community service project. In fact, one of the best service projects you may ever develop is establishing or enhancing a center that encourages other students just like you who are interested in combining service with your academic progress.

Adding Service Learning Experiences to an Existing Course

Whether you will be permitted to add a serving-learning project to an existing course depends both on the interests of the faculty member and your institution's own policies. At some institutions, formal service learning or civic engagement contracts may exist, which can provide students with additional academic credit by incorporating an approved experiential component into an existing course. In most such systems, at the beginning of the term a student proposes a service-learning project that's relevant to the course, has the project approved by the school's administration or a faculty committee, and completes the project in addition to the course's other requirements. Upon completion of the project, some systems grant the student an additional half-credit or credit of academic work, often on a pass-fail basis. At the institutions where this option exists, there are usually limitations on the number of such projects a student can apply towards graduation. At other schools, this formal mechanism isn't available but faculty members may be willing to work with you to build an appropriate service-learning project into one of your courses. At times, you may be able to use this service-learning project to substitute for another requirement. At other times, your instructor may allow you to pursue this initiative for extra credit. And in some cases the only tangible benefit you'll gain from the project is additional knowledge and the personal satisfaction of having made a difference. In any case, if service learning is something that interests you, talk with your professor or teaching assistant at the very beginning of a course in order to discover whether there are ways in which your interests can be incorporated into that particular class or section.

Key Principle

Sometimes the best way to achieve something important in the world is not to identify a particular job and seek to be offered it but rather to identify a pressing need and seek to fill it. Service learning provides practical experience in how this goal can be achieved.

Making Your Service Learning Experiences as Beneficial as Possible

We've already seen that, by keeping a journal or blog, you can make your service learning experiences far more *reflective* and *intentional* than they might otherwise be. In other words, any time you contribute service in any way, you can derive both a sense of satisfaction and a level of knowledge you didn't have before. The knowledge you gain may be as simple as learning a bit more about the life of someone you helped, as complex as developing an entirely new approach to a difficult problem, or as profound as a radically altered awareness of what you want to do in life. The real challenge in all this is that many of the lessons you learn while performing service, even the ones that affect you deeply at the time, may become diluted or even lost in the months to come as new problems and issues arise. For this reason, the reflection you perform as part of a service learning project can help you take advantage of the lessons that you learn in a service project and use them to benefit even more people in the future. One way of beginning each service project is to identify your goals and expectations.

- What are you trying to accomplish with this particular effort?
- What are the deliverable benefits you expect to provide by the time the project is concluded?
- What standards might you use to determine whether you've been successful in making a difference through this project?
- What do you anticipate learning about yourself and others during the activity?
- How will you go about discovering what the greatest needs are for the person or group you're serving?

Then, as the project continues, you should chronicle your experiences.

- What specific actions do you take in order to achieve the goals of your project?
- Are the needs of your target population the same as you expected before the project began, or are they different? If they're different, is it because these needs are greater or less than you expected or because they turned out to be altogether different in nature from what you anticipated?
- What are the reactions of the people whom you're serving? If you encounter attitudes that don't include gratitude or appreciation for your efforts, how does that response make you feel about your efforts? What might account for the reactions that you're receiving?
- If you're performing this project as part of a group, what do you learn about the motives for service among your colleagues? Do the people with whom you're working provide good role models for you? How do they handle unexpected setbacks or difficulties?
- As your project continues, do you find yourself developing new skills in any areas? Are you becoming more efficient at certain tasks? Are your attitudes changing in any way?

(For additional questions that can aid your reflection on the project, see the website maintained by Boise State University that was mentioned earlier in this unit.) Then, at the completion of the project, it's time to engage in serious and focused reflection on what you've learned or gained from the service activity. If you're doing this reflection on paper, remember everything you've learned about reflection in this course. (See especially Unit Two.) Simply let your thoughts flow wherever they take you and don't stop to look over your writing until you have filled at least two or three pages with your reflections. If you're keeping your thoughts in a blog or word processing file, write without pausing for at least half an hour. Create your first draft, not by saying the things you believe are expected of you or that you're "supposed" to say in these situations. Be as candid with yourself as possible. If you believed that the service project was going to be a life-changing experience but all you felt was frustration, say so. If you hoped to receive

widespread gratitude but were met only with suspicion or indifference, record those thoughts. If you intended to make a genuine difference but feel that all you did was waste your time, be honest. At the same time be just as detailed and open about your positive experiences. Give attention to what you've learned about the best ways to solve problems, motivate others, and promote positive change. Consider any insight into yourself you may have gained. Reflect on the goals you had at the beginning of the project and determine which of these goals you fulfilled. Most importantly, which goals were left *unfulfilled* and why?

- Were there ways in which you benefited more from the people you were serving than they benefited from you?
- Did you enter this project with an expectation that you'd be teaching and helping others, only to learn a great deal from them and to realize that the assistance you provided each other was mutual?
- If you had a similar opportunity in the future, what would you do differently?
- If your experience was generally positive, how might you encourage others to participate in similar projects?
- If your experience was generally negative, what would you change to make subsequent efforts more positive?

The Pro's and Con's of Social Networking

We saw earlier that, when people speak of their “community,” they're not always talking about people who live nearby. While physical proximity remains important for much of what we do, the rise of **social networking sites** has made it easy for people to think of such concepts as “friends” and “community” in entirely different ways. You're probably quite familiar with the most popular social networking sites such as Facebook, MySpace, Classmates.com, Twitter, and LinkedIn. In addition, a number of photo sharing sites — such as Flickr, Snapfish, and Photobucket — as well as online journals or blog sites — such as LiveJournal, Xanga, WordPress, and Blogger — have the capability for people to do a certain amount of social networking. These resources can greatly expand our contact with others who have

interests similar to our own or with whom we develop new interests. For instance, you may not know many people in your own town who share your fascination with, say, a particular band from the 1980s, a television program that was canceled after the first episode, a certain model of automobile, the books of a specific author, or individuals who share your name, but online this community may be quite large. Social networking sites can thus be very useful to undergraduate students in expanding their education beyond the classroom and their community beyond their place of residence. In short,

- Social networking sites are excellent ways of staying in touch with your friends.
- You can use them to share photographs.
- The blog or note feature of most sites can be used as an electronic journal that allows you to reflect on your college experience.
- For people who sometimes find it difficult to initiate a conversation face-to-face, social networking sites can make it easier to meet others.
- Your school may use these services to notify you of events on campus or in the community and clubs that are looking for new members.
- If you need a ride home or want to visit someone in another town, social networking can put you in touch with others who are traveling to the same destination.
- Communicating with others can provide a source of entertainment and relaxation at the end of a busy day.

On the other hand, social networking sites also pose some very serious dangers. Photos, journal entries, or open communications about drug use, excessive drinking, sexual encounters, and other activities have sometimes reached prospective employers, costing students the jobs or internships they wanted. People who have shared too much



information online have become the victims of identity theft. In certain cases, stalkers have used information about college students, widely available on social networking sites, to track down the students' addresses at home and at school, thus endangering their safety. Sameer Hinduja and Justin W. Patchin have studied the abuses resulting from the availability of personal information online. Based on their research, Hinduja and Patchin offer the following five guidelines for safe and responsible social networking. See Hinduja and Patchin (2008).

1. **Assume that *everyone* has access to your profile.** Even if you restrict access to your personal information, unscrupulous people can easily copy that information and make it available to others. Assume that everything you post online, no matter how much you try to limit it to a small group of friends, can be seen by members of your family, your professors, future employers, and unscrupulous people. *Never* post your Social Security Number or student ID online. Even your date of birth can provide people with access to information about you. Moreover, information can still be available to others long after you remove it from a social networking site. So, the best rule of thumb is only to post information online that you wouldn't mind being read *by* anyone *at* any time.
2. **Use discretion when putting pictures (or any content for that matter) on your profile.** If you're a member of any social networking site, you already know that many of the photographs people post online contain sexually suggestive images, depictions of alcohol or drug use, records of ridiculous or embarrassing incidents, or other images they wouldn't want just anyone to see. In the same way that you assume any *information* you post online may be retrieved by a member of your family, professor, future employer, or sexual predator, so should you assume that your *online photos* could also be seen by anyone. A photograph that shows your wonderful home theater system, accompanied by another image revealing your apartment number or the name of your residence hall, could be viewed by potential thieves. Remember, too, that you have very little control of the photographs your *friends* take of you at a party or in an embarrassing situation. Just about anyone with a cell phone is a

potential photographer these days and, even if you are careful about what *you* post on a web site, other people may not be as scrupulous.

3. **Assume that people *will* use the information on your profile to cause you harm.** You certainly don't want to become paranoid or suspicious of everyone around you. The vast majority of people are honest, generous, and caring to their friends and even to strangers. Nevertheless, since the Internet is available to so many people, you have to assume that there are individuals online who may not have your best interests at heart. A good practice is only to "friend" people you actually know. Another good practice is to review every piece of information and photo before you post it online with this thought: What harm *could* this item do if the wrong person saw it? Remember, too, that people who are close friends today may not be your friends tomorrow. As unfortunate as it is, arguments and rifts in friendships do occur. You don't want inadvertently to provide someone with information or a photo that could later do you significant harm.

Being Analytical

The issue of Internet privacy creates legal challenges that evolve continually.

Consider the following comment by Michael Morris, lieutenant with the university police, California State University-Channel Islands.

If university officials were to learn that a student had conducted extensive online research about the personal life and daily activities of a particular faculty member, posted angry comments on his Facebook wall about that professor, shopped online for high-powered firearms and ammunition, and saved a draft version of a suicide note on his personal network drive, would those officials want to have a conversation with that student even though he hadn't engaged in any significant outward behavior? Certainly. This information, which may reside in the university's IT system, would allow the campus to strategize a swift and effective intervention, and take steps to prevent violent behavior from ever occurring. In such cases, an important distinction would have to be made between violations of the law and violations of campus policy, and established guidelines would have to be followed to ensure the students' rights to due process. ... Although university administrators may resist the idea of passive behavioral surveillance of the campus community because of privacy considerations, the truth is that society has been systematically forfeiting its rights to online privacy over the past several years through the continued and increased use of services on the

Internet. Social-networking sites and search engines store and divulge personal information accessible to the world each day, yet people continue to use them in increasing numbers. (Michael Morris)

Consider this passage carefully and consider, not whether you agree with Morris' argument, but whether he proves his point effectively. Think about any unstated assumptions made by the author.

1. For instance, the statement begins, "If university officials were to learn that a student had conducted extensive online research about ..." How are university officials likely to "learn" that this research had occurred?
2. Morris also says that, if a college or university had access to this information, it could "take steps to prevent violent behavior from ever occurring"? What steps might the author mean? Which steps would be appropriate without infringing on a student's constitutional rights, as well as his or her right to be presumed innocent until proven guilty? (Is the latter right guaranteed in the United States by the Constitution? If not, what is the source of this right?)
3. Does Morris' argument give adequate attention to the issue of privacy? How does he deal with privacy in his statement?
4. How effective is the argument that "the truth is that society has been systematically forfeiting its rights to online privacy over the past several years through the continued and increased use of services on the Internet"?
5. How effective is the argument that "Social-networking sites and search engines store and divulge personal information accessible to the world each day, yet people continue to use them in increasing numbers"?

After analyzing this passage using a critical thinking approach, consider how you might delve further into this topic of privacy, security, and electronic communication.

6. How would you discover what the *most recent* lawsuits and rulings have been in the area of Internet privacy?

7. Since the U.S. constitution was written long before electronic communication was possible, which clauses of the constitution are applicable when issues of Internet privacy arise?
8. Can you discover any evidence that different jurisdictions have handled these issues in different ways? Do “community standards” have any legal bearing on electronic communication?
9. How many of the following different types of law tend to become involved in issues of electronic privacy?
 - a. International law.
 - b. Constitutional law.
 - c. Criminal law.
 - d. Contract law.
 - e. Tort law.
 - f. Property law.
 - g. Intellectual property law.
10. Can you identify any important issues of electronic privacy that appear not to have been addressed through legislation or case law?

4. Assume that there are predators trying to find you. Here again the point is not to make you overly suspicious of everyone around you, but to encourage you to reflect on your choices. Sexual predators sometimes identify potential victims through photographs and information appearing on the Internet. Consider the images you post online: How might those pictures be interpreted by someone who wished to harm you? Did you post information on a social networking site that indicates where you live, when you tend to go to class, when you’ll be away from your room or apartment for an extended period, or when you’ll be home alone? For instance, what might you assume about a person who listed his or her status as “lonely”? If a student posted a number of photos of himself or herself in various stages of undress or in suggestive poses, what might a potential predator assume? What problems might result from a

student posting his or her location online using Foursquare or the check-in function of Facebook?

5. **You may be held responsible for inappropriate content on your profile.**

Some colleges and universities have policies that prohibit students from posting various types of photographs or information online. These policies aren't created to restrict free speech; they merely require that free speech be made at certain times, in certain locations, and in certain ways. That type of restriction is possible for a school because it has an established interest in protecting its constituents and in maintaining the sort of order that makes its central function possible. Be sure to read your institution's "Acceptable Use Policies" for information that's posted on or retrieved by equipment it owns. In addition, your Internet service provider may have restrictions on what you can make available through its servers. These restrictions are usually outlined in a section called the "Terms or Service," which is available on the service's website.

It's also important to note that, although people often think of email, instant messaging, and text messages as safe and private modes of communication, these media are actually quite public. Many systems store records of messages that pass through their servers for years, in certain cases indefinitely. You can never know when the most private and "confidential" email, text message, or instant message that you send may be seen by others. Although it seems sensationalist to say so, there's one key principle that every college student would be well advised to keep in mind.

Key Principle

Never write anything in an email, text message, or instant message that would make you uncomfortable if it were quoted in the newspaper. The same rule applies to any information that you post online at a social networking site, in a blog, or in any other type of electronic forum.

Exercises

1. Identify someone who's extremely active in the town where your school is located. The person you select might be an elected official, such as the mayor, a representative to the town council, or a county commissioner. Alternatively, you might choose someone whose occupation creates strong ties to the community, such as a realtor, police officer, or member of the Chamber of Commerce. Ask if you can conduct a brief interview. Try to discover as much information as you can about the community that includes your college or university. For example, you might ask:
 - a. The person's five favorite places to take a guest who's never been to the town before.
 - b. The local issue or challenge that the person regards as most important.
 - c. The person's favorite memory about living in this area.
 - d. What one thing the person might change about the community, if he or she could.
 - e. The best reason why someone might consider relocating to the area.
2. In the *Republic*, Plato imagines the ideal state. Create a brief sketch that does something similar for the ideal residence hall. Would bedrooms be private or shared? How would toilets and shower facilities be arranged for each unit? Would bedrooms be grouped around a shared common area? If so, how many bedrooms would be in each suite? If not, what alternatives could be provided for social activities? How many total students in an individual building would be neither too many nor too few? What sort of staff would the residence hall have? What sort of services would be provided? What features of a residence hall would be so attractive to you that you would prefer it over living at home or in an apartment?
3. Identify the social problem you believe to be the most serious in terms of the suffering it causes. Understanding that you're unlikely to be able to *solve* the problem in the limited time available, what practical steps could you

take to make a positive difference if you had only one week in which to complete a service project? How would your plan change if you could devote an entire month to your project? A summer? A full academic term? The entire year?

4. Do an Internet search on yourself to find out just how much information about you is already available. Using a standard search engine, do a search on every variation of your name that you can think of. Also do a search on all of your email addresses, login names, website aliases, instant messaging IDs, student IDs, and other ways in which you could be identified. If you already have a blog or belong to a social networking site, look at information that you've posted to see how it might be used illegally or to gain further information about you. Could someone find your home address or where your residence hall is by using the Internet? Have you ever posted your telephone number? What sort of profile can you develop on yourself simply from doing a few Internet searches based on information already online?

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Unit Twelve:

Making the Most of Your College Experience

Learning Objectives:

1. To consider a few useful approaches to building valuable networks of contacts.
2. To recognize the role that extracurricular activities can and should play in a well-rounded college experience.
3. To understand the role that athletics can play in the college experience of any student.
4. To become familiar with the best ways to benefit from the co-curricular activities available to college students.
5. To discover how internships and other sorts of practical experiences can complement classroom learning in college.

Networking and Building Contacts

Everyone's heard the old saying that goes, "It's not *what* you know; it's who you know." Certainly we wouldn't be investing so much time and money in a college education if we thought that what a person knows doesn't matter at all. But the people you meet through your college experience are important, too. In the last unit, we explored a number of different communities to which you belong. In this unit, we're going to begin a discussion of how you can make the most of your college experience by focusing on one of those communities in particular: your personal network of contacts.

At the same time that you're learning a great deal in your coursework and engaged in all the different aspects of a well-rounded college education, you're also forming a personal network that can become very important to you in the future. You're in class with people who share some of your same interests, study fields that complement your own, and are creating many of the same college memories. These are the people whom you'll call when you're at one of those crossroads in your life — facing a family triumph or tragedy, considering whether to take a new job, uncertain about a major life decision — and need a candid source of advice. Many of the people

you meet in college will go on to successful careers of their own. They'll be able to help you — and you'll be able to help *them* — repeatedly, after you graduate. So, the friendships you're forming now aren't distractions from your college experience; they're an integral *part* of your college experience. If you don't cultivate these networks now, you may be doing yourself a disservice when you could benefit from them five or ten years from now.

Think of your personal networks as a series of overlapping but expanding circles as depicted in **Figure 12.1** at the end of this unit.

Level 1	<p>These are people you know directly: relatives, friends (including those you make in college, and other people you know on a first name basis).</p> <p>Your relationship with Level 1 contacts is often informal. You wouldn't hesitate to phone these people to request a favor, and you wouldn't hesitate to offer them a favor in return.</p>
Level 2	<p>These are people who are Level 1 contacts of <i>your</i> Level 1 contacts. You don't know them directly, but your Level 1 contacts may be able to get you in to see them or at least serve as a reference for you in your dealings with them. Your relationship with Level 2 contacts is likely to be much more formal than with your Level 1 contacts.</p>
Level 3	<p>These are people who are Level 1 contacts of your Level 2 contacts. Since your Level 2 contacts don't know you directly, they may not feel comfortable putting you directly in touch with these Level 3 contacts. Rather, they may simply say that they've "heard good things" about you and leave it up to the Level 3 contacts to get in touch with you, if they so desire. Your relationship with these contacts is likely to be very formal indeed.</p>

As you see, you don't have to know someone directly in order for that person to be part of your overall network. The people you meet in college will know other people — who will themselves know other people. It's this broader network of contacts that can be particularly important to you as your life continues after college.

When you have an opportunity to talk to your contacts at these various levels, be sure not to make the other person feel as though you're only having this conversation because you want something. It's never a good idea, for instance, to ask your contacts — particularly your Level 2 and Level 3 contacts — for a job directly. Rather, ask them for their advice and suggestions. Good questions include things like, "Is there any way in which I could improve my résumé?" and "What sort of experience should I be getting now in order to have a career in this field?" Be sure not to badger a contact for information or an opportunity; the goal is to make people glad to have the chance to talk to you, not to have them look for ways to avoid you. When networking, a softer, more indirect approach is always preferable to a hard sell.

While much of your network will include people you meet in your classes, your important contacts shouldn't *only* be people who are majoring in the same field as you. Let's begin looking at the reasons for taking a broader approach by defining three terms that have already appeared a number of times in this book.

1. **Curricular activities** consist of the courses, labs, studios, internships, and other types of credit-bearing experiences you have as an undergraduate. Your curricular activities are recorded on your **transcript**, the official record of your academic performance that is kept by the registrar.
2. **Co-curricular activities** are those experiences that help support, reinforce, or expand your academic work. When you go to hear a lecture on campus, not because you are required to go for a class but simply because you are interested in the topic, you're participating in a co-curricular activity. Academic clubs also fall under the umbrella of co-curricular organizations.
3. **Extracurricular activities** are experiences that are largely social or personal in nature and that have little direct relationship to your academic work. When you go to a dance, exercise in the gym, or spend a day at an amusement park, you're participating in an extracurricular activity. An activity associated with a social organization such as a fraternity or sorority is usually an extracurricular activity unless it also has an explicitly academic focus.

Although this distinction is useful, it can sometimes be difficult to draw a line between where co-curricular activities end and extracurricular activities begin. For instance,

should we regard a film club as co-curricular or extracurricular in nature? Our answer might depend on the emphasis of that particular organization. Does the club offer opportunities for analysis of themes and styles, presentations about the vision of certain directors, and enrichment for students who are completing coursework in film and related fields? If so, the organization seems largely co-curricular in nature. Or are its events basically recreational with little effort made to study or critique the movies that are viewed? If so, the club appears to fall within the category of extracurricular activities. In other words, while viewing your activities in terms of these three divisions can be useful, it's not always the case that any given activity will clearly fall into one category rather than another.



That having been said, however, this distinction becomes important now because you're building your network through the contacts you make in all three of these areas. As an example, let's look at one aspect of college life that many students regard as a highly desirable extracurricular activity, largely because of the networking opportunities it provides.

Greek Life

What we now refer to as **Greek life** is almost exclusively a North American phenomenon. It consists of **fraternities** and **sororities**, types of student organizations that are as old as is the United States itself. The first collegiate Greek society was **Phi Beta Kappa**, which originated as a club for debate and discussion at the **College of William and Mary** in Virginia on December 5, 1776. Since knowledge of Greek and Latin was common among students in the eighteenth and nineteenth centuries, the society adopted a Greek motto, φιλοσοφία βίου κυβερνήτης (*philosophia biou kubernêtês*, “philosophy [or “the love of learning”] is the guide of life”), both to give the organization its name — the three Greek letters that are the acronym of this motto — and to summarize its basic principles. That development began a trend among collegiate societies to adopt a Greek phrase to inspire their names. Additional chapters of Phi Beta Kappa were then created at Yale (1780), Harvard (1781), Dartmouth (1787), Union (1817), Bowdoin (1825), and Brown (1830), beginning the custom for Greek societies to have loosely affiliated chapters at a number of institutions. With the creation of the United Chapters of Phi Beta Kappa in 1883, a greater uniformity of standards and practices emerged among the various local branches of Phi Beta Kappa. See Voorhees (2007).

Even as Phi Beta Kappa grew, it spawned a parallel movement of societies that had their mission based more in service than in academics. **Union College** in Schenectady, New York, witnessed the creation of the first three Greek societies with a social networking mission. The “**Union Triad**,” as it is called, consists of **Kappa Alpha** (founded in 1825), **Sigma Phi** (1827), and **Delta Phi** (1827). A chapter of Sigma Phi was then added at **Hamilton College** in Clinton, New York, in 1831, and so, like Phi Beta Kappa, social fraternities began to exist on multiple campuses. I.C. Sorosis, later renamed **Pi Beta Phi**, is usually regarded as the first sorority (even though it didn’t coin the term) when it was established at **Monmouth College** in Illinois in 1867. The first society that actually called itself a sorority was **Gamma Phi Beta**, founded at **Syracuse University** in 1874. By the end of the nineteenth century, these two terms — “fraternity” and “sorority” — were in common use for all Greek societies with a mission rooted in service or social activities. The word “fraternity” is

derived from the Latin word *frater*, meaning “brother,” and the word “sorority” comes from the Latin word *soror*, meaning “sister.” Even today expressions like “brotherhood” and “sisterhood” are prevalent in the rhetoric of many Greek societies. Increasingly, Phi Beta Kappa and other academic groups began calling themselves “**honor societies**” rather than “fraternities” in order to distinguish themselves from social or service clubs. Honor societies were further differentiated from Greek life organizations in that they usually lacked **chapter houses** and sponsored few, if any, social events. Nevertheless, both types of organization continue to exist, and many college students find their undergraduate experience significantly enriched by their participation in Greek life.

Being Innovative

Greek life tends to be viewed in dramatically different ways at different colleges and universities today. Supporters of social fraternities and sororities argue that these organizations:

- ... encourage service and philanthropy.
- ... provide students with a valuable living/learning community.
- ... promote responsible behavior in such areas as drinking and sexual activity.
- ... encourage community involvement.
- ... offer members an important support group.
- ... and develop a network of contacts for their members after they graduate.

On the other hand, detractors of Greek life argue that these same groups:

- ... restrict their members’ sphere of social opportunities.
- ... place students in situations where they may be encouraged to indulge in excessive drinking or indiscriminate sexual activity.
- ... reinforce the most negative aspects of traditional gender roles.
- ... emphasize extracurricular activities at the expense of academic work.

- ... and may cause students to become involved in hazing (i.e., abusive initiation practices).

If you were to conduct a study designed to support or challenge one of these arguments, how would you go about planning your research? What types of data would you need to collect? If your study involves interviews, surveys, or any other contact with people, what procedures are in place on your campus governing this type of study? How would you go about ensuring that your own opinions about this subject do not affect your interpretation of the results? How might you verify whether the situation on your campus is the same as or different from that found at other institutions? What quantitative or qualitative methods would you use when engaging in this research?

Taking Advantage of Extracurricular Opportunities

Extracurricular activities include everything from your social life to service activities you perform simply because you believe they're important. A well-rounded college experience should include a broad range of these activities and should also be characterized by balance. In other words, devoting too much attention to extracurricular activities at the expense of your schoolwork can have a devastating effect on your ability to achieve many of the goals you've set. On the other hand, focusing too exclusively on studying and research can narrow you and prevent you from developing a more nuanced view of life and the social skills you'll also need to achieve your goals after college. That's why the material we've covered on time management (Unit Six) and decision making (Unit Seven) is so important. If you get control of how you allocate time, you'll be able to be both a successful student and have enjoyable, meaningful extracurricular activities. If you follow a good decision-making process, you can avoid pursuing options that you're likely to regret later.

An old saying goes, "Never regret anything that once made you smile." Do you believe that there's truth in this statement? Or do people tend to support this idea only long after the risks and problems associated with "regrettable decisions" are

past? Are there any ways in which people who follow this principle might be led to make poor decisions?

You've probably seen lists of "100 Things to Do before You Die" or "1,000 Places to Visit before You Die." Because of a 2007 movie starring Jack Nicholson and Morgan Freeman, many people now call their personal list of things they feel they must do before they die their "Bucket List." (In the movie, *The Bucket List*, one of the central characters, Carter Chambers, kept a list of things he wanted to do before he "kicked the bucket.") Putting together a similar list of extracurricular experiences you want to have before you graduate is a good exercise in intentionality.

Since the term "Bucket List" seems rather morbid, let's

call the list we're describing your "Diploma List." It'll contain the experiences you'll try to have before you receive your undergraduate diploma. We'll include a number of items on this list that many college students might include on such a list, then provide space for you to add ten items of your own. The first three columns give you a number of check boxes. As you read the list, check the first box if you've **already had** this experience or the second box if it's **not appropriate for you**. (Not every experience is, of course, suitable for everyone. For instance, some of these suggestions might not



relate well to your personal goals or religious beliefs.) The key, then, will be the items on the list for which neither of the first two boxes are checked. These are experiences you should try to pursue sometime before your graduation. The box in the third column is there for you to check off whenever you've finally had this experience. Since the items you add yourself at the end should be experiences that you feel are appropriate for you but that you haven't yet had, we'll omit the boxes in the first two columns.

_____ 's Diploma List			
Already Done	Not Appropriate	Mission Accomplished	Experience
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spent at least five continuous weeks living outside of North America.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Performed at least fifty hours of community service.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Supported myself for at least one continuous month — including all meals and household expenses — at the current minimum wage.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voted in a municipal, state, or national election.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wrote, submitted, and published a signed "Letter to the Editor" on an issue of great personal concern.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attended an active session of either a state or the national legislature.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taken an extended road trip with a few close friends and no pre-established itinerary.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Swum without “touching bottom” for at least thirty consecutive minutes.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attended a full concert performance by a major symphonic orchestra.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spent an entire afternoon touring a major art museum.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Read a novel of more than 150 pages in a language other than my native language(s).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Studied voice or a musical instrument for at least six consecutive months.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prepared, cooked, served, and cleaned up from a three-course meal attended by no fewer than eight people.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Done my own preparing and filing of both federal and state income tax returns.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attended a performance of a Shakespearian play.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attended a performance of an opera or ballet performed by a professional company.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Been interviewed for a job.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taken a personality profile or vocational interest inventory and reviewed the results with a trained professional.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Read the “Declaration of Independence,” “Constitution of the United States,” and at least one substantive summary about how the

			U.S. Federal Government works.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tried my hand at drawing a picture, making a painting, taking an artistic photograph, creating a sculpture, or attempting some other, similar artistic pursuit.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Practiced meditation or yoga.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attended a major professional sporting event.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Believed, at least once, that I was deeply and truly in love with someone.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Talked for an hour or more with someone with whom I bitterly disagreed until I could genuinely understand their point of view.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ate a vegan diet for at least one continuous week.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gone for at least two continuous weeks with no electronic communication at all, including email, text messaging, telephone calls, television, and the radio.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Taken time to talk to a total stranger who seemed lonely or just in need of someone to talk to.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tried out for a varsity athletic team.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Went back and visited my old high school.

X	X	<input type="checkbox"/>	_____
X	X	<input type="checkbox"/>	_____
X	X	<input type="checkbox"/>	_____
X	X	<input type="checkbox"/>	_____
X	X	<input type="checkbox"/>	_____
X	X	<input type="checkbox"/>	_____
X	X	<input type="checkbox"/>	_____
X	X	<input type="checkbox"/>	_____
X	X	<input type="checkbox"/>	_____
X	X	<input type="checkbox"/>	_____
X	X	<input type="checkbox"/>	_____

Some of these suggestions may strike you as odd. Why would any student want to live for a month at the current minimum wage? The answer is that experiences on a “Diploma List” (or a “Bucket List,” for that matter) shouldn’t *simply* be things that are fun. These experiences should also help us to grow, become better people, and view the world from a fresh perspective. It’s easy to say, “Oh, the minimum wage is high enough already” if we’ve never had to make ends meet on it. Conversely, it could be just as informative to live for a month in a luxury penthouse with no need to worry about paying the bills ... but having that experience is simply not possible for most

people who are serious about completing a Diploma List. If you think you can afford the penthouse and would find it a useful experience, feel free to add it as one of your own items on the list. It's useful to discover how "the other half lives," no matter which "other half" we may have in mind.

In 1997, *Chicago Tribune* columnist Mary Schmich wrote an imaginary graduation speech that, as the expression goes, "went viral." In the process, an **urban legend** (see Unit Nine) arose that falsely attributed the speech to the author **Kurt Vonnegut** and was said to have been given at MIT's 1997 commencement. [**Kofi Annan**, the secretary general of the United Nations was actually MIT's graduation speaker that year. The speech was probably confused with a somewhat similar commencement address that Vonnegut gave at Bennington College in 1970 and later published in his collection *Wampeters, Foma e' Granfalloon* (1974).] Schmich's column and its later expansion gave a group of hypothetical college graduates advice on experiences she believed they shouldn't miss, the very sort of thing that you'd want to include on your own "diploma list." Here are a few of Schmich's suggestions. Which of them do you find most meaningful as you envision the experiences you'd like to have in life?

- **Do one thing every day that scares you.**
- **Read the directions, even if you don't follow them.**
- **Get to know your parents. You never know when they'll be gone for good.**
- **Live in New York City once, but leave before it makes you hard. Live in Northern California once, but leave before it makes you soft.**

<http://www.chicagotribune.com/news/columnists/chi-schmich-sunscreen-column,0,4054576.column?page=2>

Being Analytical

In the mid-1970's David Kolb and Ron Fry developed what they called the **Experiential Learning Model** that consists of four steps.

1. **The experience itself.**
2. **Reflection on the experience.**
3. **Abstracting general principles based on this experience.**

4. Testing these principles in new experiences.

See Kolb and Fry (1975). Since the last step leads to additional experiences and reflections, Kolb and Fry saw this process as cyclical, as illustrated in Figure 12.2 at the end of this unit. What similarities to and differences from the Experiential Learning Model do you find in:

- a. Rolfe's reflective process (see Unit Two)
- b. Gibb's reflective cycle (see Unit Two)
- c. Aristotle's theory of inductive reasoning (see Unit Four)

Looking back at the Diploma List outlined above, choose an experience you've already had and see whether you can apply the Experiential Learning Model to what you gained from that activity.

A well-rounded undergraduate education includes many experiences for which students do not always receive traditional academic credit. Academic clubs, learning communities, residence life, service projects, Greek life, and college sports are only a few of the many opportunities that are available to students at most campuses. By neglecting to sample these experiences, students may be academically successful and may even attain an extremely high grade point average. But they fail to benefit from everything that undergraduate life has to offer students. Getting the most out of your undergraduate experience means attaining a proper balance among your education's curricular, co-curricular, and extracurricular elements. The negative effects of placing insufficient emphasis on coursework can be immediate and dramatic. The negative effects of focusing so exclusively on your coursework that you close yourself off from the complete college experience are often noticed only in the long term, but they can ultimately be just as dramatic. The goal of a well-rounded college education is not simply to produce good students or good athletes or good employees but to produce good citizens and good people.

Athletics and the College Experience

Another way in which you can expand your undergraduate experience is through participation in an athletic program. Although many people regard both **intramural** and **intercollegiate athletics** solely as extracurricular activities, there are a number of

ways in which college sports can play a co-curricular — or even a *curricular* — role in a well-designed academic program. Among the many ways in which you can participate in sports at your school are:

- **As an athlete.** Many college graduates later state that, although they gained most of their knowledge from the courses they took in school, what they learned about leadership, teamwork, and dedication to a cause came primarily from their experiences in college athletics. Depending on the school you attend, what you need to do in order to “make the cut” in intercollegiate athletics can range anywhere from being absolutely outstanding in a sport to simply being willing to participate. If you enjoy engaging in competition, proving yourself, and having a high degree of structure in your day, participating in sports as an athlete can be an especially rewarding part of your undergraduate experience.
- **As a member of the support staff.** Every school needs more than a roster of athletes in order to compete at the intercollegiate level. It requires a large group of people who keep statistics, film games and practices, perform with the band or sing the national anthem, manage equipment, make sure that facilities are ready, publicize events, arrange for transportation, sell tickets, and announce results. Some students find that, although participation as an athlete isn’t appropriate for them, there’s a great deal of excitement in being closely involved with athletics as a member of a support group. You can even combine your interest in mathematics, management, broadcasting, media, or public relations with an interest in athletics and gain practical experience that’ll help you after graduation.
- **As a reporter.** Sports reporting has become a major industry. Nearly every college or university that’s involved in intercollegiate athletics also maintains a newspaper and a website where upcoming athletic events are promoted and past events are discussed. Many schools also have radio stations, cable or broadcast television stations, Internet news outlets, yearbooks, alumni magazines, and podcasts that are in constant need of fresh talent and material. If you have an interest in both sports and mass communications, you can combine these interests by working as a sports reporter regardless of your academic major. You should know that a number of students have gone on from college to professional

reporting positions largely due to their journalistic experience in school.



- **As a spectator.** There are few experiences students have as undergraduates that make them feel as much a part of their school as being in the crowd at an intercollegiate athletic event. If attendance is large, you'll feel as though you're caught up in a shared experience that can make you bond with your school in a way that's difficult to parallel. If the crowd is small, you'll feel part of an inner circle of "true fans"; you'll probably get to know other spectators, many of whom may be parents or friends of the athletes, and thus make contacts you wouldn't have had otherwise. As a spectator, you can not only increase your knowledge of a sport's finer points, but also have an indirect effect on the outcome: When a supporting crowd is enthusiastic, athletes are encouraged to try harder because they don't want to let the fans down. You'll also learn something about your own level of commitment to a cause: Do you only attend games periodically, particularly when your school is doing well in competitions, or do you demonstrate regular support, sticking with a group of athletes through their tough times as well as their successes?

A significant advantage of direct participation in athletics as a student is that it helps you keep fit now and reinforces a pattern of regular physical activity that you can continue for the rest of your life. As we age, however, certain sports become more difficult, and some can even be detrimental to our overall health. Consider your life from this point forward, breaking it into decades by your age. Which athletic and recreational activities are suitable for people in their 30's that are less suitable for those in their 50's and 70's? What types of exercise are useful regardless of someone's age? Use your thoughts on this subject to be intentional about what you should be doing *now* in order to make this health plan more realistic. For instance, suppose that you're a 19-year-old traditional-aged college student. Although your favorite form of exercise now is Ultimate Frisbee, you believe that you'd be more interested in playing golf in your 50's and 60's. Wouldn't it be a good thing to start learning about golf now, so that this sport can already be part of your regular activities later in life? Or suppose you enjoy softball and believe that you can continue to play this sport well into the future. Are there precautions you can take now to prevent damage to your joints and skin so that you'll still be able to participate in this sport several decades from now?

- **As a booster.** The term for a particularly active group of fans for any athletic team is *boosters*. Some schools apply this term only to those who contribute money to support the athletic program. At other schools, boosters are those who support the team in a variety of ways, from arranging for publicity about upcoming events to selling tickets to friends and fellow students and encouraging them to become fans themselves. Boosters tend to be among the most avid fans and supporters of a team. They cheer the loudest, wave signs and banners, and sometimes even paint their faces with team colors. All these activities help boosters bond with one another, as well as with their school and team. But you don't have to engage in extreme measures to be a real booster of your team. Simply express a willingness to take on added responsibilities to make athletics a success at your school, attend

competitions regularly, and demonstrate a high level of support for your school's athletes.

- **As a scholar of athletics.** Researchers study athletics in a number of different ways. Some try to determine the effect on character development that results from participation in sports. Other scholars explore whether there's a correlation between athletic participation and such matters as completing an undergraduate degree, overall GPA, GPA in certain types of courses, *timely* completion of an undergraduate degree, pursuit of a graduate or professional degree, income levels ten or twenty years after graduation, active engagement in civic life, and so on. As an undergraduate student, your institution won't permit you to engage in certain types of studies, particularly those in which you would need to have access to the academic records of other students. Moreover, as we've already seen, any study involving human subjects has to be approved by the Institutional Review Board (IRB) at your school. Nevertheless, you'll still have plenty of opportunities to engage in important research about athletics and its impact on your institution. Think, for example, of a statement you may have heard about intercollegiate athletics that someone supported with **anecdotal evidence** (the use of compelling stories rather than systematically collected data). For instance, you may have heard a claim that most athletic programs cost schools far more money than they generate in income or conversely that they produce a significant amount of revenue for the school. You may have heard that student athletes are far more likely than other students to leave an institution before they graduate or that they graduate on time at a higher rate than their colleagues who don't participate in sports. You could become a scholar of athletics by designing a study that either conclusively proves or refutes one of the statements commonly made about the athletic program at your school.

Of course, not all the athletic activity that occurs on a college campus takes place between institutions. Intramural athletics and club sports have progressed from just being informal competitions, often between residence halls, to a key element in many schools' fitness programs. As such, recreational sports programs can sometimes be quite elaborate, with different leagues of competition for students at different skill

levels and with access to state-of-the-art facilities. In other words, intercollegiate athletics aren't your only option if you wish to participate in sports while you're a student. You may discover that you have a much more diverse range of options at the level of intramurals and club sports than you do if you focus on intercollegiate athletics alone.

Taking Advantage of Co-Curricular Opportunities

Co-curricular activities, those opportunities that expand your knowledge and skills but don't earn you academic credit, can sometimes be life-changing events. More than one student has heard a campus visitor give a presentation and become so excited about the topic that he or she decided to change majors. Other common types of co-curricular activities include playing in a band, participating in debate or a theater production, representing a nation in the Model United Nations, mastering vast amounts of information knowledge for the College Bowl, reading original work at a poetry slam or open mike night, and so on. In fact, there are probably dozens of co-curricular activities that can suit the needs and tastes of each student. A particularly important type of co-curricular activity is being a member of, or officer in, an academic club. Many benefits result from active participation in clubs while you're a student.

- i. **Academic clubs can help students overcome the “silo mentality” found in many departments, academic divisions, and colleges.** The vast majority of American colleges and universities have a strict, discipline-based organizational structure. The calculus course you're taking is probably part of a curriculum developed by a department of mathematics, which may be a unit within a division of math and science, which is in turn part of a college of arts and letters or school of natural sciences. Of course, the names of the specific units could be different at your school, but in all probability some structure of this sort exists. That type of organizational plan has many benefits: It clusters professionals with specialties in given academic areas who can certify that the courses they offer meet high academic standards and are achieving the goals that the discipline has developed. That's why most accrediting agencies assume that colleges and universities will be organized in this manner, and accrediting bodies may even encourage institutions

to adhere to traditional disciplinary structures. The problem with this arrangement is that many of the issues and problems students face after they graduate don't fall into neatly defined disciplinary categories. For instance, when does an actual problem we encounter cease to be purely mathematical in nature and become one of engineering, sustainability, ethics, political expediency, affordability, or human health and welfare, all of which are subjects that may be addressed in separate departments — even in separate colleges — from the math courses you take as an undergraduate? When does a challenging moral issue stop being a matter of ethics as you might study it in a philosophy course and begin to be a matter of political policy, business practice, scientific procedure, or interpersonal communication? Your participation in academic clubs can be of great help in overcoming that type of disciplinary “tunnel vision,” which sometimes results from viewing intellectual content and methods as the exclusive province of this or that discipline. Clubs transcend academic boundaries by including students from a broad range of majors, dealing with issues that are often not addressed by traditional academic departments, and responding to issues much more flexibly than can the curricular committees of a college or university.

- ii. **Academic clubs help students develop their leadership skills.** Although most schools require academic clubs to have a faculty advisor, nearly all of a club's business is performed by students themselves. As a result, students who participate in clubs have frequent opportunities to plan, defend and implement a budget, set priorities and goals, motivate other members, and evaluate the success of their initiatives. This type of leadership experience is excellent preparation for whatever you hope to accomplish after you graduate. Remember that clubs need new volunteers for leadership roles all the time. Although many of the organizations in which you'll participate after your undergraduate experience retain the same officers for several years, the situation is far different at colleges and universities. Presidents and vice presidents of academic clubs graduate, transfer institutions, or become too busy with other commitments to continue in their positions beyond a year or two. The result is that nearly any student who truly wants leadership experience in an academic club will have an opportunity to

obtain it.

iii. **Academic clubs help students learn ways of working together collegially.**

After you receive your baccalaureate degree, many of the opportunities you will have at that time will depend on your



ability to work effectively as a member of a team. Most of today's problems are far too complex for an individual to deal with them in isolation. Law firms, hospitals, corporations, non-profit organizations, associations, small companies, and even colleges and universities themselves want employees who can act collaboratively. The key quality that most entities are looking for in future employees or members is **collegiality**, the ability to work harmoniously towards a common goal with respect for other people's unique contributions. Certainly these skills will be important in your coursework. Group projects, lab partners, study groups, research panels, and learning communities all offer you opportunities to achieve goals as a member of some collective endeavor. Even your interaction with roommates or suitemates in your residence hall can be a valuable experience in learning how to negotiate, respect the individuality of others, and create a harmonious environment. But far more important than any of these opportunities are the experiences provided by academic clubs. Even though a club will probably have a hierarchy of officers, the way in which most clubs operate is through consensus and collegiality. If you are ever in an interview and are asked about your ability to work constructively as a member of a larger group, you'll have specific instances to cite of how you helped plan an event, achieve a goal, or manage a budget as part of an academic club or organization.

Some people see themselves as “joiners” while others don’t. Joiners are people who readily support organizations, causes, and campaigns. They’re likely to be members of many different groups and to derive a great deal of satisfaction from these collective activities. They may even come to define part of their identities from the groups they join and the causes they support. Non-joiners are reluctant to become involved with lots of formal organizations, preferring to spend their time on activities they can do by themselves or to become members of small, more informal groups. Non-joiners may also enjoy trying lots of different activities so as not to commit to any one club that they fear may be time-consuming or overly restrictive.

On a scale of 1 to 10 where 1 represents a person with the strongest possible aversion to being a joiner and 10 represents the complete, almost addictive joiner, how would you rate yourself? What is it about groups and organizations that either gives you a great deal of satisfaction or sends you scurrying in the opposite direction? What does this insight tell you about your core values and beliefs?

- iv. **Academic clubs can help students improve their oral communication skills.** No matter what career(s) you pursue later in life, it’s likely that you’ll need to make oral presentations on at least several occasions. You may be asked to propose an idea, summarize information, or persuade others to take some action. Moreover, you’ll need to be able to speak effectively in a number of different ways: one-on-one, with a small group of people, on video or sound recording, by telephone, and possibly even before large audiences. In some of these situations, the people to whom you’ll be speaking will know you quite well; at other times, the group may consist almost entirely of strangers. The people whom you’re addressing may be very supportive, or they might be skeptical of the point you’re trying to make; at times, they may even be openly hostile. In all these situations, you’re likely to be more successful in achieving your goal if you’re proficient, comfortable, and versatile when it comes to different kinds of oral communication. These skills are developed in your coursework every time you ask a question, discuss an idea, give

a report, serve on a panel, or are called on unexpectedly. But the number of opportunities students have to develop their oral communication skills in class are necessarily limited. There just isn't enough time in most courses to make more than an occasional presentation and, in large lecture classes, you are likely to spend *much* more time listening than speaking. On the other hand, at club meetings, oral communication is of paramount importance. Clubs give you plenty of practice working with other members as you explain a new idea or proposal. You'll also have opportunities to defend formal proposals before groups, possibly even making a budget request before the entire student assembly. You can gain experience communicating by telephone or videoconference as you remind members of meetings, try to secure resources for planned events, or make inquiries about available facilities. Combined with various oral presentations made in class, therefore, academic clubs can be an excellent way to document the success of your communication skills.

v. **Academic clubs can help students become more involved in their communities.**

Through the service projects sponsored by clubs and organizations, students have an opportunity to increase their level of involvement in their local communities. In fact, simply joining a club can be regarded an act of community involvement: As a member, you will be partnering with other people who share similar interests in an effort to accomplish a common goal. Moreover, many academic clubs make valuable contributions in the area of such social issues as environmental protection, reducing illiteracy, addressing homelessness, fighting diseases, promoting understanding among members of various faiths and cultures, supporting human rights, and increasing awareness of social issues or challenges.

Internships and Experiential Education

A particularly common type of experiential learning is the internship. Some institutions distinguish among **internships**, **externships**, and **cooperative educational programs**, but these distinctions aren't universal. For instance, at some schools, internships are *unpaid* experiential learning opportunities at a company, agency, or organization, while cooperative programs are those that pay the students for their

work. At other institutions, that distinction doesn't apply, but internships are programs completed at the same time that a student is also enrolled in traditional classroom courses while cooperative programs are completed during a term when the student has no classes. In a similar way, at some schools, the term "internship" is applied to an experiential learning opportunity at the institution itself, while an "externship" refers to work performed for a company or entity outside of that particular college or university. In contrast to this practice, some schools make no significant distinction between internships and externships. Others use the term "externship" only when students are gaining practical work experience in a health career or the legal profession (where this term is more commonly used) while referring to all other types of experiences as "internships." Since there's very little consistency in how these words are used throughout academia, be sure that you understand how your own college or university defines these terms.

Whatever meaning these various expressions may have locally, however, it's clear that completing an internship while you're a college student can be a valuable addition to your academic program.

- Internships (the collective term that we'll use for the rest of this unit for every kind of experiential learning that occurs at a company, agency, or organization) provide you with documentation that you have practical experience in addition to the learning you received in the classroom. Having this experience can make a great deal of difference when you're seeking a job or applying to graduate and professional schools.
- Internships offer you insight into how different types of environments function. Colleges and universities, small companies, large companies, franchises, doctors' offices, lawyers' offices, not-for-profit organizations, banks, and investment firms all make decisions in different ways. The skill sets needed to thrive in one type of environment may well not apply to other kinds of professional settings. Particularly if you've never taken time off from your schooling for an extended period of full-time employment, an internship can give you practical insight into how various organizations are structured, set priorities, and fulfill their missions.

- Sometimes internships develop into a real job. If you find an internship where you're particularly well suited, it's possible that the same office, organization, or company that offered you the internship will eventually offer you a full-time position once you graduate.
- Internships give you an opportunity to find out if a particular field is right for you before you make a long-term commitment to it. Often the next best thing to discovering that you're particularly well suited to the environment in which you do your internship is discovering that you're *not at all* suited to it. While it may be disheartening to learn only when you're well advanced in your program that the work associated with a major (or the sort of coworkers you'd inevitably have) doesn't appeal to you, it's still much better to develop this insight through an internship than after you've graduated and already taken a job. An internship, in other words, gives you a chance to try out a line of work, sometimes even to try out an entire way of life, in order to determine whether it fits who you are and what you want to become. If you aren't going to be happy in a particular career, it's better to discover this sooner rather than later.
- Internships can also give you an opportunity to explore your suitability in a field very different from what you've experienced so far. While most students pursue an internship in their major, students sometimes select internships precisely because they wouldn't otherwise learn about that particular work environment. Seeking an internship on a newspaper, in an art gallery, at an advertising agency, or on a cruise ship can provide you with a well-rounded academic experience that you'd never have if you only work in fields you already know.
- Internships can provide you with a network of contacts who can be useful to you long after your internship has been completed. Even if you don't end up working at the same place where you did your internship, the contacts you made there can serve as mentors, references when you apply for jobs, and advisors about where full-time positions can be found. The people you meet during your internship may be reminded of the excellent work you did when they learn about opportunities that arise and then bring these job prospects to

your attention. If your experience in the classroom greatly expands *what* you know, your internship can achieve the same purpose in helping to develop *whom* you know.

- Internships give you a chance to meet and interact with different types of people. As diverse as college and universities may be, they still are relatively homogeneous in one respect: They expose you largely to people who attend, work at, or enjoy the environment found in higher education. The world, however, contains a broad spectrum of individuals who don't fit into that category. During an internship, you're likely to encounter at least some of these people. That very experience can help foster your personal and professional development, as well as teach you how to interact with people whose backgrounds are quite different from your own.
- Internships can help you build self-confidence and enhance your interpersonal skills. Because you'll be interacting with people in a different way from what occurs in most of your academic coursework, you'll find that both your confidence and ability to work productively with people improve. In most internships, you'll have an opportunity to be interviewed, to learn how to gather information in an unfamiliar environment, to meet new people on a regular basis, and to explain the results of your work in situations where those results really matter. Although these activities may initially take you far from your comfort zone, you will soon find your sense of assurance growing as you make successful decisions and learn from your mistakes.

Finding an Internship

With all of these benefits arising from an internship, your next question might be: How do I go about getting one? The first step you should take is to identify companies or organizations that work in an area that interests you. If your campus is very large, it may have an entire office devoted to internship placements. At most schools, however, internships are supervised by a career placement office, the student life staff, a director of academic support services, an experiential learning committee, or the individual academic departments that offer credit for internships. Your advisor will know how

internships are handled at your school, and that office is likely to have lists of possible internships in various fields. In addition, even if academic departments don't individually supervise internships at your college or university, faculty members in a discipline may be aware of internship opportunities that earlier students have received or additional companies and organizations that have requested interns. Don't forget the possibility that friends or members of your family may have contacts who can provide you with assistance in locating a suitable internship. If none of these sources of information proves adequate — or if you are looking for an internship overseas or in a particular region of the country — keep in mind that there are a large number of reference works available that can guide you to various opportunities. The Princeton Review sponsors an electronically searchable database of internships (www.princetonreview.com/cte/search/internshipAdvSearch.asp) and Vault Career Library publishes an annual guide to internships.

Once you've identified several possible opportunities you wish to pursue, contact each of them, indicating your interest in finding an internship, stating your qualifications, and clarifying when you'll be available. Although certain companies and organizations may encourage an initial inquiry to be made by telephone or email (so that they can quickly indicate whether they have any positions still available), most internships are obtained through a written application. If no specific form is available, write a letter of application in your best prose style, stating your interest clearly and succinctly. Your letter of application should be no longer than a single page and printed on plain white paper or an appropriate letterhead. The following sample may be used as a model.

[IF YOU ARE NOT USING LETTERHEAD THAT CONTAINS YOUR
ADDRESS, PLACE YOUR RETURN ADDRESS AT THE TOP OF THE PAGE]

Tyler Kelsey
347-C Rowan Hall
Major Metropolitan University
Capital, SV 23173

[MONTH DATE, YEAR]

T.I. Wilkerson
8555 Madison Avenue

New York, NY 10022
ATTN: T.I. Wilkerson

Dear Mr. Wilkerson:

Please accept my application for a summer internship at your agency. I am currently a junior, majoring in marketing and public relations at Major Metropolitan University. I have a serious interest in learning more about the day-to-day operations of a well-established agency such as Compleat, and I am looking for an opportunity where I can both use and build on the skills that I have learned.

As you can see from my enclosed résumé, I have held several part-time jobs in the summer and while I was enrolled in my coursework. I have a strong work ethic, am service-oriented, have good people skills, and have already learned the basics of business administration and effective office management. I would welcome learning more about the practical operation of a successful talent agency in New York, while using my background and energy to help the office in whatever areas are most needed.

If you would be willing to consider me for an internship this coming summer, I may be contacted at the following address:

Tyler Kelsey
347-C Rowan Hall
Major Metropolitan University
Capital, South Virginia 23173
Telephone: 434-555-6060
Cell: 276-555-0606
tyler.kelsey@distinctionmail.com

I will be available for an internship this summer beginning on May 15, [YEAR], and extending through August 10, [YEAR]. I am very excited about the possibility of an internship with the Compleat Talent Agency, and I hope to hear from you soon.

Sincerely,

Tyler Kelsey

encl: résumé

As you see in this example, the tone of your letter should express your strong interest in both working for and learning from the organization that would provide the internship, concisely and accurately represent your strongest qualities, and contain all the information someone would need in order to contact you. If you've prepared a résumé according to the principles we'll discuss in Unit Fourteen, be sure to include a copy with your letter. If you haven't yet prepared a résumé, do so before submitting your letter of inquiry, being certain to record experiences that demonstrate how you'd be reliable if placed in a position of trust.

Being Imaginative

In Unit Three, the “scholarship of experience” was mentioned. At that time we saw that not all research involves discovering concepts or facts no one had known before. The example we considered in that unit was a study abroad program: Even if you made no particular effort to conduct “research,” simply by living in another culture for an extended period, you'd learn things from having to adjust to a new environment. Internships can provide a similar type of opportunity for the scholarship of experience. As a thought experiment, consider what type of internship experience you can conduct while still an undergraduate that meets your standards of *scholarship*. Besides learning some new skill and making some new contacts, what would you need to do in this internship to make it a genuine exercise in research?

If the company, organization, or agency has an internship available and finds your credentials suitable for its needs, you may be invited to an interview in order to explore whether you're a good fit for the type of work you'll be doing. This interview may occur by telephone, particularly if the office where you'll be working is far away, or in person. Only in the rarest of circumstances will your expenses be covered to travel for an interview that involves an internship. If you're asked to appear in person for an interview, you should expect to pay these costs yourself, unless you're informed otherwise. If the interview will take place by telephone, keep the following guidelines in mind.

- Clarify in advance whether you're supposed to place the call to the interviewer or to be available when the interviewer calls you. In most cases, you will be receiving rather than placing the call. Nevertheless, if the call comes late, it can be very distracting to find yourself wondering, "Why aren't they calling? Could it be that I was supposed to call *them*?"
- If you're the one who'll receive the call, be available at the number that you have provided to the company, organization, or agency at least fifteen minutes before the interview is scheduled to begin. In this way, you'll certainly be available when the call comes even if your clock isn't quite synchronized with that of your caller. You'll also have a few minutes to relax, catch your breath, and get into the proper state of mind for a professional interview.
- Don't be surprised, however, if the caller reaches you late, possibly even as long as half an hour late. It's far better for you to wait than to keep an interviewer waiting. At times, the person who interviews you may have a position of great responsibility in the organization, and his or her work may have taken longer than had been anticipated. Be gracious when the caller apologizes for not reaching you at the time arranged. Be even more gracious if the caller fails to mention that you've been kept waiting for a very long time.
- If at all possible, receive the call in a place that's quiet and likely to be free from interruptions for the duration of the interview. No matter whether you're being interviewed by cell phone or land line, be sure that the other phone won't ring while the interview is in progress. Put a "Do Not Disturb" sign on your door to prevent interruptions.
- Some phone interviews take place with a group of people, and they'll be speaking to you by speakerphone. At times, this arrangement can make people's voices seem distant or hollow, and the result can be distracting. There may even be a slight lag between when one party in the conversation stops speaking and the other side hears the last few words. Do your best to speak clearly and naturally, despite the awkwardness of the situation.
- Have a copy of your résumé in front of you, as well as notes about activities and opportunities you want to be sure to mention during the interview. Since your

interviewer can't see you during a phone interview, feel free to glance at these notes occasionally and to get ideas about how best to answer each question. You might even have a list of "action words" in front of you — terms that allow you to vary your vocabulary from time to time — so that you avoid becoming repetitious. Words like "planned," "organized," "created," and "developed" are good because they demonstrate your active participation in the various activities you are describing.



- Place a cup of water near the chair you will be using. Even the easiest interviews can be experiences that make you more nervous than you expect. A quick sip of water while you are being asked a question can help prevent your mouth from becoming dry and thus making you distracted during the interview itself.
- Answer each question you're asked clearly, distinctly, and in a professional manner. Listen carefully to the question and try to answer it directly to the best of your ability. If you're asked about a situation you've never encountered, it's perfectly acceptable to say so, but then try to relate the question to the most comparable situation you *have* encountered.
- Good telephone interview answers should be neither too long nor too short. If you answer in only a few words, you'll seem abrupt or appear not to have much depth of experience. If you speak too long, the interviewer may think that, once on the job, you will be far too talkative to get much work done. Practice answering a few likely questions before the call and time your answers. In most cases, a good telephone interview answer should be between thirty

seconds and two minutes long. This duration actually seems relatively long during an interview. Try answering a few questions and you'll discover how much you are able to say in a short amount of time.

- The interview may well conclude with you being asked if you have any questions for your interviewer. You should *always* have at least one question. Not being aware of anything to ask doesn't make you look knowledgeable; it makes you seem as though you didn't care enough to think carefully about the interview in advance. If you can't think of anything else to ask, you can always pose a question like "When will you be making your decision?" or "What qualities are most important to you in an intern?"

If the interview will occur in person, keep in mind the relevant items in the list above and also consider the following advice.

- Dress in a manner that'll make your best first impression. It doesn't matter that you're dressing a little more formally than you would on the job or that the people who are interviewing you may be dressed more casually. Your goal is to demonstrate that you take this opportunity very seriously, and your style of dress represents that attitude in a visible manner. If you're a man, wear a subdued or plain tie, suit or sport jacket, and well-polished shoes. If you're a woman, wear a dress, blouse/skirt combination, or business suit, and apply neither too much nor too little make-up; don't select an outfit that's too revealing, jewelry that makes noise when you move, or a hairstyle that's likely to need tending throughout the day. As you're planning your appearance, always ask yourself: Will this look convey the impression that I'm serious and professional in my work?
- Arrive at the interview early. You don't want to appear stressed or out of breath during the interview. So, make sure you have good directions to where you're going, allow yourself plenty of time for traffic or other unforeseen contingencies, and plan to arrive approximately fifteen minutes before the interview is scheduled. (If you budget too much time and arrive even earlier, talk a relaxing walk, sit down with a bottle of water, or review your materials.) Introduce yourself to the receptionist, take a seat where you're asked to wait,

- and do your best to appear calm but very interested in the opportunity you're being given.
- Even if you sent materials ahead of time, bring a few extra copies of your application letter and résumé to the interview. If you're being interviewed by a group of people, it's quite possible that at least one member of the committee will have misplaced your materials or forgotten to bring them to the interview. Having an extra copy to distribute will make you appear prepared and efficient. So will arriving at the interview with a pen and a fresh pad of paper. Nothing looks worse than having an interviewer tell a candidate something important, and the applicant has to ask someone for a pen or a sheet of paper to write it down.
 - When you meet your interviewer or the committee, shake hands firmly, but not so firmly as to cause pain or discomfort. In interviews, people begin making their minds up about you within the first few seconds of your meeting. Either a weak handshake or a grasp that seems designed to break the bones of the other person's hand create poor first impressions that are extremely difficult to overcome.
 - Listen to each person carefully, and maintain good eye contact when you're answering questions. If you look away while you're answering a question, you'll appear unsure of your response even if the question is extremely easy for you. Give the majority of the eye contact when answering each question to the person who asked it. But don't give that person a monopoly on your attention if others are in the room. Include everyone in your reply by looking at each member of the committee while you speak. A good balance to aim for is to speak directly to the person who asked you a question for about two-thirds of your response, and to look at everyone else around the table for about one-third of your response.
 - At the conclusion of the interview, thank those who spoke to you in person and then follow up your visit the next day with a short note of appreciation to the person who arranged or conducted the interview. Thank the individual for his

or her time, state your continuing interest in the position, and indicate that you hope to hear back from the organization, agency, or company soon.

No matter whether your interview will take place on the phone or in person, try to be prepared for what you're likely to be asked. If you have a friend or family member who has some experience in professional interviews, role-play with that person. Try to think of specific examples you could use to demonstrate each desirable quality you may be asked about. For example, what evidence can you provide that you're punctual, innovative, reliable, motivated, or honest?

Getting the Most from Your Internship

Like all opportunities, some internships are more enjoyable than others. But even the most tedious or intimidating experience you have on an internship can be extremely beneficial. Pliny the Elder used to say that no book was so bad you couldn't learn something from it. Something similar can be said about internships. Even if we don't always enjoy them, we can learn something from the chance they give us to work for others. You'll gain even more from your internship if you remember the following principles.

- Your role as an intern is to learn, not to take charge. Offer advice when it's requested. Demonstrate your creativity when it's welcome. Provide your perspectives when others desire them. But otherwise keep in mind that you're there to learn, not to teach. If you see something illegal or egregiously immoral taking place, of course you should report it. But don't tattle simply because people are doing things in a different way from how you would've done them. You can't absorb new insights if you're constantly trying to provide insights to others.
- In a similar way, your role as an intern is to learn, not to get rich. Although some internships pay a salary, the most important benefit you receive from an internship is knowledge, not money. Keep in mind that your internship is an investment in your future. Like any type of investment, if you focus on immediate gratification rather than long-term benefits, you deprive yourself of the greatest form of "earning" you can receive.

- The best experiences you can have during an internship are those that expose you to things you couldn't have found elsewhere. Perhaps you've been given an opportunity to work for a company or a type of organization that's completely new to you. Perhaps you're able to witness the launch of a new product or venture. Perhaps you're able to meet an experienced mentor who can guide you to the next stage of your career. Whatever you find in your internship, it'll be more meaningful if it takes you into territory you haven't yet encountered rather than leads you back through areas you already know quite well.
- Don't forget that internships are available in other countries as well. As we'll see in Unit Fifteen, an overseas internship can provide the best of both worlds: an opportunity to experience another culture in a way that's far more meaningful than ordinary tourism and a practical work experience that allows you to see the theories you've learned in actual application. Particularly for students who can't afford to enroll in a traditional academic program overseas, an internship abroad can offer a valuable travel experience for a very affordable cost.

Internships are one of the most important experiential learning opportunities any college student can have. Even if you're studying a discipline where practical, "real world" experience isn't an expected part of the curriculum — perhaps *especially* if you are studying such a discipline — an internship can give you an edge when applying to graduate or professional school. Even more importantly, it will expose you to perspectives and approaches you're unlikely to encounter elsewhere in your studies. For that benefit alone, the effort required to identify and obtain a significant internship is well worth your while.

Exercises

1. Talk to three or more fellow students about their views of intercollegiate athletics. Do they regard sports as an important part of the undergraduate experience? What is their reasoning for answering as they do? What benefits do they see arising as the result of intercollegiate athletics? What

disadvantages, inconveniences, or problems do they think arise? On the whole, do they believe that sports programs bring revenue to the institution or cost it money? Why do other students believe that sports have become such an important part of life at many colleges and universities?

- Complete the following table of information on intercollegiate athletics at your school.

Intercollegiate Athletics	
Collegiate Athletic Association to which Your Institution Belongs	<input type="checkbox"/> NCAA <input type="checkbox"/> NAIA <input type="checkbox"/> Other (specify)
Athletic Division(s) [Different sports may participate in different divisions; if this is the case at your school, indicate that. Be sure to include any applicable subdivisions.]	
Conference	
Women's Intercollegiate Sports Offered at Your Institution (list all)	
Men's Intercollegiate Sports Offered at Your Institution (list all)	

- Describe in two or three sentences your “dream” internship experience. If you could conduct an internship anywhere in the world, where would it be? With what sort of agency, organization, or corporation? For the purposes of this

- exercise, dream big. Imagine an experience so tempting that, if it were offered to you, you *couldn't* turn it down.
4. In this unit, we explored a phenomenon where there were relatively few people who shared a particular interest in a local community, even though that number turned out to be sizable in the *virtual community* online. A common term for this phenomenon is the **long tail**. How did this expression originate, and what applications might it have in your own research?

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RESOURCES

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Figure 12.1
Personal Networks

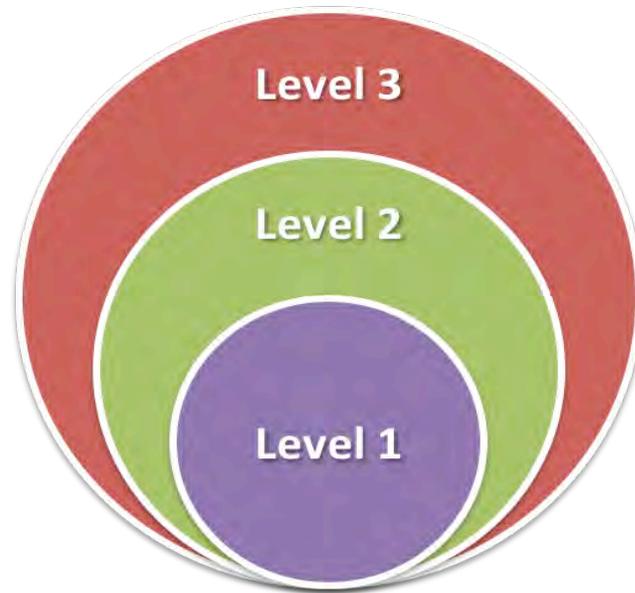
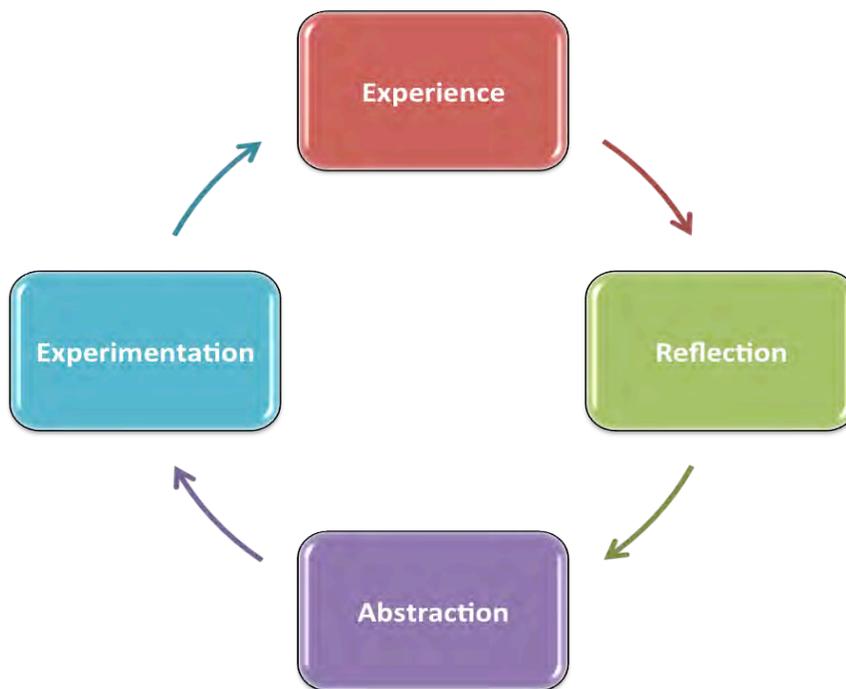


Figure 12.2
Kolb and Fry's Experiential Learning Model



Unit Thirteen:

Wellness

Learning Objectives:

1. To understand that the concept of wellness involves far more than just physical health.
2. To review some of the ways in which people make healthy choices.
3. To become familiar with the concept of emotional and spiritual wellness.
4. To learn how the environment in which we live and work affects our wellness.
5. To apply the concept of wellness to our career choices and work life.

The Concept of Integrated Wellness

When most people hear the terms “health” or “wellness,” they immediately think in terms of physical fitness. But human life is so complex that there’s an intimate relationship among such factors as our susceptibility to disease, mental state, physical environment, relationship with friends and family, and so on. In an analysis of recent research, Simone Borghesi and Alessandro Vercelli, two faculty members at the University of Siena, discovered that there’s a “vicious circle” when it comes to such matters as health and happiness.

1. People who believe they are healthy tend to be happier than those who believe they are ill.
2. People who are happier tend to become healthier than those who are depressed or despondent.

Borghesi and Vercelli (April 2012). In a similar way, a three-year study by a team of researchers discovered that how well run and “healthy” a company was had a noticeable effect on the employees’ “increased personal wellness, lower health age, better overall nutrition, reduced fat intake, increased [fiber] intake, reduced alcohol consumption, increased fitness, reduced cancer risk, lower stress, and more positive health practices.” Smith, Makrides, Schryer Lebel, Allt, Montgomerie, Farquharson, MacDonald, and Szpilfogel (January 2012) 194. In other words, there’s a complex

relationship between our physical health and our mental wellbeing, environment, job situation, outlook on life, and numerous other factors.

The concept of **wellness** addresses all of these factors and also has another distinction from the term commonly used to describe physical wellbeing: **health**. To many people, health is defined more by what is lacking than what is present. That is to say, health is commonly defined as *the absence of illness*. But that's a very negative way of looking at a highly desirable quality. A person can be healthy simply by not being sick or injured, but most of us would prefer to live lives that are active, vigorous, rich, meaningful ... to put it into a phrase *even healthier than healthy*. That's where the notion of *wellness* also comes in. If illness is bad and health is good, then we can think of wellness as a state in which our lives are excellent, exceptional, or outstanding.

Being Imaginative

We just saw that many people tend to define *health* not by what it is or has but by what it isn't or doesn't have: Health, they would say, is the opposite of illness, or health is freedom from disease and injury. How many other concepts can you think of that are typically defined by what they lack or differ from rather than by what they have or are? Consider concepts like the following.

space

silence

calm

atheism

peace

chaos

a dry martini

What other terms can you add to this list? Once you've gathered five or ten more concepts of this kind, see if you can go back and redefine each of them — including the six listed above — without contrasting it to its opposite quality, stating what is missing or non-existent, or using any negative words or prefixes (such as *un-*, *non-*, or *anti-*).

Putting together these two concepts — wellness as encompassing more than just *physical* health and implying a state that is even better than what we normally mean when we say someone is *healthy* — we can define wellness as **a state of comprehensive wellbeing** that includes physical, mental, spiritual, social, and environmental factors. In fact, many approaches to wellness try to incorporate all of the following dimensions.

1. **Physical health**
 - a. **Disease prevention**
 - b. **Accident prevention**
 - c. **Proper nutrition**
 - d. **Aerobic exercise**
 - e. **Resistance training**
2. **Environmental safety**
3. **Mental wellbeing**
4. **Intellectual wellbeing**
5. **Emotional wellbeing**
6. **Financial security**
7. **Spiritual or philosophical grounding**
8. **Career or lifestyle satisfaction**
9. **Social engagement**

For the remainder of this unit, we'll devote entire sections to several of these dimensions, and we've already dealt with issues of financial security in Unit Seven. For the moment, therefore, let's focus on three of them: **mental wellbeing**, **intellectual wellbeing**, and **social engagement**.

Mental Wellbeing

If, as we've seen, wellness involves far more than freedom from disease or injury, then mental wellbeing encompasses more than just the lack of mental illness or instability. There is even an academic field devoted to the study of this area of the human experience: the discipline known as **positive psychology**. Positive psychology is a

specialty within the general study of psychology that focuses on the increase of happiness rather than just the elimination of sadness. As envisioned by founding figures in the field, such as Martin Seligman, Mihály Csíkszentmihályi, Ed Diener, Nancy Etcoff, Daniel Gilbert, and others, positive psychology differs from what these scholars call *traditional psychology* in several key ways.

Traditional Psychology	Positive Psychology
Concerned with treating disease	Concerned with improving health
Repairs what is wrong	Strengthens what is right
Eliminates or reduces sadness	Increases and promotes happiness
Takes people from a bad state to a good state	Takes people from a good state to an excellent state
Is largely reactive	Is largely proactive

Seen in this way, positive psychology relates very closely to the idea of **mental wellness**: the alleviation of any psychological problem or challenge, as well the promotion of happiness and other desirable emotions.

As a means of gathering baseline information about your current state of mental wellness, complete the following inventory and then reflect on why you answered each question as you did.

	Always	Often	Sometimes	Rarely	Never
1. I wake up during the night feeling anxious or distressed.	<input type="checkbox"/>				
2. I am comfortable with the major decisions I've made in my life.	<input type="checkbox"/>				
3. I find it difficult to set my short-term or daily priorities.	<input type="checkbox"/>				
4. I believe that all aspects of my life are well balanced.	<input type="checkbox"/>				

5. I feel depressed.	<input type="checkbox"/>				
6. I confide in others and ask their advice when I'm troubled by important issues.	<input type="checkbox"/>				
7. I express anger in ways that I later regret or that cause problems for others.	<input type="checkbox"/>				
8. I have confidence in myself.	<input type="checkbox"/>				
9. People say that I seem troubled or depressed.	<input type="checkbox"/>				
10. I consider myself at least as happy as most other people I know.	<input type="checkbox"/>				
11. I think seriously about harming myself or others.	<input type="checkbox"/>				
12. I feel that I'm generally in control of my life.	<input type="checkbox"/>				
13. Once I'm overcome by an emotion, I can't control it.	<input type="checkbox"/>				
14. I find it easy to stay awake in my classes.	<input type="checkbox"/>				
15. I become preoccupied with death.	<input type="checkbox"/>				
16. I have a great deal of energy.	<input type="checkbox"/>				
17. I think that the world would be a better place without me.	<input type="checkbox"/>				
18. I can say "no" without feeling guilty.	<input type="checkbox"/>				
19. I keep making the same mistakes.	<input type="checkbox"/>				
20. I find it easy to laugh.	<input type="checkbox"/>				

Upon completing this inventory, it's expected that most of your answers to the even-numbered questions (those where the checkboxes have a white background) will cluster to the left; your answers to the odd-numbered questions (those where the checkboxes have a white background) should cluster to the right. If that hasn't

occurred in your case, the results don't necessarily mean that you have a problem, but they do suggest that a good deal of self-reflection and analysis may be needed.

Moreover, if among the questions you answered contrary to these expectations were #1, 5, 7, 9, 11, 15, or 17, it's a good idea to discuss your reasons for these answers with a trained counselor or therapist who can help determine whether you are dealing with an issue for which additional help is needed.

Even if you answered every question in the inventory to your satisfaction, the idea of mental wellbeing means that it's still possible for you to increase your level of happiness and satisfaction with your experiences in life. The research of Martin Seligman, one of the founders of the positive psychology movement, demonstrated that our level of optimism or pessimism isn't fixed by inherited qualities, but that we can actually learn how to become more optimistic in our outlook. Seligman developed a five-step approach, easily remembered by the letters A through E, that helps people reframe situations so that they see them in a more positive light. Seligman (2006) 207-247.

A	Adversity	What is the problem we're encountering?
B	Belief	What belief system are we using to interpret that problem?
C	Consequences	What are the results that occur because of those beliefs?
D	Disputation	How can we effectively challenge those beliefs and envision alternative consequences?
E	Energization	How can we best take advantage of the positive feelings that result from this alternative view?

Sonja Lyubomirsky conducted research that demonstrated not merely that people could increase their level of happiness by engaging in certain activities but also that there was an optimal level of timing that could increase their effectiveness.

Among the activities that Lyubomirsky discovered to be particularly effective were making it a practice to express gratitude for the good things that happened, forgiving others for the wrongs they had done, engaging in acts of kindness for people (beyond what that person would ordinarily have done), and spending additional time in activities that the person found personally meaningful. The optimal timing Lyubomirsky found to be effective was for an activity to be done often enough for it to become a regular part of the person's life but not so often that it merely became a habit. For example, people who counted their blessings once a week demonstrated a significant increase in their level of personal happiness while the effect was lost if people engaged in this practice every day. See Lyubomirsky (2008) 92.



Intellectual Wellbeing

The wellness program at Washington State University defines intellectual wellbeing as “our degree of openness to new ideas, our propensity to challenge ourselves to think critically, our inclination to nourish our creativity and curiosity, and our motivation to master new skills.” <http://www.wellbeing.wsu.edu/intellectual.aspx> We can think of intellectual awareness, therefore, as related to many of the concepts we’ve explored throughout this course: curiosity, critical and creative thinking, tolerance of

differences, and the like. In fact, one of the benefits that a college education provides is a foundation for intellectual wellness that we hope will extend throughout your life. The skills at innovation and critical analysis that you develop throughout your undergraduate career, particularly as you develop and refine your research ideas, are skills that you can use on the job, in your personal decision making, and as you consider political and social challenges that may only arise decades from now.

As a way of helping you determine which areas of your life may need some further attention in terms of your intellectual wellbeing, take a few moments to complete the following inventory.

	Always	Often	Sometimes	Rarely	Never
1. I am bored by the issues we discuss in class.	<input type="checkbox"/>				
2. I finish reading at least one book a week.	<input type="checkbox"/>				
3. When other people discuss political or social issues, I feel they're much better informed than I am.	<input type="checkbox"/>				
4. I enjoy many different kinds of music.	<input type="checkbox"/>				
5. I find it difficult to relate what I learn in one class to what I learn in another.	<input type="checkbox"/>				
6. I enjoy courses outside my own major.	<input type="checkbox"/>				
7. I fall behind in my coursework.	<input type="checkbox"/>				
8. I am aware of my academic strengths and weaknesses.	<input type="checkbox"/>				
9. I feel that, if I could just get my degree tomorrow without doing more work, I'd gladly do so.	<input type="checkbox"/>				
10. I have serious conversations about topics that I believe are important.	<input type="checkbox"/>				

Once again, the answers that seem most indicative of good intellectual wellness fall to the right for odd-numbered questions (white background) and to the left for even-numbered questions (gray background). If you have answers that deviate from this

pattern, use this exercise as an opportunity for reflection: Are you satisfied with those responses or do you wish that you were honestly able to respond differently? If there are areas in which you'd like to make a change, what resources are available to you for doing so? Is this an issue you could discuss with your advisor, mentor, or favorite faculty member?

Social Engagement

In Unit Eleven we explored civic engagement, those activities that promote participation in public life. Social engagement is somewhat similar, but it focuses on developing a healthy level of involvement in your immediate sphere of friends, classmates, roommates, and acquaintances. No matter whether you're an introvert or an extrovert, it's important to have at least some level of positive interaction with the people we encounter on a regular basis. Nancy Morrow-Howell, the Ralph and Muriel Pumphrey Professor of Social Work at Washington University, and Sarah Gehlert, the E. Desmond Lee Professor of Racial and Ethnic Diversity, cite a large number of studies linking healthy social engagement to such factors as life expectancy, general physical wellbeing, mental health, life satisfaction, and cognitive function. In their own research, they've traced the critical relationship between being socially active and retaining a high quality of life as a person ages. See Morrow-Howell and Gehlert (2012) 205-228. But social engagement is also a matter of habit: If you don't develop good practices of social engagement now, you're less likely to remain active socially when you age and when the impact of social activities on other aspects of wellness becomes particularly pronounced. Use the following inventory to measure your current state of social engagement and to identify areas in which you may want to work towards improvement.

	Always	Often	Sometimes	Rarely	Never
1. I can name fewer than five people whom I'd regard as good, close friends.	<input type="checkbox"/>				
2. I enjoy spending time with others.	<input type="checkbox"/>				
3. The people in my social group reflect my own	<input type="checkbox"/>				

ethnicity, social background, and worldview.					
4. I am a member of at least one club or organization that's important to me.	<input type="checkbox"/>				
5. I don't have time to socialize.	<input type="checkbox"/>				
6. I maintain good relations with my family.	<input type="checkbox"/>				
7. I believe that talking to and spending time with others is an unwanted distraction from my "real work."	<input type="checkbox"/>				
8. I find it easy to make friends.	<input type="checkbox"/>				
9. People tell me that I need to get out more.	<input type="checkbox"/>				
10. I talk to others while waiting for class to begin.	<input type="checkbox"/>				

As with all the inventories in this unit, your responses don't really become meaningful until you reflect on why you answered as you did. Are there questions that you *wish* you could have answered differently? After all, you're entitled to your own level of involvement in social situations. The point of the exercise isn't to make everyone equally outgoing and gregarious, but rather to help you identify where you are right now in terms of social engagement so that you can develop a plan of action if you'd like to change.

Physical Wellness: Making Healthy Choices

Just as wellness consists of more than merely physical wellbeing, so does physical wellbeing consist of more than just the absence of disease. A positive approach to health also includes such matters as fitness, weight control, nutrition, safe practices, and stress management. We seem to be surrounded by a **bimodal culture**. On the one hand, we're inundated with encouragements to exercise more, stop smoking, and eat a balanced diet. On the other hand, we're constantly tempted by leisure activities that cause us to become more sedentary and portion sizes in restaurants and fast food chains that seem to be getting bigger all the time. As with so much in life, making healthy choices is a matter of balance and common sense. The occasional

cheeseburger and fries after a long session of videogaming can be a treat. If those choices become part of your daily routine, however, your health is likely to suffer as a result. In this part of the unit, we're going to engage in several inventories related to practicing good health habits. As always, the point isn't to make you feel like a failure if you don't adhere to your own standards in this regard, but rather to provide you with some baseline information so that you can better plan for the future. Let's begin with examining your current approach to nutrition.

	Always	Often	Sometimes	Rarely	Never
1. I eat fast foods like hamburgers, French fries, fried chicken, and pizza.	<input type="checkbox"/>				
2. I eat breakfast.	<input type="checkbox"/>				
3. I drink non-diet colas and other types of sugary soft drinks.	<input type="checkbox"/>				
4. When eating meat, poultry, or fish, I try to select lean cuts.	<input type="checkbox"/>				
5. I consume energy drinks.	<input type="checkbox"/>				
6. I eat a balanced diet with plenty of vegetables and fruit.	<input type="checkbox"/>				
7. When I have coffee drinks, I get them with added flavor, milk or cream, whipped cream, or sugar.	<input type="checkbox"/>				
8. I pay attention to the amount of sugar, sodium, fat, and fiber in my food.	<input type="checkbox"/>				
9. People say that I eat too much or criticize my eating habits in other ways.	<input type="checkbox"/>				
10. I get the recommended daily allowance of vitamins either from meals or supplements.	<input type="checkbox"/>				

As with so many aspects of health, balance is the key to proper nutrition. Don't feel bad if you have an occasional energy drink or flavored coffee, but recognize the

amount of sugar and caffeine they contain. But if food that's high in calories or caffeine becomes part of your daily routine — and particularly if you consume them several times a day — it's probably time to establish a healthier eating plan. And just as too many calories are harmful to your health, so are too few. Eating disorders like **anorexia** (an obsession to lose weight that results in self-starvation) or **bulimia** (an obsession to lose weight that results in purging the body of food after meals) affects traditional college-aged students at a higher percentage than the rest of the population. Nevertheless, anyone can succumb to an eating disorder by becoming obsessed with body image, no matter whether it's a slim build or large muscles that are the goal. College is a good time to develop the habit of monitoring what you eat, not in order to become fanatical about avoiding certain types of food, but simply to be aware and intentional about what you consume.



Being Intentional

Nutrition is one of the areas in life in which intentionality can play an easily discernible role. As an experiment, spend one week simply tracking everything you eat and how much. Then, during the next week, adopt an intentional approach to your meals. Instead of just focusing on the taste and convenience of the foods you eat, set yourself a specific goal: reducing calories, increasing vitamin consumption, exchanging proteins for a certain amount of carbohydrates, or something else of this sort. Then, before you prepare each meal or eat something that's already prepared, review this intention and visualize what you should choose in light of your goal. If you're like most people, you'll find that even this simple level of intentionality can greatly affect what you eat and in what amounts. Continuing that type of intentionality becomes more difficult after a week, but if you can sustain this practice as long

as *three* weeks, you're likely to discover that what was a conscious decision at first has already become a regular habit.

The next aspect of physical health that we want to consider is the level of care you take to avoid disease or injury. Here, too, it's possible to carry good practices to the extreme. You may know or have heard about people who refuse to shake hands with anyone out of their fear of germs or will never travel by plane because airliners do occasionally crash. Being cautious and being compulsive are two different things, and that's why it's useful to be aware of what you're doing to protect yourself from injury and disease.

	Always	Often	Sometimes	Rarely	Never
1. I smoke or chew tobacco.	<input type="checkbox"/>				
2. I try to limit my exposure to second-hand smoke.	<input type="checkbox"/>				
3. I'm over or under my recommended weight.	<input type="checkbox"/>				
4. I use sunscreen when going outdoors.	<input type="checkbox"/>				
5. I consume more than two alcoholic beverages a day.	<input type="checkbox"/>				
6. I avoid riding in vehicles when the driver has been drinking.	<input type="checkbox"/>				
7. I drive after having consumed one or more alcoholic beverages.	<input type="checkbox"/>				
8. I get about 7 or 8 hours of sleep a night.	<input type="checkbox"/>				
9. I pull all-nighters to study or party.	<input type="checkbox"/>				
10. I know my blood pressure and have had it checked within the past year.	<input type="checkbox"/>				
11. People who know me well say that they're concerned about my health.	<input type="checkbox"/>				
12. I practice safe sex (either abstinence or barrier techniques).	<input type="checkbox"/>				

13. I avoid going to the dentist.	<input type="checkbox"/>				
14. I seek professional medical advice when I need to.	<input type="checkbox"/>				
15. I treat my pains and illnesses with herbs or supplements.	<input type="checkbox"/>				
16. I bathe or shower every day.	<input type="checkbox"/>				
17. I take prescription medicines (either mine or others) improperly or recreationally.	<input type="checkbox"/>				
18. I avoid using illegal substances.	<input type="checkbox"/>				
19. I abuse legal substances.	<input type="checkbox"/>				
20. I feel that I'm in good health.	<input type="checkbox"/>				

You may wonder why some of the items on this inventory are in this section rather than in others. For instance, why weren't the questions about alcohol consumption included earlier in the section on nutrition since other beverages are addressed there? Or why wasn't the question about second-hand smoke postponed until later when we're going to deal with other environmental issues? The answer is that many of our wellness choices span different categories because health and safety issues are so connected to other concerns. For example, we can regard alcohol use as a nutritional issue if its consumption is depriving you of other essential nutrients or as a health and safety issue if its consumption harms you physically or impairs your judgment. Similarly we can regard second-hand smoke as either an environmental issue since it's part of your "personal ecosystem" or as a health and safety issue because, like the use of alcohol and drugs, it introduces a toxic substance into your body.

The final inventory that we'll take with regard to physical health relates to your fitness routine. Exercise is frequently divided into two major types: **aerobic exercise**, in which the availability of oxygen exceeds the body's need for it, and **anaerobic exercise** or **resistance training**, in which the body supplements the oxygen available in the atmosphere by drawing additional sources of energy from the muscles. In general, we can think of aerobic exercise as activities that build **endurance** and anaerobic

exercise activities that build **strength**. A good fitness plan involves both types of exercise, occurs regularly rather than in intense “bursts,” and involves a workout that’s strenuous enough to be **anabolic** (health building) but not so strenuous that it becomes **catabolic** (health destroying). You may hear that you have to “push through the pain” or know expressions like “no pain, no gain,” but there’s a limit beyond which testing yourself becomes destructive. Everyone’s strength and level of endurance are different, and being intentional about your health means knowing when you’ve reached a limit that you shouldn’t cross. The psychologist **Lev Vygotsky** (1896-1934) spoke of a level of challenge that he called the **zone of proximal development**: the point where people feel sufficiently challenged that they have to stretch themselves a bit, but not so overwhelmingly challenged that they become frustrated or discouraged. See Vygotsky and Kozulin (1986) 187-189 and Vygotsky (1978) 86-89. Vygotsky was speaking about intellectual challenge and the level at which children learn best, but there’s a parallel zone when it comes to exercise. Your fitness will develop most consistently over time if your workouts take you to your personal zone of proximal development. When an activity becomes too easy, add a little more distance, a few more reps (short for repetition; the number of times an exercise is performed in a single set or session), or slightly more weight. But trust your body: You know the difference between “good pain” and “bad pain.” If you have any suspicion that you’re not simply being challenged but are actually doing yourself harm, stop immediately and (if the pain is particularly intense or chronic) see a doctor.

	Always	Often	Sometimes	Rarely	Never
1. I would describe my daily routine as sedentary, immobile, or inactive.	<input type="checkbox"/>				
2. I exercise for 30 minutes or more on most days of the week.	<input type="checkbox"/>				
3. My exercise routine consists solely of aerobic or anaerobic training (or I don’t exercise at all).	<input type="checkbox"/>				
4. I would describe my exercise routine as gradually becoming more challenging.	<input type="checkbox"/>				

5. After a workout, I have pain or severe discomfort that lasts more than half an hour.	<input type="checkbox"/>				
6. When I do aerobic training, such as walking or running, I do it long enough to break a sweat.	<input type="checkbox"/>				
7. When I do resistance training, my appearance is more important to me than my long-term health.	<input type="checkbox"/>				
8. When using free weights, I work with someone who can spot me if a problem occurs.	<input type="checkbox"/>				
9. I ingest steroids that have not been prescribed by my doctor.	<input type="checkbox"/>				
10. When exercising, I take steps to remain properly hydrated.	<input type="checkbox"/>				

Health and Undergraduate Research

Physical wellness isn't just a matter of developing an important life skill. It can also be the basis for research that you can conduct in several disciplines you're likely to study. For instance, the term **Freshman 15** is commonly used to refer to the weight gain that students often experience during their first year in college. The number 15 (for 15 pounds) isn't based on any reliable evidence; it's just a shorthand way of indicating that a combination of poor eating choices, alcohol consumption, and lack of physical activity often leads to many students' rapid increase in weight during college. But there are many ways in which this common assumption can provide you with a research opportunity focused on your first year experience.

- Your approach could be a **personal reflection**. Has your own weight changed during the current academic year? If so, at what rate and what do you intend to do about it? Can you speculate on any causes for this change? If not, to what do you attribute your ability to maintain your weight when others are less successful? Is it the result of specific choices that you made, were you fortunate enough to develop good eating habits early in life, or were factors

beyond your control (such as a high metabolism or a very limited budget) more significant?

- You could adopt an **historical approach**. What are the earliest references to the Freshman 15 that you can find? How have colleges and universities tried to address this problem? Have certain schools been leaders in promoting better health and nutrition for their students? Has the concept of the Freshman 15 been treated in novels or films that can provide you with an historical perspective on this issue?
- You could study this topic **sociologically**. At your own school, is weight gain consistent regardless of socioeconomic background, residence status (on-campus versus off-campus), intended major, age, and other factors? Because collecting this information involves dealing with human subjects, what additional steps would you have to go through in order for your project to adhere to accepted research practices?
- You could use methods common in **biology** or the **health sciences**. What elements of diet (such as carbohydrates or alcohol) seem to correlate most strongly with weight gain? What types of exercise (aerobic or anaerobic) seem to correlate most strongly with weight reduction or maintenance? What implications do those results have for students who wish to avoid the Freshman 15?
- There are **economic** aspects to this topic. Students may gain weight in college because there are incentives to do so. Food that's high in calories may be cheaper, easier to obtain, and tastier. Exercise may be difficult to schedule, hard to perform, and not congruent with the typical student's coursework. (For example, if your only break in classes is midday, it may not be appealing to have to shower and change clothing several times a day or to attend class unbathed and in workout clothing.) If you hold a job in order to pay your college expenses, you may find that you simply don't have the time or energy to exercise regularly. At colleges and universities with limited fitness facilities, it may be too expensive to hold a membership in an off-campus health club. How

might you incentivize better nutrition and greater participation in fitness activities so that these drawbacks are less important?

- You could take an **artistic** approach to this topic. You might create a poem, play, short story, or film about a student struggling with the Freshman 15. What problems may arise and how might the character deal with them? Would your approach be comic or serious? Would your primary goal be to entertain or inform?

Frequently in college you'll discover topics like health that cross strict academic boundaries. In addition to the suggestions above, see if you can think of how physical health, nutrition, exercise, and the Freshman 15 relate to each of the following disciplines. What opportunities for research might occur in these fields?

engineering

anthropology

philosophy

women's studies

hospitality management

statistics

African-American Studies

religious studies

neuroscience

political science

education

law

design

Emotional and Spiritual Wellness

Just as there's a great deal of overlap between physical and environmental wellness, so does the next topic that we'll discuss — emotional wellness — have certain features in common with an issue we addressed earlier: mental wellbeing. Many psychological challenges, such as depression and bipolar disorder, manifest themselves in our

emotional states. But whereas mental wellbeing addresses more generally a person's "state of mind," including his or her rationality and ability to focus on important issues, emotional wellness deals more extensively with our feelings and how they affect the quality of our lives. The Wellness Center at the University of Illinois defines emotional wellness as

developing awareness and acceptance of one's feelings. Emotionally well people are able to express feelings freely and manage feelings effectively. Emotional wellness is not an end stage but a continual process of change and growth. Emotional wellness enables one to maintain satisfying relationships, deal with conflict and remain grounded during stressful times.

<http://www.campusrec.illinois.edu/wellnesscenter/dimensions/emotional.html>

There are several important aspects of this definition.

1. Emotional wellness doesn't mean that a person's feelings remain constant. We all have our highs and lows, our frustrations, and our fears. Nor does it mean that a person never becomes angry. There are times when the most appropriate response to a situation that an educated person can have is righteous indignation. Rather emotional wellness means that we're **aware** of our emotions when they occur, that we **take responsibility** for the effect our emotions have on others, and that we **accept emotions** as an important part of human life. In short, emotional wellness is not about stifling or eliminating certain emotions but rather **dealing with emotions in a proper way**.
2. One of the ways in which emotionally healthy people deal with their emotions is understanding that there are certain times, places, and manners in which the expression of emotions is more appropriate than others. We may be hurt because our closest friend seems to be ignoring us at someone's wedding reception, but making a scene and ruining the occasion for the new couple and their guests isn't a skillful way of expressing those emotions. Emotional wellness thus involves the recognition that **our emotions can have an effect on other people's emotions** and deferring or altering the expression of our feelings as a result.

Julie comes from a very conservative family. She's just started going out with Taylor, and they're in the initial stages of their relationship where they're constantly euphoric over how much they love one another. At a holiday party given by Julie's family, Julie and Taylor can't keep their hands off one another. They repeatedly engage in deep, passionate kisses and caress or stroke one another. An hour into the party, Julie's aunt — at whose home they have gathered — pulls Julie aside and says, "I want you and Taylor to leave my house right now. You've humiliated me by your behavior and made everyone terribly uncomfortable. You're not welcome back here until you apologize and tell me that you've learned how to behave like an adult." Julie is terribly hurt by these remarks, but takes Taylor and starts to leave. She quickly recounts what's happened. "What's her problem?" Taylor asks. "Hasn't she ever been in love? We're just doing what everyone does."

- Is anyone at fault in this situation? Is one person more at fault than another? If so, why?
- How might the situation have been handled better?
- How would you assess the emotional wellness of Julie and Taylor? Weren't they just "expressing their feelings freely" as suggested by our definition of emotional wellness?
- How would you assess the emotional wellness of Julie's aunt? Wasn't she also just "expressing her feelings freely"?
- Does your response to this situation change depending upon Taylor's gender?

3. Emotional wellness involves, not merely the way we deal with how we feel, but also our ability to form satisfying **relations** with others and to remain **grounded** when dealing with difficult challenges. Naturally the quality of our relations aren't *solely* our responsibility, but it can be a warning sign if we find ourselves feeling that we've repeatedly been betrayed by friends or romantic partners in similar ways. That can be a good time to ask, "What am I doing that seems to

be giving other people implicit ‘permission’ to treat me this way? Is my emotional response to them a fair assessment of how they acted?” In a similar way, feeling a bit anxious over new or frightening situations is completely normal. But if our anxiety starts to paralyze us or appears when we can’t easily identify the focus of that anxiety, we may be in a situation where we need to talk with someone we can trust about our excessive feelings of stress.



4. Despite what some non-academic websites may tell you about emotional wellness, there’s no reference to being **enthusiastic** or **relaxed** in our definition. Enthusiastic people sometimes assume that enthusiasm is a key ingredient of happiness or a well-balanced life. It’s not. Some people do feel more content when they’re in an upbeat or animated mood, but other people feel a greater sense of balance by being more laid back, composed, or tranquil. In the same way, although chronic or severe anxiety is an indication of a problem that should be addressed, some people are more anxious while others are more relaxed. Within moderation, one type of personality isn’t better than the other; they’re just different. In fact, some people feel that their stress level rises when they don’t have something to worry about! A certain level of concern makes them feel needed and, unless it is interfering with their quality of life, it’s not incompatible with overall emotional wellness.

1. Other people tell me that the intensity of my anger or other emotions makes them feel uncomfortable.

Always Often Sometimes Rarely Never



2. When I'm being unreasonable in my emotional response to a situation, I'm aware of it.	<input type="checkbox"/>				
3. I have emotional outbursts that I later regret.	<input type="checkbox"/>				
4. People would describe my emotional reactions as mature.	<input type="checkbox"/>				
5. I feel a high level of stress or anxiety.	<input type="checkbox"/>				
6. I know the resources I have for dealing with emotional issues.	<input type="checkbox"/>				
7. I'm lonely.	<input type="checkbox"/>				
8. I would describe myself as happy, content, satisfied with life, or cheerful.	<input type="checkbox"/>				
9. I feel as though I'm on an emotional rollercoaster.	<input type="checkbox"/>				
10. Even when I feel a strong emotion, I'm aware of when, how, and where I should express it.	<input type="checkbox"/>				

Spiritual Wellness

Spiritual wellness relates to the way in which people find meaning or purpose in their lives. For many people, that meaning is derived from their adherence to a set of religious beliefs. For others, a sense of purpose is derived from belief in a certain philosophy of life or adherence to a set of core principles. The key point is that one doesn't have to believe in spirits in order to be spiritual. While many people take great comfort from the faith they have in God or life after death, spiritual wellness doesn't require you to believe in either of these concepts. There are spiritual atheists, just as there are very unspiritual people who attend religious services regularly. The key question is: What are the guiding principles that give significance to your life? People who answer, "I have no guiding principles. I believe that the material world is all that exists, that the universe wasn't created as the part of any plan, that there's no such thing as a transcendent deity, and that human consciousness doesn't survey the death of the body" are missing the point. Those very ideas *are* their guiding principles in life.

They form the nucleus of what they believe about the purpose of life: that there *is* no purpose. And a conviction that everything around us is transitory, that we must cherish each moment as it unfolds, and that we can't waste our time while alive because that's all the time we have can be just as spiritual as a conviction that God loves us, that our purpose on earth is to do God's will, and that the most precious gift we have is an opportunity for eternal life.

Spiritual wellness doesn't imply adherence to any particular set of beliefs, merely the recognition and appreciation that we all have beliefs. And even the most materialistic person in the world has beliefs: He or she believes that there is no otherworldly existence beyond what we can determine through our senses, the philosophical view that we call **empiricism** from the Greek word ἐμπειρία (experience). Remember what we said in Units Three and Five: a *hypothesis* is a conjecture that's capable of being disproved, and a *thesis* is a truth claim to which a cogent and logical counterclaim could be made. Despite many arguments to the contrary, the existence of God, the afterlife, the soul, and so on can neither be proved nor disproved; by definition they are regarded as entities that cannot be experienced in the same way that we experience sight and sound. For this reason, we can't really say that empiricism is a hypothesis. It's more like a thesis, since the counterargument that entities beyond our experience exist can be made logically, even if we don't happen to believe it. And that's the key: No matter how we try to get around it, any position we take on these issues is a matter of *belief*. We take them on *faith*.

Being Reflective

In Unit Five, we conducted several exercises designed to identify your core principles or core values. Go back and review what you concluded at that time, and see if you still agree that those principles are more important to you than any others. Then reflect on an experience you had where you encountered a person whose values were dramatically different from yours. How did you handle that situation? Did you feel a need to persuade the other person that he or she was wrong? If you didn't feel such a need, what conclusions might you draw about your commitment to your core values? If you did feel a need to try to change the

other person's point of view, were you successful? Many times we adhere to a set of core beliefs, not because we've drawn these conclusions logically, but because of our experience and upbringing. Since everyone's experience and upbringing are different, we may find ourselves holding on to a principle even if we can't defend it rationally. Other people are in that same situation. As you continue to reflect on your conversations with others whose values differed from your own, how do you come to regard them? Are they a waste of time, a source of insight, a frustrating experience, an opportunity to "score points" by outdebating someone, or another type of conversation altogether?

People who regard themselves as atheists or agnostics, are often rankled by that very word *faith*. "I don't have any need for faith," someone might say. "I'm more interested in knowledge and experience." But, as we've just seen, knowledge and experience only take you so far when you're dealing with questions about the ultimate meaning of existence. Sooner or later, you simply have to take your stance, based upon the point of view you find most compelling, and have confidence in it. In fact, that's really all we're talking about when we call our core values a matter of faith: We mean that we have more confidence in those views than in others because they seem to make better sense of our experience. In fact, the Latin word *fides* that provides the stem of our word *confidence* simply means faith. You can't get around it. We all have faith in some ideas that we can't either prove or disprove. The ideas of this sort that relate to how we find meaning in life become our spiritual wellness, no matter whether we find the terms *spiritual* and *faith* pleasing or not.

In our inventory on spiritual wellness, therefore, you'll see that you're not required to believe in any particular dogma. Rather the goal is to ascertain how aware you are of the core principles you believe in and how tolerant you are that others may have different beliefs.

	Always	Often	Sometimes	Rarely	Never
1. I'm too busy to think about vague questions like "What does life mean?" or "Why am I alive?"	<input type="checkbox"/>				

2. I make time each day for something that's meaningful and satisfying to me, such as prayer, meditation, or "personal time."	<input type="checkbox"/>				
3. I don't know what to say when people ask me what I believe in or why.	<input type="checkbox"/>				
4. My core values guide my actions and decisions.	<input type="checkbox"/>				
5. I feel that people whose beliefs are different from my own are untrustworthy or stubbornly resistant to the obvious truth.	<input type="checkbox"/>				
6. Although I may not always agree with the views of others, I am not disturbed that <i>they</i> hold these beliefs.	<input type="checkbox"/>				
7. I feel that people from other belief systems cannot possibly derive as much satisfaction from theirs as I do from mine.	<input type="checkbox"/>				
8. I am comfortable with the sense of purpose I feel in my life.	<input type="checkbox"/>				
9. I find that I'm not even tempted to contribute time or money to a cause that I believe in.	<input type="checkbox"/>				
10. I know where to go if I ever feel like spending time with others who share my beliefs or core values.	<input type="checkbox"/>				

Research Integrity

Since our focus in this course is how undergraduate research can help provide meaning and structure to your college experience, we can't really leave the topic of core values without at least some discussion of those values that relate to our scholarly and creative activity. **Research integrity** involves adherence to all appropriate ethical principles in the pursuit of knowledge. It includes but is not limited to:

- Honesty about the contributions of yourself and others to the research project.
- Responsible behavior towards anyone who may be involved in the project as a human subject.

- Humane treatment of all animals involved in the research.
- Collegial treatment of any partners you may have in the project.
- Acknowledgement of any areas of the project for which you may have a conflict of interest.
- Fairness and professionalism in the review of others' research.
- Strict adherence to all established protocols for the type of research being conducted.

We saw in Unit Three that following established research protocols is important to academia because they give other scholars confidence that our results are reproducible, help us avoid plagiarism (including unintentional plagiarism that may occur if we fail to conduct a thorough literature review and inadvertently reproduce someone's original project), and protect the rights of the people and animals we may need to rely on for our study.

	Always	Often	Sometimes	Rarely	Never
1. I understand when my use of human subjects in research (such as completing surveys) must be reviewed prior to my study.	<input type="checkbox"/>				
2. I know what an IRB is and the role it plays in research integrity.	<input type="checkbox"/>				
3. I understand my institution's policies and procedures for the use of animals in research projects.	<input type="checkbox"/>				
4. I know what an IACUC is and the role it plays in research integrity.	<input type="checkbox"/>				
5. I know what policies I must follow if my research could result in my personal financial gain.	<input type="checkbox"/>				
6. When I write a research paper, I acknowledge those who assisted me or whose ideas helped me.	<input type="checkbox"/>				
7. I know which office at my institution is responsible for research.	<input type="checkbox"/>				

8. I know which office at my institution is responsible for research <i>integrity</i> .	<input type="checkbox"/>				
9. When reviewing the scholarship of others, I can set aside what I know about the scholar(s) involved and focus solely on the quality of the results.	<input type="checkbox"/>				
10. When working with others on a research project, I would describe my interactions with them as professional, collegial, and supportive.	<input type="checkbox"/>				

This inventory is different from the others in this unit in that the preferred responses all cluster to the left. In addition, since many of the questions deal with what you know as opposed to what you feel, you can easily remedy some of the areas about which you were uncertain. For example, if you found on this inventory that you rarely or never recall what an IRB or IACUC is, review the nature and role these groups play as outlined in Unit Three.

Environmental Wellness

In order to understand the concept of environmental wellness completely, let's start by considering a few simple ideas in **set theory** and **systems theory**. A **set** is any well-defined group of objects or ideas that can be considered an entity in its own right. In this way, we can talk about a set of:

- dishes
- integers
- vowels in a specific language
- rational numbers
- free weights
- even numbers
- golf clubs
- rules
- gardening tools
- prime numbers

And so on. A **system** is then a set with members that interact with one another in some way or that affect and are affected by one another. In this way, we can speak of:

- an ecosystem
- a computer system
- the cardio-vascular system
- a home theater system
- a political system
- an economic system
- a healthcare system

and the like. The key factor is that systems are sets composed of individuals that can reasonably be distinguished (for example, a monitor in a computer system doesn't do the same thing as a keyboard, a fish in an aquatic ecosystem isn't the same thing as the seaweed, the heart has a different function from the lungs) but that work together with or influence one another. When you affect one component of a system, other components are affected; at times, the entire system may cease to function. These ideas are important because, when we speak of environmental wellness, we're not just dealing with the flora and fauna in your vicinity. We're



dealing with that entire set of things that are separate from you but that still play an important role in your wellbeing. For example, if you're living in an environment in which you're exposed to a great deal of mold and mildew, your allergies and other aspects of your health could easily be affected. But you could also suffer if you live in an environment that's extremely stressful, hazardous, or polluted. Noise pollution, no less than chemical pollution, can have a long-term effect on the body, and an environment

full of distractions can make it difficult to be aware of unsafe conditions that would otherwise be readily apparent.

With these thoughts in mind, complete the following inventory on factors relating to your overall environmental wellness.

	Always	Often	Sometimes	Rarely	Never
1. I use tanning salons or tanning beds.	<input type="checkbox"/>				
2. I have my vehicle serviced according to the schedule outlined in the owner's manual.	<input type="checkbox"/>				
3. I stay overnight in places that lack a carbon monoxide detector.	<input type="checkbox"/>				
4. When I see a traffic light that's out of order, I report it.	<input type="checkbox"/>				
5. I stay overnight in places that lack a smoke detector.	<input type="checkbox"/>				
6. When I see broken glass or other dangerous conditions, I either report the problem or (when safe to do so) take care of it myself.	<input type="checkbox"/>				
7. I stay overnight in places that lack a radon detector.	<input type="checkbox"/>				
8. I wear safety goggles and closed-toed shoes when working in a science lab.	<input type="checkbox"/>				
9. I live or work in an environment where there's a great deal of trash and/or clutter.	<input type="checkbox"/>				
10. I'm aware of how to find and use basic safety equipment when working in a lab, workshop, or other environment where injuries are possible.	<input type="checkbox"/>				
11. I skydive, participate in extreme sports activities, or engage in other recreations that put my life or safety at risk.	<input type="checkbox"/>				

12. I practice recycling to reduce the amount of trash I discard.	<input type="checkbox"/>				
13. I listen to loud music.	<input type="checkbox"/>				
14. I spend time in environments that are soothing and that help me to relax.	<input type="checkbox"/>				
15. One or more of my friends smoke.	<input type="checkbox"/>				

Certain students may disagree with what some items on this inventory imply. “I enjoy skydiving,” someone might say, “but I always take all of the appropriate precautions to protect my safety.” Or “I just can’t work in any environment that’s too neat. I *need* a certain amount of clutter and disorder in order to concentrate.” Remember that these inventories are not designed to indicate that you *have* to take one course of action or another, rather their purpose is to make you aware of the choices that you’re making so that you can assess every aspect of your approach to wellness. At the end of this unit, we’ll give you an opportunity to reflect on whether you’d like to make some different choices for the future. But for now the goal is simply to inventory the wellness choices that you’re currently making.

Being Analytical

The following is a selection from an essay written by Donald B. Ardell, a widely published author in the field of wellness and, at one time, an advisor to the University of Central Florida on its wellness program. Read the passage and then use the techniques of critical thinking and analysis that we’ve been exploring in this course in order to determine what you regard as strong arguments, weak arguments, and the overall merit of the remarks.



Everyone knows that wellness seekers and promoters value fitness, nutrition, fun and a host of other positive lifestyle matters. Most people familiar with health promotion also realize that the term “wellness,” though widely used commercially in varied and even contradictory ways, entails more than NOT doing high risk things, more than foo foo spa treatments and more than medical assessments of hazards existing and likely to develop.

Yes, despite the hype by many in the medical profession, a wellness philosophy entails so very much more than simply a willingness to avoid attitudes and behaviors that risk illness and disease, like smoking, overeating, remaining sedentary or being a grump. In fact, wellness—the conscious choice to pursue health and life quality well above the common standard of “normal” mediocrity, does not in its original or best sense emphasize any of these last mentioned aspects. Wellness properly described and embraced entails the study and integration of mental and physical health-enriching qualities into one's daily life, starting with fitness and nutrition but including much else.

On many occasions, I have suggested the use of the term REAL wellness to emphasize such positive non-medical realms as the quest for added meaning and purpose, the cultivation of an increased capacity for reason, exuberance and liberty, critical thinking, applied ethics, positive psychology (happiness) and environmental awareness.

Wellness seekers and promoters need not feel remiss about advocating personal advancement via exceptional lifestyles. Such a focus does not equate with self-absorption or neglect of the commons (the larger environment): instead, it reflects a deliberate focus on what one can do for him or herself. Enjoy and go for it. Too bad more people don't do the same. If most did, the U.S. medical system would not be so bloated as to consume 17 percent of GDP.

In addition to looking after ourselves, we are wise if we also work together, with others, to promote favorable environmental priorities. What can REAL wellness seekers do about environmental awareness? What, exactly, IS environmental awareness?

On their own, there is not much any individual can do about the great physical issues we face in this country and around the world. Similarly, we are limited in what we can do about economic and social problems, which also fall in the category of environmental awareness. Yet, we cannot focus only on our own situations while the environment around us deteriorates and social and economic conditions worsen. Being happy, in top physical form, mentally acute and otherwise fit as a proverbial fiddle won't matter much if the wells go dry, the economy collapses and the air becomes toxic, for starters.

The community, state and the world need our attention. If any of these jurisdictions fall apart, individual wellness will mean little. A willingness to do one's part to safeguard and promote the greater good is a positive wellness trait. Given the serious problems in this country and around the world, wellness seekers and promoters must also focus on a selection of “green” issues of their choice. In this way, a positive lifestyle will serve as a complement to outreach efforts beyond the personal. Pressing national and global concerns very much affect the quality of an individual's quality of life. Of course, there are so many concerns, issues, problems and challenges, from economic crises to global warming to conservation and so on, that no consensus among wellness enthusiasts on which national and global concerns are most important is likely anytime soon. We must all choose our own priorities for outreach services for the general good.

<http://www.seekwellness.com/wellness/reports/2009-01-17.htm>

Occupational Wellness



If you ask most Americans to tell you something about themselves, they'll frequently start by describing their occupations. That's not true in every other part of the world, however. In some places, people are more likely to describe themselves by talking

about their family, hometown, or religion than to see themselves as defined by their careers. Having such a strong focus on our occupations brings with it both advantages and disadvantages. We tend to be hardworking, productive, and efficient employees, but we also tend to lose sight of work-life balance. In fact, some people become so fixated on their jobs that they become **work addicts** or **workaholics**: They feel compelled to work beyond regular hours and have trouble enjoying their leisure time. Occupational wellness is all about keeping a proper perspective on work. People with a high level of occupational wellness see their careers as important but not as all encompassing. They can tell the difference between *who they are* and *what they do*. They know what their resources are if they want to explore new career options, and they pursue work in fields that don't conflict with their core values. While you're in college, occupational wellness also means seeing the proper relationship between your education and your career goals. Your college program should bring you closer to your career goals, but it shouldn't simply be vocational in nature. The time you spend in college should make you more employable and successful in your work, certainly. But it should also make you a better citizen, wiser consumer, and more effective communicator. It should increase your career options, but it should also introduce you to a wider range of leisure options. In short, a well-balanced college education should give you access to a better life, not just a better job. The following inventory can help you see exactly where you are right now in your development of occupational wellness.

	Always	Often	Sometimes	Rarely	Never
1. I believe that the field of work I will enter is likely to be consistent with my core values and personal goals.	<input type="checkbox"/>				
2. I fall behind in my work.	<input type="checkbox"/>				
3. I know where the career services center is at my college or university.	<input type="checkbox"/>				
4. I'm interested only in issues that relate to my profession or intended major.	<input type="checkbox"/>				
5. I believe that the career services center is useful largely for people who are almost done with college, not for students in their first or second year.	<input type="checkbox"/>				
6. I have a clear and accurate sense of what it will be like to work in my chosen field.	<input type="checkbox"/>				

Being Innovative

This section of the unit suggested that, while Americans tend to define their identities in terms of their occupations, people from other cultures may describe themselves in terms of where they live, who their family is, or what their religious beliefs are. Suppose you wanted to investigate this topic further and determine whether mass communication and the rise of the Internet are reducing these differences, what steps would you need to go through in order to conduct this study?

- Since the study involves differences in location and culture as well as changes through time, how might you need to focus this topic in order to make it a reasonable topic for undergraduate research?
- In light of the resources that are available for undergraduate research, how might you modify your topic still further in order to make it possible to accomplish?

- In conducting your literature review, which academic disciplines might already have produced research on a related topic? How would you go about identifying and locating those studies?

Exercises

1. Look back at your responses to the various inventories in this unit. What are three areas of your life in which you seem to be doing exactly what you should be doing to promote your overall wellness?
2. What are three specific things you could do to improve your wellness? Don't provide general answers like "eat better" or "reduce stress." Those vague objectives are not very helpful in setting actual goals for the future. Instead state very specific changes you could make, such as "Switch from regular to diet soft drinks" or "Spend at least one hour each weekend walking in the park."
3. If you were to begin *today* to engage in the activities you identified for question #2, what's your best estimate as to when you might see a noticeable improvement in your wellbeing?

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Distinction in the Future – Transition to Greater Opportunities

Unit Fourteen:

Documenting Your Successes

Learning Objectives:

1. To master the basic strategies of how to prepare a résumé.
2. To explore the ways in which a well-constructed portfolio can complement the impact of a résumé.
3. To learn about electronic portfolios and their role in documenting a person's achievements.
4. To gain insight into how best to write a letter of application for a job or other opportunity.
5. To consider what makes some people more successful than others when they are interviewed.

The Résumé

As you compile a record of success in your coursework, undergraduate research, internships, and other aspects of your professional life, you're going to need an effective way to demonstrate to others what you've done so that you can open the door to further opportunities. In this unit, we'll explore several ways of documenting these successes, beginning with the most basic: the professional résumé. In its simplest form, a résumé is just a convenient way of summarizing for others what you've already done when you're being considered for a job, award, admission to a graduate program, or some other type of opportunity. The origin of this word is French, and it means "summary" or "summarized." An important aspect of this term that's often overlooked is that it has accents on *both* e's, not just the last one. If you're using a word processing program and don't know how to put accents on both e's, just type the word as *resume*. Don't try using apostrophes — resulting in the word *re'sume'* or *resume'* — since this looks unprofessional, and the last thing you want is for a résumé to look unprofessional. At times, you may also encounter a term for a similar type of document: the *curriculum vitae*. In most cases, people use these two words

interchangeably. In other situations, however, the difference is one of length and focus: A résumé is a relatively short document, no more than one or two pages in length, while a *curriculum vitae* is a more extensive summary of your past achievements, running on to perhaps five or six pages in total. When using the expression *curriculum vitae*, however, there are several potential pitfalls to watch out for.

- This phrase *curriculum vitae* comes from Latin, and it means “the course of life.” Some people falsely believe that, because this expression includes the term *curriculum*, it applies mostly to the schoolwork that you’ve completed. That’s not true. A *curriculum vitae* should detail “the course of” all your major achievements in life.
- Because the expression is Latin, you have to remember to place an *-e* at the end: *curriculum vitae*. The spelling **curriculum vita* is incorrect and, if you use it, certain readers will fault you for using words you don’t appear to understand.
- When you omit the term *curriculum*, however, the proper spelling is *vita*, not **vitae*. If you write, “I am enclosing a copy of my *vita*,” you are really saying, “I am enclosing a copy of my *life*.” Writing “I am enclosing a copy of my *vitae*” (“I am enclosing a copy of my *of life*.”) looks as illiterate in Latin as it does in English and, once again, certain reviewers may downgrade your application because you’re using terms incorrectly.
- There is no convenient plural of the expression “*curriculum vitae*,” so always try to find a way around it. Instead of writing “Enclosed, as requested, are three **curriculum vitas*,” say “Enclosed, as requested, are three copies of my *curriculum vitae*” or “... c.v.s” or even “... résumés.”

From this point forward, we’ll use the terms *résumé* and *curriculum vitae* as though they were synonyms since that’s become standard practice in much of academic life. But you should be aware of the differences because they may be important in some of your courses. If you are a traditional-aged undergraduate student, then regardless of whether you call it a résumé or *curriculum vitae*, it’s likely to be rather brief, no more than two pages in length at most. Any document longer than that at this stage of your career is likely to seem pretentious and will work against you instead of helping you get the opportunities you’d like. If you’re a non-traditional student with considerable

professional experience, your résumé might be a few pages longer. But only in the rarest of circumstances should an undergraduate c.v. exceed six pages. To put it bluntly, if you're a child prodigy who began performing internationally at the age of seven, began your own multi-million dollar corporation in your teens, and have already published several books that were reviewed by *The New York Times*, consider extending your c.v. a page or two beyond six. Otherwise, adhere to that page limit, condensing your material to only your most essential and impressive achievements.

What Should an Undergraduate Student's Résumé Contain?

The information you put into your résumé will vary according to the amount of experience you've had working, performing service projects, and engaging in other activities that demonstrate your strengths and capabilities. For most undergraduates, however, their résumés should contain the following information.

- **Contact Information.** Many people who view your résumé will need to contact you. They may want to interview you for a position, tell you that you've won an award, or invite you to work for them. For this reason, you should make it easy for the reader to get in touch with you. List your full name, including your preferred name if you use a name other than what appears on your birth certificate. Provide all mailing addresses, such as school, work, and home, if they are different. Indicate at which address you'd prefer to be contacted. In a similar way, provide all telephone numbers, including the area code, where you may be reached. List the e-mail addresses you check regularly. If you are easily reachable through instant messaging (IM) or a social networking site such as Facebook or tumblr, you may wish to include this information. You should not, however, include any e-mail address, IM identity, or other pseudonym that someone might consider vulgar or silly. A résumé is a professional document, and you'll be judged by how professional you look on it. As we saw in Unit Eleven, consider very carefully the type of information people would see about you on your social networking site and determine whether what you and your friends say on that site is suitable for professional purposes.

- **Current Goal.** Include a sentence fragment or two indicating your immediate goal in preparing the résumé. Avoid the use of the first person in this section and throughout your résumé as a whole. For most sections, use the infinitive form (the “to” form of the verb) rather than complete sentences with a subject, verb, and object. For example, your current goal might be *“To obtain admission to a Ph.D. program in early modern history”* or *“To work in a major accounting firm where there is the possibility of career development.”*
- **Qualifications.** This section will change periodically, depending on how your skills develop and how you can relate them to the opportunity at hand. For this section, ask yourself what it is about your background that makes you particularly qualified for this specific opportunity. As in the previous section, use sentence fragments and avoid all use of first person forms.
- **Educational Information.** Beginning with high school, list all the schools you’ve attended, including your current college or university and your anticipated date of graduation. For the high school from which you graduated, be sure to list its complete name and the year you received your diploma. Since your résumé is likely to be reviewed by people who are unfamiliar with your local area, list the city and state for each school. For this section, as well as all others that include information with dates, place all items in **reverse chronological order**. That is to say, the most recent item is at the top of the list, the earliest item at the bottom.
- **Occupational Information.** List all the paid jobs you’ve had, including a brief summary of what your responsibilities were.



- **Service Information.** List all your unpaid or volunteer activities that were performed for the good of the community. For many opportunities, the person reading your résumé will want to know that you're interested in more than just making money. So, if you don't have a lot of service experience already, try to get some before you graduate.
- **Extracurricular Activities.** List the most important activities you have performed outside of class. Include what you are currently doing at college as well as any significant activities that occurred earlier. Don't forget organized groups like clubs and societies, athletic teams, musical groups, and so on.
- **Honors and Awards.** List any special recognitions you have received, explaining them if the name alone won't be enough for the reader to understand why this achievement was important. Be sure to list the date when you received this honor and to spell out any acronyms that a reader might not know.
- **Special Skills.** If you're particularly proficient at a foreign language, computer application, type of technology, musical instrument, or have some other skill that most people won't have, you may want to include that information.
- **Date Information.** If you are using the résumé to apply for a job or another educational opportunity but will not be available until some time later, indicate the date at which you will become available. Also indicate, perhaps in the footer of the document, the date on which this copy of your résumé was updated or printed. Providing this date will help a reviewer understand how current the information is.

Please note that your résumé doesn't have to include *all* these sections. In fact, if you try to include them all, you are likely to end up with a document that's longer than the page or two that a strong, undergraduate résumé should be. Obviously you would never include a section for which you have no entries. So, if you've never held a paid position or served as a volunteer, you would simply omit that part. In addition, after you have drafted a sample résumé with all of the information that you have, ask yourself which sections would help you make the strongest case. Which sections seem

weak or unconvincing? Keep the best information, omit or condense weaker information, and reduce the entire document to no more than two pages.

Being Imaginative

The term *epistolary novel* is applied to an extended work of fiction in which a story is told through a series of letters. One insight that we gain from epistolary novels is that fiction can assume many shapes, such as an email exchange or a collection of tweets. How would you go about creating a short story told in the form of a résumé? How might you use the different sections of the document to provide additional information as the reader went through the résumé and perhaps provide a surprise ending? Since the items in a résumé are traditionally listed in reverse chronological order, how could you use this backwards motion in time (which starts over again in the next section of the résumé) to your advantage? Since your story is not going to be submitted as part of an actual application for a job, how might you use images, designs, and watermarks creatively to either enhance your story or make the work more visually appealing?

What should my completed résumé look like?

Your word processing program probably has several templates that you can use as the basis for your résumé. In addition, an online search of a phrase such as “sample college student résumé” will produce a number of examples that you can adapt so that they include your own information. Your resulting document may end up looking something like the following.

I.M.A. Student

College Address:
P.O. Box 666
Southeastern Central University
Northwoods, WD 58058
Telephone (701) 555-1212 ext. 666

Home Address:
123 Fairlawn Avenue
Richmond, VA 23225

Telephone (804) 666-5555

E-Mail: imastudent@secu.edu

IM: distinctionthrudiscovery

OBJECTIVE: Research associate at an NGO promoting social justice.

QUALIFICATIONS

Serving as chair of the Southeastern Central University Political Justice Committee, submitted three grant proposals in support of outreach efforts to migrant workers in the Northwoods Valley; two of these grants were funded, resulting in such projects as ESL instruction to pre-school children and transportation services to the local Legal Aid office.

EDUCATION

2014-present	Southeastern Central University, Northwoods, WD Anticipated graduation, 2018
2010-2014	High school diploma, John Marshall High School, Richmond, VA

EMPLOYMENT

2014-present	Server, The Distinctive Diner, Northwoods, WD <i>Responsible for greeting guests, providing prompt and courteous service, accurately placing and serving food orders.</i>
2012-2014	Receptionist, Student Insurance Company <i>Front-line duties answering the telephone, greeting customers, and informing staff members of pending appointments.</i>

SERVICE

2015-present	Weekly resident visits, Northwoods Nursing Home and Rehabilitation Center, Northwoods, WD
2011-2014	Volunteer ("Candystriper"), Henrico Doctors Hospital, Richmond, VA

EXTRA-CURRICULAR ACTIVITIES

2015-present	Intercollegiate Hockey, Southeastern Central University
2011-2014	Soccer, John Marshall High School, Richmond, VA
2010-2014	French Club (vice president, 2012-2013; president, 2013- 2014), John Marshall High School, Richmond, VA

What are some of the principles I should keep in mind as I prepare my résumé?

- **Be honest. Don't exaggerate.** "Padding your résumé" has become such an expression that it's easy to assume everyone does it. They don't, and an

inaccurate résumé has ruined more than one career, even many years after the document was created and (so the writer thought) forgotten. Some people believe, “The résumé just gets me in the door. So, it *has* to be impressive. But once I get my chance, they’ll see my true value and no longer care if I exaggerated a little bit.” The problem is that the school or employer who accepts you will conclude, “Well, if this person lied on the résumé, what *other* things have we been lied to about?” Moreover, once an exaggeration gets to be a part of your official documentation, it can be all but impossible to drop that inaccurate information from your résumé later. For all of these reasons, be aware that it’s okay for your résumé to reflect your *best* self, but it needs to reflect your *honest* best self, not the person you wish you were for the sake of getting this opportunity. Don’t claim to have been in charge of an event that you only attended or to have proposed the idea for an activity that began long before you came onto the scene. Your application could end up being rejected solely on the basis of an exaggeration or “little white lie” that you can’t imagine the reader would ever be able to disprove.

- **Print your résumé on good, substantial, and plain white paper.** In most cases you’ll be submitting your résumé to a reviewer, one of the first things that he or she will do is to photocopy it for other members of a review committee. When a résumé is photocopied, colored paper or stationery with designs and watermarks tends to result in a very poor copy. At best, the photocopy of your résumé will look unattractive. At worst, some of your information may become illegible because the color of the paper or the nature of the design makes the text difficult to read. A plain white paper is always best when printing a résumé. But don’t feel that you need to use only regular typing paper. A thicker or heavier paper is actually advantageous because, if résumés are photocopied in a stack, this type of paper prevents the next paper in the stack from “bleeding through” and making your text difficult to read. Moreover, a heavier paper feels good and substantial in the hands of a reviewer. It literally lends “weight” to your application and conveys a subliminal impression that you are a person who has done serious and important things.

- **Print your résumé only on one side of the paper.** Just as you don't want the next page in a stack of résumés to "bleed through" your text when these documents are being copied, you don't want the text on the back of your own résumé to show through either when it is being copied or as it is being read. A heavy enough white paper will reduce the likelihood of this problem, but there's also another reason why it's a bad practice to duplex a résumé. Since these documents are usually copied, it becomes all too easy for the person who's making the copies not to notice that your résumé is printed front and back. As a result, the photocopy may end up containing only half your résumé, and the people who receive the copies will have no way of knowing that something is missing.
- **Don't use multiple fonts or styles.** With word processing applications, it can be very tempting to use a wide variety of fonts or styles (such as *italic*, **bold**, underlined, and double underlined) when preparing a résumé. The result rarely looks professional. Excessive changes of font and style detract from the content of the document, which is what you want the reader to focus on the most. Rather than putting your name in a different font at the beginning of a résumé, try keeping the font the same but increase the size of your name slightly. It is acceptable to use **bold face type** for the headings of major sections in your résumé, such as **Qualifications**, **Education**, and **Employment**, as well as underlines or italics for the names of publications. But use of a style change for emphasis, to supply an element of drama, or simply because you think the text looks better that way is not a good idea.
- **Use color sparingly.** A small amount of color may be effective in a résumé. For instance, placing your name and the major headings of the document in color while the rest of the text is black against the white background of the paper can make a résumé look distinctive. Nevertheless, if you choose to apply a bit of color to your fonts, do so sparingly, with no more than one color used in addition to the standard black text. Choose a color that tends to be easy to read, such as navy blue or burgundy rather than yellow or bright green. And remember that whatever advantage color may give your *vita* will be lost when

the document is photocopied. So, never use color in a manner that's *essential* for someone to understand the document or that would create confusion for anyone who is trying to read a black-and-white photocopy.

- **Explain any term a reader is likely not to know.** We tend to be so familiar with the names, abbreviations, and technical terms that we work with on a daily basis that we forget how confusing all this information can be to others. A reference that you served as a teacher's aid in "Ms. Watson's ENG 4 class" may not have the impact you intend if your reader is unaware that Ms. Watson was your high school's principal and that "ENG 4" is not an English class but an advanced engineering class. In the sample résumé that we considered earlier, "I.M.A. Student" explained that being a volunteer at the local hospital involved the position commonly known as a "candystriper." In a similar way, go through your résumé carefully and make sure that every name, term, and abbreviation that you use will be understood by anyone who is likely to see it.

While it was once customary to prepare a résumé only when you were on the verge of graduating from college and about to look for employment, undergraduate students today should begin preparing a résumé at the very beginning of their college programs. A thin or weak résumé can indicate areas where you need to gain experience while there's still time to do so. A well-written résumé can make it possible for you to receive scholarships, internships, and other opportunities that would not otherwise be open to you. Finally, as we'll see in the next unit, you can use a résumé as the basis for a planning exercise that will help you to set goals and develop strategies to meet them.

The Portfolio

Not matter how well constructed a résumé is, it only *tells* the reader what you've done. A portfolio *shows* the reader what you've done. For this reason, you should consider expanding your résumé by combining it with a carefully selected body of work that documents your achievements for others. In certain fields, portfolios have been around for a long time. Artists and photographers have long used portfolios of their work to demonstrate their style and skill to others, and people who work in the field of marketing or public relations often submit a portfolio with their job applications. But

there's no major or field for which a portfolio isn't valuable in *some* way. The key is to choose the proper items to best represent your work.

A portfolio is, in other words, a **selection of your best work** so that anyone who reviews it can see what you're capable of. So, if you're a history major, your portfolio shouldn't contain every single paper you've written and test you've taken but only the one or two instances of each that demonstrate your level of ability. That task will be easier if you follow four important steps.

1. **Decide on the focus of your portfolio.** If your school requires all students to develop a portfolio, this step may already have been taken for you, and you may even have specific requirements about what the contents of the portfolio must be. In other cases, you'll have some choice about the portfolio's overall structure and design. And what you include will vary according to the specific focus that you've adopted. Several possible areas of focus for undergraduate portfolios include:
 - **Personal growth:** How are you developing as a person over the course of your college career? How are your views on politics, religion, and your role in the world evolving?
 - **Employment:** How have you developed the knowledge and skills that would be useful to an employer? What distinguishes you from other applicants for the same position?
 - **Further study:** How does your undergraduate program prepare you for graduate or professional school? What evidence can you provide that you're qualified for advanced study?
 - **Service:** What evidence can you provide that the world is a better place because of you? How have you changed the lives of others for the better?
2. **Decide on your "narrative arc."** Your portfolio shouldn't just be a random collection of evidence. It should tell a story or convey a message to the people reviewing it so that they can understand you as a fully developed, three-dimensional human being. Naturally, at least part of your narrative arc will be determined by the focus you've selected. An employment

portfolio should convey, “I’m the best candidate for this job.” A service portfolio should convey, “I care about people and take concrete steps to help them,” and so on. But there should also be a complementary narrative arc that distinguishes you from others who are also qualified for the job or who care about others. Choosing the narrative arc of a portfolio is an extremely personal decision, and you should give it a great deal of thought before actually beginning your portfolio. Here are a few suggestions of possible narratives that your portfolio could tell, but don’t just choose one: Modify it and adapt it so that it truly reflects who you are as a person.

- I am creative.
- I have overcome great challenges.
- I “march to the beat of a different drummer.”
- I am a visionary person.
- I am practical.
- I am a deeply spiritual person.
- I see beyond the silos that separate people and disciplines.

3. **Decide on the specific contents of your portfolio.** Your specific focus and narrative arc will then help you select the items that are most appropriate to convey the message that you’ve chosen. For instance, suppose that you’ve selected the following as what you’d like your portfolio to convey: “I’m highly qualified for admission to medical school, but I have interests in many other areas as well. I’m not just a scientist; I’m also a poet, a marathon runner, an artist, and a believer in the value of alternative therapies.” What sort of items would you need to convey that message?

- A résumé.
- A transcript demonstrating your academic success.
- A small but representative sample of your poems and artistic works.
- Your times in several of your best marathons, along with newspaper clippings about those races.

- A research paper you wrote about the effectiveness of acupuncture in treating the nausea associated with chemotherapy.
- An exam in organic chemistry for which you received an excellent grade.



4. **Decide on the best organizational structure for the items in your portfolio.** A good portfolio doesn't consist merely of items — even well-chosen items — dumped together in an envelope or folder. The structure you use should be based on the narrative arc that you've selected and make it clear *why* you've included these specific items. Perhaps the most convenient way to do that is to include a personal statement as the very first document in the portfolio. Without bragging but also without undue modesty, outline for the reader who you are as a person, what your core values are, and what makes you unique as a human being. Then conclude the personal statement with an index or table of contents that informs the reviewer what the portfolio contains and how each item is linked to what you've outlined in your personal statement. While your résumé should always come immediately after your personal statement, place the other

items in the same order that the meaning of each item is mentioned in your personal statement. If you find that you can't draw a legitimate connection between an item and what you've written in your personal statement, that may be an indication that you're trying to include something that really doesn't belong in your portfolio. The rule of thumb to use in these cases is: **When in doubt, leave it out.** Extraneous items will merely dilute the overall message you're trying to convey.

What Are Some Items Typically Included in a Portfolio?

Even though every student's portfolio should have its own focus and narrative arc, there are some items that typically appear in an undergraduate portfolio. As with your résumé, don't try to include all of the items listed here. They're outlined merely to provide some suggestions and to get your own ideas flowing. The only requirements to follow are those established by your professor or university. If your required portfolio can be free-form — or if your school doesn't require a portfolio at all — remember to select only those pieces of evidence that are most effective in conveying the message you've selected. We've already mentioned three items that most portfolios include:

1. A personal statement that provides a guide to or index of the portfolio's contents.
2. A résumé.
3. A transcript.

Being Intentional

One of the most aggravating parts of assembling a portfolio is having to find documents that you've misplaced or to reconstruct documents you've thrown away. Make it easier for yourself by adopting an intentional approach to your portfolio. Create a "pre-portfolio" in which you place documents that you *might* consider including in a portfolio at a later day. For example, if you are handed back a paper that you believe is a particularly good example of your work, place it into your pre-portfolio so that you'll have it available when you're compiling the

portfolio itself. Set a specific date each semester on which you'll examine the contents of your pre-portfolio, eliminate any documents you'll no longer need, update items on your résumé, and contemplate which new items you're likely to produce within the next few months.

In addition to these documents, other items that you may wish to consider including in your portfolio are:

- **A biographical statement.** Since reviewers will want to get to know you as a person, you can make that process easier for them by telling them about your background, critical events in your life, challenges that you've overcome, and why you're interested in a particular field or career. In certain cases, your biographical statement may be part of the personal statement mentioned earlier; at other times it's preferable to have two separate documents. For instance, you might create a personal statement that illustrates in a very focused way why you want to become a doctor, while your biographical statement is a much more general description of your early history, family relations, non-academic interests, and the like. Alternatively, your personal statement might be designed to provide structure for the narrative arc of your portfolio, while your biographical statement deals with only one component of that arc, such as your personal faith journey or your growth as an engineering student.
- **One to three of the best papers you have written for a class.** At least one of these works should be a research paper because the people who review your portfolio will be interested in your ability to perform original work, complete a project either independently or as a member of a team, and explore a topic in depth. If you are writing a thesis as part of your undergraduate program, your thesis should serve as your best and most complete work of research. If you decide to include other papers, it may be useful to provide a varied sample of your work, such as a reaction paper, extemporaneous essay, focused writing assignment, or another form that was discussed in Unit Five.

- **An example of a first draft for one of your papers, combined with the final draft as a way of indicating how you work.** Since a portfolio doesn't just tell reviewers what you've done but also gives them insight into you as a person, it can be useful to allow people to see the steps you've taken in the process of completing a significant work. To assist them in drawing their conclusions, you might include some annotations indicating why you made some of the changes that you did. For instance, was there a section at the end of your first draft that needed to be moved earlier in the paper in order to make certain concepts understandable to the reader? Did you realize that one section of the work didn't flow into the next as logically as you hoped and thus added a more complete transition? Were there additional sources you came across that caused you to rethink some of your initial assumptions?
- **A sampling of creative works.** Naturally if you're hoping to pursue a graduate degree in painting, photography, dance, theater, voice, and the like, you'll want to include some evidence of your creativity. But even if your intended field or profession is different from these, you may make yourself more attractive to those who review your portfolio if they can see how well-rounded and creative you are. The documentation that you select might be programs of performances or exhibitions, photographs of your work, reviews from local newspapers, copies of poems or short stories, and anything else that provides evidence of your creative activity.
- **Letters of recommendation.** Evaluative letters from professors and other professionals who can provide a reliable assessment of your work help to verify your claims of achievement. After all, anyone can *say* that they were among the best in their class at this or that activity, but having that statement supported by an unbiased witness gives these claims much more impact. For this reason, letters of recommendation from friends or members of your family carry much less weight than someone who has no vested interest in describing you in glowing terms. In the same way, it's far more effective to include letters of support that describe in some detail *why* your work has been of superior quality rather than simply praise you without providing the reasons why these

accolades are merited. Before you request these letters of recommendation, be sure to review the guidelines on how to do so in Unit Eight. Naturally, since the letter is not going to be mailed, there is no reason to include a pre-addressed stamped envelope in this case.

- **Performance reviews.** If you ever underwent an evaluation for work that you completed while on a job, providing an actual performance review can make a portfolio far more effective. While you'd never include a completely negative review, evaluations that were positive offer an objective assessment of your strengths while one or two criticisms reveal your ability to take advice with a positive attitude.
- **Work performed for a capstone experience or a major undergraduate research project.** We've already seen that, if you're writing a thesis, including that extended work of research in your portfolio is a good idea. But even students who are not writing theses may often conduct a capstone project during their senior year that pulls together many different aspects of their undergraduate programs. The reason why capstone projects are good indications of your work is that they demonstrate a long-term commitment to a single activity, illustrate independence of thought, provide a sample of your communication and critical thinking skills, and represent the culmination of your work in your chosen discipline.
- **An extracurricular transcript.** This document provides a listing of all your significant activities for which you didn't receive academic credit. Even better than a bare list, however, is an annotated summary that indicates what you gained from each activity. How have athletics made you a better leader? How has your participation in Greek life or clubs taught you how to handle greater responsibility? How have the activities in your residence hall made you a more effective participant in group endeavors?

Zubizarreta (2009) is an excellent resource to consult if you're looking for additional ideas about what to include in your portfolio or how to structure it. While its focus is on portfolios that document student learning, much of the advice contained in the

work is applicable to employment portfolios, graduate application portfolios, and any other type of portfolio you're likely to need throughout your undergraduate program.

The E-Portfolio

An e-portfolio is simply a version of your portfolio that you create, not on paper, but as a computer file or website. While nearly everything we saw about regular portfolios is also true of e-portfolios, there is one important principle to keep in mind.

Key Principle

Don't fail to take advantage of the e- in e-portfolio.

In other words, you could simply use an e-portfolio to collect digital versions of the same documents that appear in your regular portfolio, but that would deprive you of some of the advantages that technology can give you.

- **An e-portfolio can contain audio and video files that you couldn't include in a paper portfolio.**
- **An e-portfolio can contain a great deal more material than you would want to keep in a paper portfolio.**
- **An e-portfolio can contain hyperlinks that allow the user to move through the document in a non-linear manner.**

Let's explore each of these features individually as a way of determining how you could make the best use of an e-portfolio.

Audio and Video Files

We saw earlier that portfolios can show people what résumés only tell people. In a similar way, e-portfolios can show people things that even paper portfolios only tell those who read it. For example, rather than just containing a program for one of your piano recitals, your e-portfolio could also include a recording of it. Rather than presenting just a summary of an extemporaneous speech that you delivered, your e-portfolio could allow a reviewer to hear or see that speech. Rather than just containing still images of the website that you designed, your e-portfolio could also include active

links to that site. Of course, just as a portfolio shouldn't be merely a collection of items that don't make a specific point or convey an important narrative arc, so should the items in your e-portfolio be there for a clear reason. As with any portfolio, reflect on what it is you're trying to accomplish and what would provide the best evidence to get you nearer to that goal.

- **If your e-portfolio is part of a project for your college or university, which audio and video files would best illustrate your growth and achievement as an undergraduate?**
- **If your e-portfolio is intended to help you get admitted to graduate or professional school, which files will best demonstrate to an admissions committee that you have the knowledge and capacity to succeed in an advanced program?**
- **If your e-portfolio will be included as part of a job application, which files will prove to someone that you have the right training, knowledge, and temperament to succeed in your job?**

If your e-portfolio doesn't fit into any of those three categories, ask yourself what a reviewer would need in order to say "yes" to you in your pursuit of whichever goal you have. Then focus on those items that best give this reviewer what he or she needs in order to reach that positive conclusion.

Breadth of Content

When it was suggested that your thesis be a part of your portfolio, you may have thought, "How can I do that? My thesis is 78 pages long. The portfolio is going to become so unwieldy that no one will really read through it." In fact, the sheer limits on space available in the average portfolio means that you may have to omit or condense certain items. Perhaps instead of including your entire thesis, you might include only the final chapter. Perhaps instead of screen shots of each page on a website you designed, you might include only a few representative views. Many of these concerns are reduced, however, when you're dealing with an electronic portfolio. If your e-portfolio is online, its homepage can be very concise: a brief personal statement plus

ten or twelve links to various subpages. Since most reviewers will not go through an e-portfolio in a linear manner, but will skip from hyperlink to hyperlink as they think of various questions, you're free to include a far larger amount of material in an e-portfolio than you would if you were providing hard copies to someone. Even so, you'll want to make sure that you adhere to the following principle.

Key Principle

Just because an e-portfolio can contain more and longer documents than a paper portfolio, you can't skip the step of selecting, editing, and structuring those documents carefully.

The temptation is simply to "dump" everything you have into an e-portfolio and let the viewer sort it all out. But doing so really undermines the whole purpose of this medium. You still want a clear purpose and narrative arc to emerge from the materials that you've assembled. What you don't want to happen is for your most important achievements to be overlooked by the sheer bulk of the material you've included. For example, you may have a 90-minute video of a conference in which your 15-minute presentation occurs about 2/3 of the way through. It's easier to post the whole video and let the reviewer search for your part, but few people are going to do that. Even though it takes time (and perhaps learning some new skills) to edit that video so that you include only your own section, it's well worth doing so. Even then, the viewer may only watch two or three minutes of your entire presentation, but by being selective, you've at least made sure that he or she will actually see you "in action" and not get frustrated by being unable to locate you in the video.

Being Innovative

How would you go about determining whether students who submitted an e-portfolio with their job applications were more likely to be offered a position than those who submitted a traditional portfolio or no portfolio at all? Since you obviously can't gather information on every student in every country, how do you focus your research question so that your topic is both meaningful and capable of

being answered? Do you focus your topic by region, age, academic field, type of job, or some other factor?

Just as it's important to be selective about the material included in an e-portfolio, it's also important to organize and structure it carefully. Even though people are likely to move through an e-portfolio in a non-linear manner, it should always be clear to the reviewer why a document has been included and how it fits into your overall purpose. For this reason, an attractive and carefully considered homepage for an e-portfolio is essential. Your homepage should make it clear what you're trying to demonstrate through the evidence you've collected, who you are as a person, and where you see yourself going. In doing so, however, remember to follow all common rules for Internet safety: Don't post your social security number online, and make sure that your address and telephone number are not in a part of the portfolio that anyone can see without being given access by you. Since birthdates can be used by criminals who want to steal someone else's identity, don't post that information publicly either and don't post it at all unless it's germane to your purpose. (For instance, you may need to prove to an employer that you're old enough to rent a car.)



The specific items that you include in your e-portfolio will vary according to your purpose and/or the requirements of your school. Here, for example, is a list of suggested contents provided by the University of Denver (portfolio.du.edu/portfolio/getportfoliofile?uid=128371)

- **A completed biographical description on the homepage**
- **A personal photo on the homepage**
- **A current résumé/cv**
- **Samples of best work/publications**
- **Descriptions of internships, study abroad experiences, and volunteer work**

- **Optional links to personal blogs or social networking sites that have strong academic or professional purposes**

Hyperlinks and Non-Linear Style

Perhaps the single greatest advantage an e-portfolio has is the ability to use **hyperlinks** to move from one place in your document to another, open a new document, play a video or audio passage, and so on. A hyperlink is a small bit of code that allows a user to click on a word or image in a document and be taken to another location either in that same document, another work, or online. Suppose, for example, you mention in your résumé that you presented information to the city council about the rezoning of land adjacent to your campus.

With hyperlinks, a reviewer who wanted to do so could click on that line of your résumé and be taken to a video of you giving that presentation, the text of your remarks, or the council's agenda for that day. While, as we've seen, hyperlinks do provide special challenges in clarifying your narrative arc because a reviewer is unlikely to move through an e-portfolio in a strictly linear manner, the value they add in making it easier for a reviewer to find support and documentation for your achievements far surpasses any difficulty they may present. When using hyperlinks, however, keep in mind the following best practices.

- **Before letting others review your e-portfolio, check every hyperlink to make sure it works properly. Sometimes, as an e-portfolio evolves over time, what was once an active link later connects to a document that has been removed. The use of hyperlinks then becomes counterproductive: What was supposed to make you look more professional ends up making you look less so.**
- **Give your reviewer a path so that he or she can find the way back from a hyperlink. Sometimes a reviewer will click on a hyperlink, examine the contents there, perhaps click on another hyperlink at the new location, and then want to return to the point where he or she started. If your e-portfolio is online, it's often possible to return to the starting point by continuing to click on a *back* or *previous page* arrow. But reviewers vary widely in their mastery**

of technology. It's in your best interests to make your e-portfolio as user friendly as possible by including *return* hyperlinks on linked subpages.

- Consider having the hyperlink open a new window. Reviewers may at times get so caught up in the audio or video file you've linked to that they won't even remember the page they were originally on. You can make their review easier by making linked pages open in a new window or tab so that the page of origin always remains available to them.
- Don't overlink. The value of hyperlinks is so great that it's tempting to want to link almost every line on a page to some other document. Overlinking an e-portfolio is as distracting as over-footnoting a research paper. You want to make the job of the reviewer or reader *easier* not harder, but excessive use of hyperlinks and footnotes can muddy the overall message you're trying to convey.

The Letter of Application

Our next two topics, application letters and interviews, were already introduced in Unit Twelve when we were discussing internships. When it comes to applying and being interviewed for jobs, many of the guidelines we encountered there still apply.

For the letter of application:

- Use plain white paper (so that any photocopies that will be made of your application materials will be clear and easy to read) or simple, professional-looking letterhead.
- Use your best, most professional prose style.
- Provide all the information someone would need to contact you.
- Include a copy of your résumé.

For the interview:

- Dress professionally.
- Arrive early.
- Bring extra copies of your application letter and résumé.

- **Shake hands firmly.**
- **Make eye contact frequently with each person in the interview.**
- **Thank each person who interviews you and follow up a day later with a note of thanks.**

In the following section, we'll consider other matters to keep in mind when preparing for a job interview. For now, let's examine some best practices in writing application letters.

An application letter for a job is similar to the letter you'd write for an internship, but it will be slightly longer and more detailed. If a good letter inquiring about an internship is one-page long, keep an application letter for a job to about two single-spaced pages in length. A shorter letter won't have enough detail for a human relations director or search committee to know if you're suited to the position. A longer letter will probably not be read, and it may even be to your disadvantage because you'll appear wordy and unfocused. The tone of the letter should be confident but not cocky, proud of your accomplishments but not arrogant or self-important. That's a hard balance to achieve, and you'll probably need to revise your letter two or three times to make sure that you achieve the tone that's going to represent you well without making you appear to be too full of yourself. Writing multiple drafts will also help you catch typographical errors or sentences that aren't as clear as they might be. Typographical and spelling errors in an application letter will usually cause a candidate to be given lower priority than a candidate who took the time to look professional even when applying for his or her very first job after college.

Being Reflective

What's the best job you've had so far? What was your worst job? Think back to both experiences and try to identify the factors that distinguished these two experiences. Don't stop with superficial answers like, "My boss was horrible." Carry your reflection to the next level, asking "What was it about that boss that I found terrible? How can I learn from those lessons? What might these lessons teach me about what I should say in an application letter to make it more likely that I'll be interviewed?"

A good application letter should be tailored to the specific job you're interested in. Writing a generic letter that is different from every other one you write only in the address to which you mail it is unlikely to be as successful as you'd like. Directors of human resource departments read thousands of application letters, and it's easy for them to spot an overly generic letter that seems to have been produced via mail merge. One effective practice is to take the advertisement to which you're applying, select a few key phrases describing the person they're looking for, and identify how your skills and accomplishments match those requirements. Vary your sentence structure so that not every sentence begins with "I." Naturally, you're going to be talking about what you do well, and the person reading the letter will expect you to be blowing your own horn a bit, but a varied sentence structure can help alleviate the appearance of egotism that application letters sometimes have.

Find a way of structuring your letter so that its overall shape and direction are clear to the reader. Fortunately, you have a good model for this type of structure that we have already discussed in this course: the five-paragraph essay. A five-paragraph structure helps you organize the material of the letter clearly and keeps the length of the document to a manageable size. For example, one very common structure might be to design the five paragraphs as follows.

- 1. Introduce yourself and explain why you're interested in the position.**
- 2. Explain why your skills and achievements match one requirement stated in the job announcement.**
- 3. Explain why your skills and achievements match a second requirement stated in the job announcement.**
- 4. Explain why your skills and achievements match a third requirement stated in the job announcement.**
- 5. Draw a conclusion and restate your interest in the position.**



In each of these sections, focus on what you can contribute to the position, not on what the job can do for you. Your biggest priority may, of course, be the salary, job title, and location of the work, but these are not the issues that will make an employer choose you over someone else. The reader of your letter will want to know how the company or organization will benefit from having you as an employee, not what advantages you hope to gain from the work.

Here's an example of a good application letter that you can use as a model. Remember that your word processing application is likely to have many different letter formats to choose from. If you use one of the predesigned templates, choose one that looks professional and businesslike.

[IF YOU ARE NOT USING LETTERHEAD THAT CONTAINS YOUR ADDRESS, PLACE YOUR RETURN ADDRESS AT THE TOP OF THE PAGE]

Tyler Kelsey
347-C Rowan Hall
Major Metropolitan University
Capital, SV 23173

[MONTH DATE, YEAR]

Department of Human Resources
High Tech Software Innovators, Inc.
111 Silicon Valley Road
Cupertino, CA 94014

Dear Director of Human Resources:

Please accept my application for the position of software beta tester, which was recently advertised in the Capital Tribune Gazette. I will be graduating in May, [YEAR], with a major in marketing and public relations, as well as a minor in software design, from Major Metropolitan University. During the summer of [YEAR] I had an opportunity to serve as an intern at the Compleat Talent Agency in New York where I completely redesigned their website (www.compleattalent.com), beta tested all the software they developed in house, and wrote my own smartphone application for tracking job placements at the agency.

In your position announcement, you stated that you wanted "an experienced beta tester with both design and marketing experience." In addition to the beta testing experience

from the internship I mentioned, I completed a senior practicum titled "Special Problems in Beta Testing" in which I received extensive hands-on experience in how to identify flaws and potential security weaknesses in a wide range of software programs. My major in marketing and public relations has given me the opportunity to study advertising campaigns from both a marketing and design standpoint and to learn current best practices in social media, print, and broadcast advertising.

You noted that it is important for the beta tester you hire to have "a demonstrated record of effective teamwork and collaboration with others on extended projects." The senior capstone project at Major Metropolitan University is required to have both individual and group components. As part of the teamwork I engaged in while preparing my thesis, "Social Media Marketing in 'Tough Sell' Markets: A Case Study of Rypopf Life Insurance Company, each member of the team was graded on collaborative as well as individual achievements. My team members all gave me the highest possible score in collegiality, value of team contributions, and small group leadership.

Finally, your position states that you are looking for "a dynamic self-starter who brings an entrepreneurial spirit to our endeavors." When you contact my references on the enclosed list, they are likely to tell you that I regularly meet (and usually beat) deadlines, am a quick study, require little direct supervision, and approach challenges with an innovative perspective. It is this set of qualities that, I believe, led to my overall grade point average of 3.83 and caused me to be elected each year to leadership positions in my university's Student Government Association.

For all these reasons, I believe that I would bring the right attitude and skill set to your beta testing position. For further information about my academic work, employment history, and service contributions, please see my enclosed résumé or review my e-portfolio at www.majormetropolitan.edu/portfolio/tkelsey. If I can provide you with any other information, please do not hesitate to ask. I may be contacted at:

Tyler Kelsey
347-C Rowan Hall
Major Metropolitan University
Capital, SV 23173

Telephone: 434-555-6060
Cell: 276-555-0606
tyler.kelsey@distinctionmail.com

While I can be available to interview at any time, I cannot begin full-time work until after my graduation on May 15, [YEAR]. Thank you for this opportunity, and I hope to hear from you soon.

Sincerely,

Tyler Kelsey

encl: résumé
 contact information for references

Notice that this application letter exhibits the following qualities.

1. It adheres to a general five-paragraph form (introduction, three paragraphs of content, conclusion).
2. It ties the writer's achievements directly to the criteria for the position.
3. It documents the claims that it makes.
4. It presents a great deal of information concisely.
5. It flows logically and avoids a paratactic style. (See Unit Four.)
6. It emphasizes the writer's strengths without appearing boastful or self-indulgent.

The Interview

Since job interviews are often even more formal (and anxiety-producing) than the process of applying for an internship, you'll want to prepare for them even more carefully than you would prepare for an internship interview. Practice by having several of your friends ask you questions as though they were the interviewers. Determine which questions or types of question cause you the most difficulty or make you uncomfortable. Then plan a strategy for how you'll handle the situation if it should arise during an actual interview. If possible, have a video made of your practice interviews. When you watch the video, pay attention to the following.

- Do you provide eye contact not only to the person who asked you the question but also to anyone else participating in the practice interview (if applicable)?
- Do you use filler words — such as *um, you know, actually* — repeatedly or overuse any other word in your answers?
- How do you use your hands while answering? Do you gesture too much, too little, or too artificially? Do your hands make it appear that you're nervous?
- Do you really answer the questions or mostly talk around them?
- Are your answers longer or shorter than they should be? While you want to give a complete answer, talking for more than two or three minutes will seem excessively long to the interviewer, and he or she may run out of time for all the questions that were planned.

In addition to rehearsing with friends, consider investing in a bit of interview coaching with such services as www.perfectinterview.com. This website gives you access to videos of tough interview questions that you answer via webcam. Then a coach critiques your replies and gives you suggestions for improvement. You can also review some common interview questions such as those outlined by Fry (2009), Oliver (2005), and Podmoroff (2005).

To get a head start on this process, consider how you might respond to the following common interview questions.

1. **Why are you interested in this job?** *The focus of this question is not “Why are you interested in a job?” or “What benefits do you hope to gain from this job?” but “How does your education and experience make this job the next logical step in your career path?” and “what will we gain from having you in this job?”*
2. **What is your greatest strength? What is your biggest weakness?** *One common way of approaching the greatest weakness question is to describe a strength as though it were a weakness: “I work too hard and put in too many hours” or “I care too much about the people I’m serving.” In actuality, interviewers have heard responses of this sort so often that they regard them as superficial. It’s far better to identify an actual weakness and address how you’re working to improve in that area.*

3. Where do you see yourself in five years? *Even though you may be viewing the job you're interviewing for as a stepping-stone for another position, it is never diplomatic to say so in an interview. If you can honestly say so, the best answer is your own variant on "Working here but entrusted with even greater responsibility."*
4. What is an example of a time where you dealt successfully with a difficult challenge? *With this question, the interviewer is less interested in the exact nature of the problem you had than in your responsible handling of the situation. Try to choose an incident where you had to demonstrate initiative, resourcefulness, or the willingness to "go the extra mile."*
5. How do you handle criticism? *No one likes to be criticized, but the interviewer is asking whether you respond positively or negatively to advice on how to improve.*
6. What makes you unique as an individual? or Why should we give you this job over another candidate? *What the reviewer is looking for is what value you will add to the position over and above simply performing the duties outlined in the job description. Answers that talk about what a hard worker you are, indicate that you're a "people person," or are overly general will not make much of an impression. Try to find some positive quality or ability that truly sets you apart from other people you know and describe how that quality or ability will be beneficial once you're on the job.*

Being Analytical

Suppose you were interviewing a candidate who you believe included false or exaggerated information. Suppose, too, that this interview was being held in a location where you had no access to the Internet or any other way to check the facts of what the person told you. What questions would you ask in order to increase the likelihood that the candidate's answers will be honest? How would you analyze what the candidate told you in order to separate truth from fiction since you can't simply check the person's answers on the Internet? What indications of sincerity (or the lack thereof) would you be looking for?

7. What tasks do you like least? *This question is seeking to determine whether you're a good fit for the position. If you say that you find a particular activity tedious or annoying, and that activity is important to the job, you'll probably exclude yourself from further consideration. Try to talk about something you don't like to do that doesn't relate to the job, such as trying to concentrate when there's loud music in the background (unless you're applying for a job that has to be performed in a noisy environment) or weeding the garden on a hot August day (unless you're applying for work in landscaping).*



8. What is your most significant accomplishment to date?

Your answer to this question will depend on where you are in your own career cycle. If you're a non-traditional student, you may have an example

from an actual employment situation that you can talk about. If you're applying for your very first job, you may have to select an example related to your schoolwork or volunteer activities. In either case, talk about an accomplishment closely related to tasks that would interest an employer. A favorite achievement in one of your hobbies, such as a local record in bowling or having landed a particularly large bass, may be significant to you but will probably not impress the interviewer unless you can relate this achievement to your persistence, ability to focus, or pursuit of exceptionally high standards.

9. Describe a tough decision that you've made. *Interviewers often want to know how you react when you're under pressure and whether you're capable of doing the right thing when it isn't the easiest thing. Since this question deals with your personality rather than with your work experience, the example you choose*

doesn't have to be job related. For instance, having decided that an aged parent should no longer drive a car is a very personal situation, but it demonstrates the ability to approach truly difficult choices with compassion as well as a willingness to handle hard decisions.

10. How do you deal with conflict? *This question is one of the relatively few interview questions for which there are right and wrong answers. The interviewer will want you to talk about how you try to discuss the matter with the other person, obtain a mutually acceptable compromise, and then, once the conflict is over, move on from it. Answering that you'd confront the other person in a manner that makes you appear to be hot-headed or that you'd report the matter to your supervisor and expect that person to handle it is definitely not what the interviewer is hoping that you'll say.*

While it's a good idea to think through how you'll approach specific interview questions, you don't want your answers to sound rehearsed. When the interviewer asks a question, pause a moment to collect your thoughts, and then answer clearly, concisely, and thoroughly. Try to come to the interview with several good examples of the experiences mentioned above (strengths, weaknesses, toughest decisions, and so on), and don't use every one of your examples in a response. If you do, you won't have any further examples to cite if you're asked a follow-up question or if you're asked several similar questions by different interviewers.

The techniques of research and inquiry that you learn as a student have value that go beyond your academic work. For instance, consider the following steps you'd take in preparing for an interview.

- **How would you perform a "literature review" to discover what you needed to know about the company or organization that will be interviewing you?**
- **Which critical thinking strategies would you use to determine whether the information you uncover during your literature review is valid?**
- **Which hypotheses or models would you be testing during the interview process?**
- **How do intentionality and reflection relate to the interview process?**

Exercises

1. Prepare a one- or two-page résumé based on the format seen in the sample résumé presented in this unit. If you already have such a document, modify and update it in accordance with the sample. If you've never before prepared a résumé, start one. Of the various categories and sections that are possible in a college student's résumé, which make the most sense for you to include considering the experiences you have already had?
2. If you had to prepare a portfolio of your achievements at this stage of your educational career, what items would it be most important to include? Are there certain items that are better presented in a standard portfolio than in an e-portfolio or vice versa? What would you want your "narrative arc" to be?
3. Write a letter of application to a hypothetical company or organization. Use the five-paragraph format and base the central three paragraphs on your qualities or achievements that you believe would be important to someone interested in hiring you. Focus on only one quality or achievement per paragraph.
4. Look at the job announcements in the professional journal or trade magazine of some field. (Most job ads placed in a newspaper won't be as detailed as you need them to be for this exercise.) What credentials are mentioned as necessary or desirable? What skills does the advertiser want the employee to have? Are there any character traits (such as honesty or a good work ethic) that are mentioned? How would you structure an application letter that addressed these expectations?
5. How would you answer the ten sample interview questions presented in this unit? Do any of the questions make you think that there are specific experiences you'll now want to pursue before you graduate?

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Unit Fifteen:

Transitions Beyond the First Year

Learning Objectives:

1. To consider some ways of making the second year of college more beneficial and productive.
2. To explore ways of incorporating a study abroad experience into your undergraduate program.
3. To learn what you can be doing right now to make a successful application to graduate school more likely.
4. To become intentional about preparing a path to professional school.
5. To examine what students need to know early in their college programs in order to be successful in their careers later.

The Second Year Experience

While many people still think of a bachelor's degree as something you earn after four years of study, the reality of academic life today is more complex. Some students complete their undergraduate program more quickly, perhaps because they enter college with so many credits from **AP (Advanced Placement)**, **IB (International Baccalaureate)**, or **AICE (Advanced International Certificate in Education)** courses that they can graduate after only a year or two. Other students, because they change majors several times, need to balance coursework with full-time jobs, or face significant challenges along the way, require far longer than the four years we traditionally associate with an undergraduate degree. Despite this variety in program length, it remains true that, in the "typical" four-year undergraduate experience, each year has its own distinctive rhythm and focus.

- In their **first year**, many students feel the excitement of new beginnings. They see college as a way to start over again with a new set of friends and often in a new location. That much change carries with it all the possibilities and challenges that any new adventure offers. For students who earned high

cumulative grade point averages in high school, this new beginning confronts them with a “blank slate” and thus the need to prove themselves all over again in an unfamiliar environment. For students who had greater difficulties in high school, there’s a chance for a fresh start with a cumulative grade point average that’s no longer weighed down by past problems. And *all* students have an opportunity to reinvent themselves in the first year of college, to discover new interests and additional aspects of their identity. Most institutions offer programs specially designed for first-year students, such as orientation weeks, freshmen seminars, transition courses, and social events. At times, first-year students are even assigned their own dean who’s in charge of freshman programs and who’s responsible for extracurricular activities designed to make students feel at home from the very start of their undergraduate experience.

- During a student’s **last year** of college, activities increasingly focus on graduation, life after college, and plans for the future. Many colleges and universities have instituted formal capstone experiences that pull together everything students have learned during their undergraduate programs. These capstone experiences may include a thesis requirement so that students will have produced a substantive product of in-depth research on a single topic. Some institutions give seniors an opportunity to present their research at a special conference or symposium dedicated to undergraduate projects. In other cases, the capstone experience may be a senior seminar where students discuss specific books, topics of social importance, or significant ideas, using the broadened perspective they’ve gained from their years of study. Students often find it interesting to compare their senior year experience to their freshman seminar or First Year Experience course, reflecting on how their views have changed, knowledge has grown, and skills have developed since they began college.
- Even what has traditionally been called the **junior year** has a character all its own at most institutions. By roughly the third year of undergraduate study, most students have completed a majority of their general education courses

and are well into their majors. They sense that the college experience has begun to become more focused. Less of their time is spent on developing their breadth of knowledge, with more and more attention directed towards developing a depth of knowledge in a specific field. At the same time, many students are either taking or preparing to take the examinations they'll need for admission into graduate or professional school. Increasingly their courses have prerequisites. The "Junior Year Abroad" is still customary at some schools, with an entire year devoted to study in a different country. In certain majors, a junior seminar prepares students for the type of research they will need to conduct during their final year; at other schools, a junior symposium provides a culminating and reflective experience at the end of the general education program. Moreover, at many schools, there are formal social events designed for students who are now beginning upper-level coursework. Some colleges, such as Immaculata University and the Virginia Military Institute, have formal events during which the student's class ring is officially presented during the junior year.

- But what can possibly be distinctive about the **sophomore year**? Many students feel that their second year of college lacks both the excitement of their first year and the chance to focus on their major that they will have during their final two years. Even the term "sophomore" seems unappealing and perhaps even offensive. The word is derived from two Greek roots: *sophos* meaning "wise" (cf. *philosophy*, *sophistry*, and *sophisticated*) and *mōros* meaning "foolish" (cf. *moron*, *moronic*, and *oxymoron*). Etymologically, therefore, the traditional concept has been that a sophomore is a "wise fool." Indeed, nearly all of this word's connotations are unflattering. For instance, a "sophomore slump" is a period of decline after a promising beginning. And people are "sophomoric" if they are simultaneously both immature and brash. Who wants to be associated with *those* ideas? Even worse, there's an old saying about college life that goes ...

Freshmen do not know and do not know that they do not know.

Sophomores do not know but know that they do not know.

Juniors know but do not know that they know.

And seniors know and know that they know.

Naturally, any platitude that simplistic can't be taken too seriously. Unfortunately, this traditional view of sophomores reflects attitudes that many people still have. Like **Socrates**, sophomores aren't often expected to be wise but are at least expected to understand the limits of their own knowledge. So, while these ideas aren't really very appealing, they do capture a common experience many students have during their second year of college: the dawning recognition of just how much there is that they don't know.

Distinction through Discovery in the Sophomore Year

As a highly capable student, however, you can do better than that. Your second year of college has the potential of being a far richer experience than a mere transition between the excitement you had when starting college and the excitement you'll recapture when you graduate. More and more schools are recognizing the importance of the sophomore year and designing programs specifically to meet its challenges and to take full advantage of its possibilities. If your school has established an official **Second Year Experience** or **Sophomore Year Experience** program, this opportunity is likely to emphasize several of the ideas we'll explore in this unit. It probably also provides other services and opportunities that are integral to your school's distinctive mission. But suppose that no such program is in place at the school you attend: How can you make the most effective transition from your first year to your second year? How can you create a Sophomore Year Experience on your own? Here are a few suggestions you may wish to consider as you prepare to move into your second year of undergraduate education.

Keep in mind that the decrease in formal structure your school will provide you during your second year comes about because the faculty and administration feel that you *need* less structure. Take it as a compliment.

Colleges and universities typically devote a great deal of energy to providing a formally structured experience for incoming students. They do this because they understand that first year students often need a great deal of information and encouragement in order to make a successful transition from high school to college. As we saw in Unit One, college-level courses are taught differently and have different types of expectations from even the most challenging courses students encounter in high school. Universities are organized in a way that's very different from other institutions, and students often require a bit of orientation in order to know how to go about having their questions answered, their problems solved, and their needs addressed. But once you reach your second year at any institution, you're expected to be familiar with these issues. The lack of orientation programs and transition courses means that you don't *need* them. Your school is counting on you to find success on your own.

Although the way in which you study and learn new information will continue to evolve throughout your undergraduate program — and, it is hoped, throughout your life as well — by your sophomore year you'll already be quite familiar with how college-level learning differs from other types of learning. You'll have come to understand exactly why your professors don't expect you merely to repeat what you've heard in a lecture or read in a textbook, but to draw your own conclusions and make your own discoveries. Even at this point in our course, the approaches of thinking critically and creatively, being intentional and reflective, and developing an innovative line of inquiry should be second nature. You already know that you won't just be handed an equation in most courses and expected to solve a puzzle; you'll be expected to *derive* equations from your own data and to draw verifiable conclusions. You already understand what it means to say that advanced academic work is less about *finding the right answers* than about *asking the right questions*. Since these aspects of a college education are familiar to college students by the start of their second year, many of your instructors will assume that you already “know the program” and don't

need to have these basic assumptions explained to you. In other words, you should regard it as *flattering* that people have enough confidence in you to trust you to learn on your own. “The training wheels have come off,” we might say, and that’s a sign you’ve earned the autonomy you’re being given. This change in the way people deal with you doesn’t mean that people care about you less, but that they’ve come to respect you more. In fact, the further you go in your life and career, the fewer external validations you’re likely to receive from others when you’re on the right track or are making a difference. So, part of your Sophomore Year Experience will be to learn how to give *yourself* these validations so that you can expect them from others less frequently.

Find your own measures of success.

When we receive less affirmation from others about our successes, we must judge the quality of our accomplishments ourselves. Early in your schooling, you probably received frequent positive reinforcement for good work. Some teachers put gold stars on elementary school papers, write “EXCELLENT!!!!” in large letters across the top of the page, and praise students for even attempting difficult tasks. The idea behind these actions is to help students associate positive feelings with strenuous effort. So, the more the student tries, the more the teacher tends to provide praise. As we continue through our schooling, however, this type of external reinforcement comes to us less and less frequently. Grades are still assigned, and a positive comment on a paper from a high school teacher or college professor still provides a great deal of satisfaction. But by now you increasingly rely on your own sense of accomplishment



to feel that your hard work has been worthwhile. This process will intensify as you proceed to upper-division courses and your major. Then, following graduation to your experiences in graduate school, professional school, or your career, you may notice that formal acclaim from others occurs quite rarely ... or perhaps not at all.

The second year of college is an excellent time to begin making this transition from relying on reinforcement from others to forming your own opinions about your work. People who fail to make this transition may become frustrated after they leave school. They continue to expect others to notice and compliment them on every effort they make. But in many professional environments, people are simply too busy with their own work to stop and compliment a colleague — or even a subordinate — for doing good work. And it would never occur to many people to compliment their boss on something that he or she did; to some employees, such a remark would seem obsequious; to others, it would appear strange that their boss expects praise for a job well done. For this reason, the better you can become now at finding your own validation of your successes, the more readily you'll adapt to whatever challenges you'll face after graduation. During the coming year, decide on how you'd like to reward yourself for completing a task, receiving a good grade, or achieving some goal. Not all the rewards you choose need to be costly. You may decide that, if you complete your research project on time, you'll sleep in late on Saturday morning, take a walk in your favorite park while listening to some music that you particularly enjoy, or watch a movie with a friend. You can also exert your creativity to reward yourself in a manner unique to you, something that has a special meaning no one else would understand. The important thing is that you're no longer relying on external factors, since these are beyond your control and will often fail to occur. Becoming more self-reliant in this way is also important when you find yourself confronted by people who don't believe you can do something or look with disdain on an activity that's very important to you. Finding your own satisfaction prevents you from being paralyzed by the criticism of others and thus often makes the difference between success and failure.

Key Principle

You won't always know you've been successful because of the accolades of others.

In many of the most important achievements you'll have in your life, your own personal sense of satisfaction will be your clearest indication that your work has made a difference.

Seek leadership roles.

Since your institution expects that you'll need less formal structure and affirmation in your second year, you can help meet this expectation by assuming leadership roles on campus. The leadership opportunities you seek can be as informal as assisting first-year students in a course you've already completed or as formal as being elected as a class officer. Your involvement with a campus club, faith-based organization, or even a part-time job can offer you a chance to develop your skills as a leader. Consider serving as a docent in a local museum or gallery, positioning yourself for eventually becoming captain of an intercollegiate athletic team, or taking time to talk to fellow students who seem lonely or "down." All these activities will give you valuable experience in leadership.

Sometimes people feel that they're in a lull or that there just "doesn't seem to be as much to do around here anymore," only to realize that *they're* now the ones who are in a position to plan the kind of activities that someone once planned *for* them. Sophomore year can also be an excellent time to reinforce your role as a leader in the classroom. You can serve as an example for others by always coming to class on time and fully prepared, contributing productively to class discussions, and offering constructive help to other students who may find the material challenging. You can take this leadership to an even more advanced level by researching and reading additional articles on your own that relate to the coursework, relating the material covered in that class to other subjects you're studying, and volunteering when students are needed for demonstrations or simulations. Keep in mind, however, that leadership in the classroom is not a matter of dominating class time or always being the one who answers a question first. Class leaders are gracious in allowing other students to have a fair chance to contribute to the course and build collaboratively on other people's perspectives. They don't usurp the instructor's authority as the course's ultimate leader, challenge decisions unnecessarily, or attempt to have the final word in every

discussion. Leaders in the classroom are examples to their peers, not just of how to learn the most, but also how to share that learning with civility and generosity.

Re-engage whenever you feel you're becoming disengaged.

By their second year, some students begin to feel less challenged by their work and so become disengaged. After all, they've already found a close circle of friends. They know their way around the college or university. They've had practice in allocating time to different types of college-level courses. And they've become increasingly comfortable being "on their own." If you ever notice yourself feeling detached because college life seems boring or too easy, it's time to stop waiting for things to happen and to start *making* them happen. Be the person who plans the party, invites others to the movie, organizes the outing, or finds the new restaurant to try. Seek out service learning projects in more and more of your courses. Taking the initiative in this way is a great way to re-engage if you feel that you've become a passive learner. Not everything you try will be a success. Some movies will be tedious, some restaurants will be awful, and some parties will be incredibly dull. But achieving distinction through your discoveries isn't about being successful the first time you try something or even *every* time you try something. It's about taking the initiative in your studies, your personal life, and your social connections so that, in the end, you wind up with more successes than failures ... or at least *bigger* successes than failures. Distinction through discovery doesn't mean waiting for someone else to do something; it means actively engaging with your community and surroundings so that, in all the aspects of your life, *you're* the person who makes things happen.

Declare your major, if you haven't already done so.

At certain institutions, one of the few activities that are distinctive to a student's second year is the formal declaration of a major. The practice of declaring a major in the second semester of the sophomore year was once almost universal, but now can be done at many different points in a student's program. Some schools even have students declare their area of special concentration even before taking their very first course, believing that students who begin focusing on a major early in their programs

are more likely to become more engaged in their studies. Other schools have no fixed time at which a major must be declared. But if you're uncertain about what your major should be, the second year of college is an excellent time to explore different options, talk with representatives of various academic areas, and consider what you might be interested in studying in some depth. An office of academic support services, advising, or career placement can guide you in your search for a major; these centers usually also have a number of inventories available that can suggest to you possible areas that would be appropriate to study based on your personality, interests, and goals in life. (We'll encounter a few of these inventories later in this unit.) Remember that selecting "the right major" isn't a matter of life or death: Simply because you choose a particular field now, that decision won't limit you for the rest of your life; you'll still have plenty of time to pursue other options. On the other hand, you shouldn't choose a major carelessly: Switching majors, particularly if you do so several times, can delay your graduation. The key factor in selecting a major is that you should be reasonably sure that it'll hold your interest for at least two or three years. Talk to students who are further along in that discipline, as well as people who work in this field. Are they individuals similar to the person whom you want to be? Do their daily activities and interests appeal to you? Do they do the sorts of things you'd imagine they'd be doing, or is advanced work in this discipline quite different from what you'd hoped? For more on this topic, review the material presented in Unit Nine.

Use next year to start planning for any other transitions you will soon be making.

Once you've successfully completed your transition to college life, start thinking about the *next* set of transitions that you'll be making. Will you be moving out of the residence hall into an apartment or home of your own? Will you be seeking a full-time job after you graduate? Will you be studying abroad? Will you need to prepare an undergraduate thesis? Will you be applying to graduate or professional school? Your second year of college is a good time to consider how these activities will fit into your overall program. At what point in your schedule will you engage in each of them? What preliminary steps do you need to take before these transitions become possible?

For instance, if you are thinking about moving into an apartment, what services and utilities will you need to contact before you can move in? How far in advance of your move should these contacts be made? Sophomore year can be a good time for gathering information and thinking through the consequences of each choice you make. Moreover, since many students find that sophomore year involves a progression from lower-level coursework to more advanced work or from general education to a focus on their majors, you can enhance this experience by being reflective and intentional about this process. Gather information, study implications, and consider your options very carefully. Keep a journal or blog. Analyze your decision-making process. And see if you can identify how the changes that you experience are helping you to grow as a person.

Being Imaginative

Develop a creative project about a student's undergraduate experience. The type of project you chose could be completed in any medium that appeals to you: poetry, music, drama, a video, a short story, a novel, painting, sculpture, a website, a graphic novel, or some form that has not yet even been invented. How do you go about capturing the essential elements of what college means in someone's life?

- **How is the person in your creative work changed by the experience of being a student?**
- **Does your central character experience sacrifice as well as gain? Does he or she experience gain as well as sacrifice?**
- **Do you feel drawn to capture a unique type of college experience, or do you find it preferable to depict an experience that many different people might relate to?**
- **How does the medium that you select affect the content of what you will present?**
- **Is the experience that you are describing something that you hope to have, fear you may have, or have already had?**
- **How do you respond to someone who challenges you about whether this type of project may legitimately be called "research"?**

Choose your electives carefully.

As you already know, **electives** are courses that a student takes for reasons other than fulfilling the institution's requirements for the major, minor, or general education program. Frequently students simply take whatever electives are available in order to meet the requirements for a bachelor's degree. They look for easy courses in subjects that will not "distract" them from the attention they wish to pay to their majors. Or they take any course that happens to fit their schedule, particularly if they don't want to get up early for it or if it allows them to have a longer weekend. But there are far better ways to choose electives, ways that help you plan a program that will ease your transition after college.

1. **Using Electives to Try Something New:** Electives can be used to experiment, test the waters, and see whether you like a field that you know very little about. Early in your academic program, if you're uncertain of what major to pursue, you can use both general education courses and electives to find out whether various disciplines appeal to you enough to study them in depth. On the other hand, if you've already selected your major, you can use electives to learn about something that you've always wanted to know or that you may not have an opportunity to study in this depth again. Particularly if you're a traditional-aged student, it can be easy to overlook the tremendous resources for discovery that are provided by colleges and universities; after all, you've probably been in school each year since you were about five or six, and you may no longer see the novelty of being surrounded by people who devote their entire professional life to teaching and learning. If you're a non-traditional-aged student who has spent a number of years in the workforce before returning to college, you are more likely to develop a deeper appreciation for the unique opportunities of higher education. It will never be as easy for you again in your life to learn about a subject in such depth, taught by people who spend their lives discovering how this information is best presented and absorbed, and surrounded by peers whose own attempts to grapple with the material can greatly enhance your understanding of it. You can always promise yourself

that you'll "pick up a book someday" on some of these topics that interest you, but few of these promises are ever kept. The sheer pressure of daily life becomes an obstacle once you graduate from your baccalaureate program, and even the best books cannot provide the rich learning environment that you find among excellent instructors — many of whom are doing original research in the very fields that you're studying — and fellow students who share your common interests. For this reason, electives can be your best opportunity to try something new or explore an area that has always intrigued you.

- 2. Using Electives to Add Balance to Your Academic Program:** Another valuable approach to choosing electives is to use these courses as a means of rounding out your curriculum. For instance, if you're a pre-med major, choosing electives from art history, classical languages, philosophy, creative writing, or medieval studies will help you develop a broader perspective on the world. As an added advantage, medical schools frequently look favorably on students who not only have a high grade point average and score well on the **Medical College Admission Test (MCAT)**, but also demonstrate breadth in the courses that they have taken. If you're a major in the fine or performing arts, electives in such areas as small business management, geography, psychology, economics, computer science, statistics, and public speaking will provide a desirable degree of balance to the program that you're taking. If you're a traditional-aged student whose parents are concerned about the marketability of a degree in the arts or humanities, you may be able to assuage their concerns — as well as balance your curriculum effectively — by taking a few electives in business or education. In fact, no matter what type of program you are pursuing, there is some way for you to broaden it through the effective choice of electives. Ask yourself which perspectives or disciplines are under-represented in the four-year academic plan you have developed. Don't be content with merely looking *slightly* outside your immediate field of interest. You don't broaden a major in molecular biology simply by choosing electives in cell biology, organismic biology, and evolutionary biology. Rather, try to imagine the disciplines that, in terms of mindset and methods, are the most

- diametrically opposed to most of the courses you've taken. If you're pursuing a major in peace and conflict resolution, it may not initially occur to you, to take electives in **ROTC (the Reserve Officers' Training Corps)**, military science, and engineering but, should you do so, you'd find that you've become a better peace studies major as a result.
3. **Clustering Electives:** For most students, the best approach to electives is to choose them from as broad a range of disciplines as possible. General education programs are shrinking at many colleges and universities, at the same time that the number of hours required for many academic majors is increasing. While it's true that specialization is an increasing factor in many careers — and even in certain pastimes (“Oh, sure I play video games, but I really only play ‘first person shooters’ with a World War II theme.”) — it is also true that newly developing fields, technological innovations, and shifting perspectives in the world will continue to make many specialties obsolete or irrelevant. As we've seen, the single greatest quality that any college graduate can develop is **versatility**, the capacity of being flexible under changing conditions and learning new ideas or procedures quickly. Using electives to provide a wide range of diversity in your curriculum doesn't demonstrate “a lack of focus,” as some students fear; it demonstrates a commitment to developing versatility. Nevertheless, sampling disciplines broadly through electives is the best practice only for *most* students. In certain situations, it can be advisable to “cluster” the electives that you take in order to achieve a particular academic goal. Your course cluster might lead to an academic minor, preparation for a study abroad experience, an interdisciplinary study of a topic that cuts across academic fields, or an increase in your career options. But since clustering electives within a very tight academic schedule requires a great deal of planning, be sure to begin mapping out your overall strategy as soon as possible.

Study Abroad

As we just saw, an important decision that many students make is to incorporate a study abroad experience sometime while they're in college. Studying in another

country can be difficult to work into your schedule since you're trying to complete a major, a minor, the general education program, and a few electives all at the same time. Nevertheless, for most students, an extended period abroad can be a life-changing experience. If you decide that this type of opportunity appeals to you, you should realize that there are several different kinds of study abroad programs.

- **Programs that are sponsored by your institution and directed by a member of the faculty or staff there.** These programs are generally the easiest for students to incorporate into their schedules because enrollment is done through their home institutions. All of the credits for these programs are awarded by your own college or university. The faculty members who teach in the program are either employees of your own institution or regarded as adjunct faculty members. From your institution's perspective, therefore, your study abroad program is almost identical to courses taken on your home campus. While these programs exist in many different formats, they are particularly common for summer and "inter-term" (i.e., programs, usually three to five weeks in length, that occur between the institution's regular academic terms, often in January or May).
- **Programs that are coordinated by your institution.** Almost as easy to work with from a student's perspective are programs that are not led by a particular member of your institution's faculty or staff but that are still coordinated by your college or university. Often these programs are developed because of a partnership that your institution has with a foreign university or a special center that it maintains in another country. In these situations, the credit for the program may be offered by your home institution or it may be transferred automatically because of an articulation agreement that your college has negotiated.
- **Consortium programs in which your institution is a member.** Colleges and universities also sometimes partner with other institutions in order to offer a more extensive range of study abroad opportunities than any one school could offer by itself. Depending on the nature of the consortium, your credits may either transfer automatically back to your home institution or you may need to

- file a request for your course work to transfer. Because these programs differ so widely, it is particularly useful to work closely with your institution's office in charge of study abroad or consortium programs to make certain that no deadlines are missed that could jeopardize the awarding of credit that you earn abroad.
- **Student exchange programs.** In a different type of consortium arrangement, institutions sometimes arrange for direct transfer of students between institutions. In other words, you go abroad to study, and your host institution sends a student to study at the school you regularly attend. One potential advantage of participating in student exchange programs is that they can be less expensive than other types of arrangements. Since the goal is a one-for-one exchange, many of these programs have you simply pay your regular tuition to your home institution, and the exchange student pays his or her regular tuition to your host institution. The disadvantage of many of these programs is that the balance of exchanges is very difficult for institutions to maintain. After a few years, many schools discover that they are "importing" or "exporting" significantly more students than are being provided by the other school, and either surcharges are imposed or the programs are discontinued.
 - **Study abroad agencies.** Since coordinating study abroad programs can be extremely complex, particularly when multiple foreign countries are involved, service agencies have arisen to provide students with options for studying overseas. Many of these agencies are excellent because, by specializing solely in university-level opportunities for students to study abroad, they know all of the policies, regulations, and hurdles that need to be addressed for a successful student experience. On the other hand, new agencies appear and disappear all the time, so you will want to be certain that, if you use the services of one, it is likely to remain in business for the duration of your program. For this reason, try to find an agency that has an established track record, other students at your institution have used, and your school's study abroad office is familiar with. Be pro-active in working with your school's registrar or study abroad office to make certain that the credits from the program will transfer to your

institution. Also be aware that, since many of these agencies are for-profit enterprises, it can be more expensive to participate in one of their programs than in an opportunity offered by your own school. Nevertheless, many agencies can offer you a wider range of programs than your school or even its consortia can provide, including shorter opportunities such as educational tours, home stay programs, trips that have a particular academic focus (such as environmental programs, cultural tours, and foreign internships), and trips that involve multiple destinations.

- **Stand-alone academic programs.** Some overseas programs exist independently and focus on specific locations. For instance, College Year in Athens (www.cya.org) is a longstanding program that offers students from a wide variety of American institutions to take a full academic program while studying in Greece. Sweet Briar College's Junior Year in France, established in 1948, is the oldest coeducational intercollegiate program for American college students in Paris (www.jyf.sbc.edu). Moreover, other programs such as Semester at Sea (www.semesteratsea.com) and The Scholar Ship (www.thescholarship.com) provide students with an opportunity to travel to numerous locations around the world while taking classes with a cohort group of specially selected students and faculty members.
- **Direct entry into a foreign institution.** One of the most challenging ways of completing a study abroad experience can be to apply directly to a foreign institution and then transfer the credits back to your home institution. While it is always advisable to consult with your institution's study abroad office before embarking on any international study program, it is all but essential if you are considering direct entry to a foreign institution. Some schools will offer programs that, for whatever reason, cannot be accepted for credit by your school. Others may have academic calendars so different from an American college calendar that scheduling your entry into these schools can be extremely difficult. In still other cases, you may need to formally withdraw from your home institution before attending another school abroad, particularly if there are grants or financial aid considerations involved. Negotiating the intricacies

of another government's educational system can be extremely difficult, and you are strongly encouraged to enlist the aid of professionals at your own school if you are even considering this option.



Since it can be difficult to incorporate a study abroad program into an already crowded schedule, there are two important decisions you'll need to make as you complete the transition into your second year.

- 1. Is a study abroad program right for me?**
- 2. If so, how do I make time for it without delaying my graduation?**

Because we've already explored time management in this course, let's start with this second question. Accommodating travel abroad into an academic schedule will require



careful attention to the time management strategies we explored in Units Six and Nine. In particular, look at the planning form for your undergraduate degree that you prepared in Unit Nine. How can you adjust this plan so that one of the semesters or years

that you've outlined can allow time for you to study abroad? Remember that you'll be taking courses and earning credits even while you're in another country. Which degree requirements are you most likely to satisfy in another country? Chances are good that you won't be able to take a specific course that your school requires for graduation, so move those requirements to terms when you know you'll be at your own school. Look for electives and general requirements (such as "any course in non-English literature" or "any course at the 3000-level or above") that are most likely to be found at foreign universities. If you have a specific idea about where in the world

you'd like to study, do some research into programs your institution may have in that country and see which courses are offered in that program. It's important to begin these preparations now since you don't want to reach your junior year and find that you can't do the study abroad program you hoped for since you used up your electives in your second year and now need to focus on your major. If you find that, no matter how well you plan, you can't fit a study abroad program into a regular academic year, consider the possibility of pursuing one of these opportunities during the summer or between the fall and spring terms.

As for whether studying abroad is right for you, one of the best tools that can help you answer this question is the **aspirational résumé**. An aspirational résumé is simply a realistic but ambitious version of what you hope your résumé will look like at some point in the future. The first step in creating one of these résumés is to select the date that will help you most with your planning. It shouldn't be too soon, since then you won't have enough time to work on the goals that are going to arise from this exercise. But it also shouldn't be too distant, since the Lorenz Butterfly Effect which we discussed in Unit Six, as well as all the other uncertainties of life, will make envisioning a very remote time of your life all but impossible. In other words, choose a date that's far enough away for you to have time to complete a "midcourse correction" if necessary, but near enough to the present that your goals won't have changed very much from what they are right now. A few suggested dates you might consider for your aspirational résumé are:

- a. One year after you have received your bachelor's degree.
- b. One year after you have received the highest degree you intend to seek from a college or university.
- c. Five years from now.
- d. One year into your first full-time job after receiving your highest college or university degree.
- e. Ten years from now.

Some of these dates may end up being the same (or nearly the same) for you. For example, if you're planning to enter the workforce immediately after you receive your bachelor's degree, then a, b, c, and d may be identical. Similarly, if you intend to

pursue a doctorate or medical degree immediately after your undergraduate work has been completed, then b, d, and e could all be approximately the same. Moreover, if you're performing this exercise as part of a class assignment or orientation group, it's best to work with whichever date your instructor or discussion leader suggests. If, however, you're doing this exercise on your own, simply use your best judgment to select a time frame that seems right for you.

Once you've selected the date for your aspirational résumé, begin to develop it by:

- assuming that you've reached that date, and
- updating your actual résumé so that it reflects all the achievements you hope to have by then.

For your actual résumé, we saw that a length of one or two pages was sufficient for most undergraduate students. But since you will no longer be a college student at the date of your aspirational résumé, you don't have to restrict yourself to these limits. Nevertheless, unless you're extremely ambitious and intend to set extraordinarily high goals for yourself, try to keep your aspirational résumé to no more than five or six pages.

What sort of goals should I consider when creating my aspirational résumé?

Just as the sections you chose to include in your historical résumé depended a great deal on what you've done and who you are, so will what you include on your aspirational résumé vary according to what you *intend* to do and who you *hope to become*. So, consider the following sections and include the ones that are most appropriate for your hopes and dreams.

- **Contact Information.** It's all but impossible to know what your address and telephone number are going to be several years in the future. Nor can any of us anticipate what new methods of communication may be common by that time. Nevertheless, you should feel free to imagine where in the world you may be living. If you find this type of speculation difficult, ask yourself this question: "If I could choose *any* place to live within the near future, where might I be?" It need not be in the state or the area of the

country where you grew up. It may not even be in your native country.

Dare to dream a little and select the place you would most hope to be at the future date you've chosen for this exercise.

- **Aspirational Goal.** By the future date you're considering, you will obviously have already attained one or more important goals. You will have earned your bachelor's degree (perhaps even an additional degree or two), and probably found employment. Therefore, by the future date you've selected, it will be time to start considering your *next* major step in life. What would be a logical way to extend the experience you will have gained by that time? What goals do you hope to reach *after* your formal education has been completed and you've taken your first job? This aspirational goal can be anything you like. It might be a better job than you're likely to have immediately after graduation, the sort of position that's obtainable only after you've gained a few years of experience. It may involve taking some time off of work to start and raise a family. It may involve seeking political office. Your goal could also be receiving recognition in your career for your creative contributions, or it could involve an entire change of direction in your life. In short, your goal should truly be a *vision* or *aspiration* of the best possible future you can imagine. Ask yourself what goals you hope to achieve *after* you've fulfilled your initial objective of graduating and finding employment?
- **Qualifications.** Describe what you will have achieved in order to place you in the right position at the right time to begin attaining your aspirational goal. What will you have accomplished since the events documented in your historical résumé that makes you ready to begin working towards this further set of goals?
- **Educational Information.** If you intend to enter the workplace immediately after receiving your baccalaureate degree, record this degree as completed on your aspirational résumé. (Remember that, since all information in a résumé appears in *reverse* chronological order, your most recent degree is always at the *beginning* of the list.) If you intend to pursue

graduate work after completing your bachelor's degree, list the university or universities that you hope to attend after the conclusion of your undergraduate work, and then remove the entry for your high school diploma. (It's not customary for people who have multiple college degrees to mention completing high school on their résumés. That achievement is taken for granted.) Include your anticipated date of graduation for all college degrees. For your undergraduate work, list a major and, if you like, a minor. If you expect to graduate from your undergraduate program with a very high grade point average — usually 3.4 or better — indicate whether you expect to receive **Latin honors**. These are the honors that start at the level of *cum laude* for those students who achieve at least the minimum threshold for this distinction, go through *magna cum laude* for those students with even better academic records, and reach *summa cum laude* for students with the highest grade point averages. Latin honors are not given for graduate degrees, so don't include this distinction if you're listing a master's or doctorate degree; in the case of graduate degrees, however, you should include the field of study you hope to pursue.

- **Occupational Information.** List all the paid jobs you would like to have had by the date of your aspirational résumé, including a brief summary of what your responsibilities were. Knowing where your dream job is located could help you determine the place you'll be living for the section containing contact information. For this and all subsequent sections, remove all references to jobs held or achievements made while in high school. Once you graduate from college, you won't include information about these high school activities on your résumé any longer.
- **Service Information.** List all the unpaid or volunteer activities you intend to perform for the good of the community. Try to identify service opportunities that occur either in areas where you have a great sense of commitment or which help you gain the type of experience you'll need in order to pursue the career you've identified.

- **Extracurricular Activities.** List the most important activities you expect to have engaged in outside of class. Since you're imagining yourself at some point in the future, remember to include activities that you haven't yet had time for but that you hope to pursue in the future. Are there areas of interest that you've always been hoping to develop but for which you haven't yet had the opportunity? Try to picture what important experiences you'll gain or how your life will be enriched if you engage in these activities.
- **Honors and Awards.** All the sections before this point in your résumé require a combination of hard work on your own part and a little bit of luck. Honors and awards are different in that they can be *completely* outside your sphere of control. While it's often true that you can nominate yourself for these distinctions — or ask someone else to nominate you — it's ultimately up to others to select you. For this reason, identify no more than two or three honors or awards that you hope to achieve. Give priority to achievements that are *possible* for you to receive by the date of your aspirational résumé and that would be the most meaningful to you.
- **Special Skills.** In addition to the skills you've already developed, what additional areas of high competency do you hope to attain in the future? What skills do you not have now but would like to develop in the future? Are there languages that you'd like to learn, computer applications you hope to master, or other talents that you'd like to build over the next several years?

As in your actual résumé, you don't have to include every single one of these sections, merely those that are the most relevant to you. Nevertheless, since we'll be using this document to set some goals for the future, you can include more material than you would normally want to appear in a well-edited, professional résumé.

What should my aspirational résumé look like?

Your aspirational résumé should reflect both your experience up to the present and your goals for the future. Since everyone's goals are individualized, your aspirational résumé may look significantly different from that of a friend or another student in this course. The following example can give you some suggestions for style and formatting, but your own hopes for the future will be the best guide throughout this exercise.

I.M.A. Student

Work Address:
 Association for Migrant Workers
 451 Alameda Boulevard
 Berkeley, CA 94704
 Telephone (510) 555-1212 ext. 555
 E-Mail: imastudent@amw.org

Home Address:
 1815 Las Palmas Court
 El Cerrito, CA 94530
 Telephone (510) 666-5555
 IM: distinctionthrudiscovery

OBJECTIVE: Director of an NGO promoting social justice.

QUALIFICATIONS

Served as principal investigator for eleven grants totaling more than \$6 million that provided services to migrant workers, primarily in the southwestern United States and throughout the Dakotas. Supervised a staff of 8 in addition to a volunteer base of more than 400, developed annual budgets, acted as a liaison to the state legislature on several projects, and assisted the director of the Association for Migrant Workers in managing the day-to-day activities of the Berkeley office.

EDUCATION

2020	Master's degree in Public Policy, Goldman School of Public Policy, University of California, Berkeley
2018	Bachelor of Arts (Peace and Conflict Resolution) <i>magna cum laude</i> , Southeastern Central University, Northwoods, West Dakota

EMPLOYMENT

2020-present	Research Associate, Association for Migrant Workers, Berkeley, California <i>Researched, prepared, and implemented grants on behalf of migrant workers in the southwest. Developed work plans for staff. Supervised timekeeping and coordinated projects.</i>
2019	Summer Intern, office of congressional representative Cameron H. Philips <i>Internship under the Jacob K. Javits Political Leadership Scholarship (see below). Studied political processes. Performed routine correspondence. Provided research assistance.</i>

2018-2019 Intern, Association for Migrant Workers, Berkeley, California
 Assisted research associate with preparing grants for submission to foundations and federal agencies. Performed front office work and served as receptionist.

SERVICE

2020-present Member, Rotary Club of El Cerrito
 2018-2020 Provided ESL instruction, Migrant Project of America
 2015-2018 Performed weekly resident visits, Northwoods Nursing Home and Rehabilitation Center, Northwoods, West Dakota

EXTRA-CURRICULAR ACTIVITIES

2018-present Founder, Hispanic Literature Book Discussion Group, Berkeley, California
 2018-present Member, Cultural Arts Film Festival, Thousand Oaks, California
 2018-2019 Instructor, weekly Hatha yoga class, El Cerrito Community Center

HONORS AND AWARDS

2020 Making a Difference Award, Migrant Project of America
 2019 Jacob K. Javits Political Leadership Scholarship, Goldman School of Public Policy, University of California, Berkeley
 2018 Outstanding Student Thesis, Southeastern Central University

SPECIAL SKILLS

English (native speaker), Spanish and French (high levels of competence, approaching fluency), word processing, database management, spreadsheet preparation, social media, webpage design.

INTERESTS

Yoga, mindfulness meditation, graphic novels, contemporary literature, experimental film.

As you prepare your aspirational résumé, don't fall into the trap of imagining that opportunities have come your way simply through luck or the effort of others. In our hypothetical example, the author did envision receiving one rather distinguished graduate fellowship (the Jacob K. Javits Political Leadership Scholarship), but this hope was an actual possibility for the student because of his or her background, academic performance to date, and long-term goals. In other words, the author of this résumé intends to work hard, earn a high enough grade point average to merit the distinction *magna cum laude* at graduation, and pursue both coursework and extracurricular activities that would make this type of fellowship a genuine possibility.

Being Innovative

While it may seem obvious that the further into the future we try to plan our lives, the less accurate those plans will be, how might you design a study that would *prove* this assumption?

- Does it seem likely that people will develop more reliable plans about certain aspects of their lives (such as whether they will marry, how many children they will have, and the general region of the world in which they'll live) than about other goals they may have (such as the position they'll hold in their careers, the specific city in which they'll live, or the interests that they'll have outside of work)?
- Is there a consistent period (such as five, ten, or fifteen years) for most people beyond which plans become so unreliable as to be all but meaningless?
- Since your study involves events that might take place over decades, how could you construct your research project so that you will not have to wait many years before knowing whether your results are significant?

As should be apparent from our hypothetical example, the purpose of an aspirational résumé is neither to script every detail of your future (which isn't possible anyway) nor to create a situation where you are unable to take advantage of the unexpected opportunities that will inevitably arise. Rather, the purpose of this exercise is to set realistic goals and to determine what you would need to do in order to achieve those goals.

Key Principle

Careful planning of your future does not preclude you from enjoying the unexpected opportunities that will inevitably come your way. On the contrary, careful planning of your future puts you in the best possible position to take full advantage of those “unexpected” opportunities when they come along.

If you were the student who created our hypothetical résumé, you could now use it as a basis for planning what you need to start doing *now* in order to be ready for opportunities *later*. Here's what you might conclude.

- “In order to be accepted into a prestigious graduate program and to be offered the Jacob K. Javits Political Leadership Scholarship, I'll need to work very hard in all of my undergraduate courses so that I can develop the best academic record I can.”
- “In order to be successful in receiving the large grants I hope to be offered someday, I'll need to look for opportunities where I can begin applying for several small grants early in my career. That way I can have a record of successful grant application later when I need it.”
- “In order to spend my leisure time as I'd like, I'm going to have to expand my knowledge about activities like yoga and contemporary literature and film.”
- “In order to complete the best possible thesis during my senior year, I'm going to need to get an early start on my research and to select the sort of advisor who's going to challenge me, not simply approve everything I suggest without giving me the kind of advice I need.”
- “In order to achieve the level of fluency I want in both Spanish and French, I'll need to consider study abroad programs and other immersion experiences that can enhance my language proficiency.”
- “In order to become as skilled in computer applications as I hope to be, I'll need to take a few workshops along the way to keep my level of knowledge up-to-date.”

In this way, by setting long-term goals, you discover what decisions you should be making now. The student above certainly could benefit from a study abroad program, so it'll be worth the effort to plan coursework carefully to free up enough time for travel during the summer or academic year. In a similar way, if you can envision yourself as a successful surgeon in fifteen or twenty years, there are certain decisions you'll need to make *now* about the courses you'll take and the extracurricular activities you may wish to pursue. If you hope to produce an award-winning film, there are clubs to join and majors to explore. The aspirational *curriculum vitae* isn't a way of

predicting exactly what *will* happen; it's merely a tool you can use to make it more *likely* for desirable opportunities to come your way. Since your interests will inevitably change over time and new opportunities will emerge, you should revise your aspirational résumé periodically. Every few years it can be useful to look back over your last version of this document, see whether you're making progress towards your goals, and determine whether any of your goals have shifted since your last update.

Key Principle

Not all dreams can come true but, in order for them to be possible at all, you must first begin by dreaming them.

Graduate School

As you design your aspirational résumé, you may discover that it'll be necessary for you to attend graduate or professional school before you enter the workforce. Most of these schools require applicants to take a standardized test as part of the admissions process. If you took the **SAT Reasoning Test** (once known as the **Scholastic Aptitude Test** or the **Scholastic Assessment Test**) or the **ACT** (originally an abbreviation for **American College Testing**) exam, you're already familiar with what it's like to take a nationally normed, standardized admissions test. While, as we'll see throughout this unit, the specific exam you'll have to complete varies according to the type of degree you're seeking, the purpose of the exam is always the same: It provides a supplement to your undergraduate transcript and at times serves as a *corrective* to your record. After all, not all colleges or universities provide the same rigor. An A at one school might be equivalent to only a C somewhere else. The material covered in a course at one college may be nowhere near as demanding as that covered in the same course at a different school. Moreover, certain students do extremely well academically but perform poorly on standardized tests. So, by evaluating *both* your undergraduate transcripts *and* the results of standardized tests, graduate and professional schools develop a better picture of your overall strengths and weaknesses. A high test score won't automatically compensate for a poor academic record, and a

superb academic record may not always compensate for low test scores. Nevertheless, if your transcript, letters of recommendation, and standardized test scores present an inconsistent pattern, it's likely that your application will be examined closely in order to determine whether there is a clear reason for this inconsistency.

Many graduate and professional programs don't require students to follow any particular major. Despite a

common misconception, medical schools don't exclude students who were not pre-med majors. Law schools don't accept only pre-law majors. In non-professional programs, you're likely to encounter



students whose undergraduate majors were in areas remote from the field they're now studying. Nevertheless, the admissions tests by which students gain access to these graduate or professional programs all assume that those taking the exam have mastered certain skills, shared certain experiences, and completed certain coursework. So, if your aspirational résumé makes it clear that graduate or professional school is at least a possibility for you, you ought to start investigating what you'll need to know in order to succeed on the exam you'll eventually take. Knowing what courses you'll need can help you plan your schedule better over the next few years. It may suggest that you'd be well advised to combine a particular minor with your major, register for electives in certain fields, or keep particular skills sharp through the co-curricular activities you select. Since new admissions tests for graduate and professional schools are developed all the time, it's not possible to list *all* of the exams you may be interested in considering. Nevertheless, we'll look at some of the most common exams used for graduate and professional school admission so that, even if these aren't the same tests you'll end up taking, you'll see what questions you should start asking now in order to be ready for new opportunities later.

The Graduate Record Examinations (GRE)

The **GRE® Revised General Test**, commonly known simply as the **GRE**, “measures your verbal reasoning, quantitative reasoning, critical thinking and analytical writing skills — skills that have been developed over a long period of time and are not related to a specific field of study but are important for all.”

http://www.ets.org/gre/revised_general/about/content/. The skills that the GRE focuses on include:

1. **Verbal Reasoning**, such as the critical thinking skills that we’ve explored in this course. Verbal reasoning questions seek to determine whether you understand a complex passage of text that you’ve read, can complete a meaningful sentence by selecting one or more appropriate words, and can identify terms or phrases that are roughly equivalent to one another. Some problems are presented as single-answer multiple-choice questions, others as multiple-answer multiple-choice questions, and still others require you to complete various parts of a sentence correctly by choosing several answers that only make sense in combination with one another. Here are some examples to illustrate the types of question that appear.

SINGLE-ANSWER MULTIPLE CHOICE

The arrival of the package _____ our need to search for it at the post office.

- a. adumbrated
- b. ameliorated
- c. obviated
- d. prevaricated
- e. articulated

MULTIPLE-ANSWER MULTIPLE CHOICE

Catherine was stung by the _____ tone of Brian’s reply.

- a. mordant

- b. sympathetic
- c. specious
- d. acerbic
- e. caustic
- f. eclectic
- g. fortuitous

MULTIPLE COMPLETION

The author's text is refreshingly (1)_____ although it has the misfortune of veering at times into sheer (2)_____.

Blank (1)	Blank (2)
puerile	acumen
banal	pedantry
tautological	magnanimity
nefarious	eloquence
erudite	forbearance

The correct answer to the single-answer multiple-choice question is (c) *obviated*, which means “made unnecessary”: The arrival of the package made a trip to the post office unnecessary. The correct answers to the multiple-answer multiple-choice question are (a), (d), and (e) since we're told that Brian's remark *stung* Catherine, and those choices alone among the answers imply that his words were biting, harsh, or sarcastic. The correct answers to the multiple-completion question are *erudite* and *pedantry*, since the word “refreshingly” implies that the first answer will have a positive connotation, while the word “misfortune” implies that the second answer will have a negative connotation. All the other choices are either neutral or the opposite of the implied connotation. Your score on the verbal reasoning section of the GRE will range from a low of 130 to a high of 170. All scores are whole numbers.

2. **Quantitative Reasoning**, which involves the skills you've developed in your algebra, geometry, trigonometry, calculus, economics, and physics courses.

The types of questions included in this section of the test are:

- a. single-answer multiple choice
- b. multiple-answer multiple choice
- c. quantitative comparison (where you'll have to determine whether A is less than, equal to, or greater than B or whether you lack enough information to draw a conclusion)
- d. numeric entry questions (where you'll have to calculate and enter a specific number).

Your score on the quantitative reasoning section of the GRE will range from a low of 130 to a high of 170. All scores are whole numbers.

3. **Analytic Writing**, which involves analyzing an issue or argument. In analyzing an issue, you'll be expected to use critical and creative thinking skills by adopting a position on a topic that is posed and defending that position with a logical, well-supported case. In analyzing an argument, you'll be asked to respond to a case made by an author, critiquing his or her claims, evidence, conclusions, and logical progression from premises to inferences. Your score on the analytic writing section of the GRE will range from a low of 1 to a high of 6. Scores may be either whole or half numbers.

Being Analytical

You can find additional sample questions for the GRE at

http://www.ets.org/gre/revised_general/prepare?WT.ac=grehome_testprep_a_121008 and in books such as Educational Testing Service (2012) and Kaplan Publishing. (2012). Examine a number of these test questions and then analyze the sorts of knowledge, skills, and competencies that the questions seem to be testing for. For example, are they testing merely the breadth of your vocabulary? Are they testing to see whether you can determine relationships among words, such as synonyms, antonyms, homonyms, and heteronyms? Are they testing for technical terms used in academic subjects or do most of the

verbal sections on these exams deal with terms that any well-educated person would know?

Analyze, too, your own experience in taking these sample tests. Do you do better if you trust your first impressions or ponder the question longer? Do you score higher if you've been studying right up until the time you take the practice test or if you rest for a while and begin taking the test when you're more refreshed?

What can you start doing now in order to help improve your score on the GRE® Revised General Test? Because of the nature of the test and the types of questions asked, you might consider taking some of the following courses as you select your minor and electives.

- **Writing-intensive courses.** Courses that require as much writing as possible will help you with both of the verbal sections on the exam. Extended writing projects, consisting of at least 6,000-10,000 words per course, are most beneficial. Look for courses that require writing in a variety of styles and on many different topics.
- **Foreign language, classics, or etymology courses.** Courses in other languages cause you to reflect on the structure and nature of your own language. Classics courses introduce you to the origins of complex words, many of which come to English by way of Greek or Latin. Etymology courses help you build vocabulary and often include exams that are similar in structure to the verbal section of the GRE.
- **Courses in statistics and mathematics, as well as science courses taught with a mathematical basis.** Many students take only the bare minimum of math and science courses unless they are majoring in a scientific field. The problem with this approach is that, by the time they take the GRE, these students may be out of practice at solving quantitative problems. For this reason, even students in the fine arts and humanities are well advised to take at least one highly quantitative course each year.

- **A broad range of electives.** By taking courses in a variety of disciplines, you'll encounter the technical terms and vocabulary of many different academic fields, thus preparing you for the verbally intensive GRE. You'll also learn to see repeated themes from alternative perspectives, which will help you process information quickly, make critical judgments, and adopt other approaches when one method of assessing a situation proves unsuccessful.
- **Symbolic, Formal, or Modern Logic.** In logic courses, students explore argumentation, deductive reasoning, drawing appropriate conclusions, avoiding fallacies, and determining logical relationships in ways that are extremely helpful as preparation for the GRE. These courses are also excellent for improving critical thinking skills and are thus good preparation for any field of graduate or professional study.

Professional School

Post-graduate professional schools prepare people for careers in fields such as medicine, dentistry, veterinary science, the law, architecture, business, public policy, and so on. While certain graduate programs accept the GRE as part of the application process, other fields prefer their own tests that emphasize aptitude and knowledge in the areas most closely related to work in that profession. There are many different kinds of professional school exams, but in this unit we'll focus on three: the LSAT for admission to law school, the MCAT for admission to medical school, and the GMAT for admission to business school.

The Law School Admission Test (LSAT)

The LSAT is administered by the Law School Admissions Council, a non-profit corporation that was founded in 1947 "to ease the admission process for law schools and their applicants worldwide." <http://www.lsac.org/aboutlsac/about-lsac.asp>. The test consists of five 35-minute sections of multiple-choice questions, four of which are scored and one of which is experimental. Students also complete an unscored writing assignment at the end of the exam, which is sent to the schools where the student is applying. The scored sections of the LSAT are:

1. **Reading Comprehension.** A passage is followed by a series of questions that determine the student's ability to follow a complex argument, recall information, see the relationship among various ideas, and determine the overall theme of a complex discussion.
2. **Logical Reasoning, Part 1.** A paragraph or set of facts is followed by a series of questions dealing with proper conclusions, fallacies, assumptions, premises, and similar aspects related to critical analysis.
3. **Logical Reasoning, Part 2.** Similar to Logical Reasoning, Part 1 but based on a new paragraph or set of facts.
4. **Analytical Reasoning.** "These questions assess the ability to analyze, critically evaluate, and complete arguments as they occur in ordinary language. Each Logical Reasoning question requires the test taker to read and comprehend a short passage, then answer a question about it. The questions are designed to assess a wide range of skills involved in thinking critically, with an emphasis on skills that are central to legal reasoning. These skills include drawing well-supported conclusions, reasoning by analogy, determining how additional evidence affects an argument, applying principles or rules, and identifying argument flaws." <http://www.lsac.org/jd/lsat/about-the-lsat.asp>.

Scores on the LSAT range from a low of 120 to a high of 180. The LSAT is generally taken on a Saturday, although students who observe a Saturday Sabbath have an option that allows them to take the test on a Monday. The Law School Admissions Council has very strict rules about what students may and may not have with them during the test. For example, analog watches are currently allowed at the testing site, but not digital watches because of their ability to store information and perform functions that may give students an unfair advantage.

What can you start doing now in order to help improve your score on the LSAT?

Because the LSAT is designed to test skills in reasoning, comprehension, and written communication, taking courses with a specific content may not help students prepare for this test as much as they believe. For instance, many students who wish to attend law school take courses in law and society, political science, and public administration.

While these are admirable courses and certainly significant for the study of law, they're not the *only* type of course that you should consider if you're planning to take the LSAT. Other courses that can help you prepare for this exam include:

- **Courses with essay exams.** Since you will need to provide an extemporaneous writing sample during the LSAT, it is helpful to get as much practice as possible writing and organizing spontaneous essays. The essay questions on the LSAT tend not to be about controversial topics, so any course in any discipline that gives you lots of practice in writing extemporaneous essays will be beneficial.
- **Symbolic, Formal, or Modern Logic.** See the description of these courses in the section on the GRE above. A significant portion of the LSAT requires you to be able to spot valid and spurious arguments, derive conclusions from premises, and identify repeated themes. Courses in logic are good preparation for all of these activities.
- **Courses with long required readings, particularly in non-fiction.** Since the LSAT requires students to comprehend and draw conclusions from complex texts, the more practice you can get in reading this type of material, the better.
- **Foreign language, classics, or etymology courses.** These courses are excellent preparation for the verbal and logical sections of the exam. In addition, mastering a foreign language can give you an important edge if you are pursuing a career in law. Courses in classical languages can help round out your curriculum and, because these languages have a complex structure, can reinforce the analytical skills you'll need to succeed on the LSAT.

Moreover, many of the skills we've encountered in this course as we explored approaches to undergraduate research — such as critical thinking and analysis — are the same skills tested by the LSAT. The more opportunities you have to conduct undergraduate research, therefore, the better prepared you'll be when you take the test.

Being Reflective

Think back on your other experiences with standardized tests. Was your level of anxiety high before and/or during the test? Is there anything you could have done to make yourself feel less tense or more prepared? What are the lessons you can draw from this experience so that you'll perform at your best on any standardized tests you'll need to take for graduate or professional school?

The Medical College Admission Test (MCAT)

The MCAT has developed a well-deserved reputation as one of the most challenging of the graduate school admissions tests. It is the preferred examination for students who are seeking a post-baccalaureate degree in medicine, dentistry, osteopathy, and related health fields. The MCAT is a program of the Association of American Medical Colleges and is “designed to assess the examinee’s problem solving, critical thinking, writing skills, and knowledge of science concepts and principles prerequisite to the study of medicine.” <https://www.aamc.org/students/applying/mcat/about/>. The exam is computer-based and consists of four sections that students take in the order listed below:

1. **Physical Sciences:** 52 questions designed to test a student’s knowledge of essential concepts and formulae in chemistry and physics, as well as the ability to apply those formulae correctly when solving the problems that have been assigned. Time limit: 70 minutes.
2. **Verbal Reasoning:** 40 questions that are multiple-choice and test a student’s ability to follow a written argument, distinguish factual statements from assertions, identify repeated themes, draw inferences, and reach logical conclusions. Time limit: 60 minutes.
3. **Biological Sciences:** 52 questions on a wide range of biological topics. In addition to questions that test a student’s knowledge of facts, other questions require students to know or be able to derive essential formulae, apply information presented in a descriptive passage, and solve problems related to biological issues. Time limit: 70 minutes.

4. **Trial Section:** 32 questions, strictly optional, that are used to test formats that may be used in future versions of the MCAT. The questions are *either* in the areas of biochemistry, biology, chemistry, and physics *or* in the areas of psychology, sociology, and biology. These questions do not affect your score on the MCAT.



The first three sections of the exam receive scores that range from a minimum of 1 to a maximum of 15. The

composite score for these three sections thus ranges from a low of 3 to a high of 45. Previous versions of the MCAT also included a writing sample that was examined by a computer program and two human readers who together assigned a letter grade running from a low of J to a high of T, but this section no longer appears on the exam. The trial section is being used to prepare for a major revision of the MCAT, which is planned to occur in 2015.

What can you start doing now in order to help improve your score on the MCAT?

Because the MCAT requires specific content knowledge in addition to transferable skills and abilities, certain courses are all but essential in order to receive a satisfactory score on this exam. These courses (all at the college-level) include:

- **One full year of laboratory-based General Biology**
- **One full year of laboratory- and mathematics-based Physics**
- **One full year of laboratory-based General or Inorganic Chemistry**
- **One full year of laboratory-based Organic Chemistry**
- **Anatomy and Physiology**
- **At least one additional semester of advanced Biology**

Because most students who take the MCAT will wish to do so early in the second semester of the junior year (particularly if there is any possibility that the student will wish to retake the test in order to improve his or her score), it's important to complete these courses no later than the first semester of your third year. In addition, because of the nature of the MCAT and most schools' requirements for admission to graduate programs in human health and medicine, the following courses should be strongly considered:

- **English:** Most medical schools require applicants to have completed two or more English courses. In addition, the more English you take, the more practice you will get in the skills necessary for the verbal reasoning section of the MCAT.
- **Biochemistry:** Some medical schools require biochemistry, and almost all of them *prefer* that a student has taken it. This course will also build on the knowledge that you've gained in both biology and chemistry courses, keeping your problem-solving skills sharp in these areas.
- **Mathematics:** Although much of the material covered on the MCAT is based in science, the test requires you to solve a number of equations and correctly apply various formulae. Mathematics courses, particularly those that give you a great deal of practice in solving problems without a calculator, are excellent preparation for the MCAT. Furthermore, calculus will be a prerequisite for many of the upper-level science classes that are necessary for successful completion of the MCAT so, although it is not listed above as a requirement, almost all future medical students will need to have completed at least a year of it.

Many students wonder about the value of enrolling for special practice test classes or hiring tutors to help them prepare for graduate and professional school admissions tests. A large number of students do find these practice sessions valuable because they diminish the unfamiliarity of the exam itself and can help the student target specific areas for review. Nevertheless, even the best test preparation course can't help you make up for several years when you didn't learn as much as you should have. So, even if graduate and professional school seems a long way off or only a slight possibility,

you will do better in the long run if you begin preparing for these future opportunities during your first year, not just a few months before the test is taken. Work with your advisor to take the courses suggested in the appropriate section above, seek electives that challenge you, and work to strengthen any areas where you may feel that you have particular weaknesses. You can also find detailed summaries of what students are expected to know for each section of the MCAT at <https://www.aamc.org/students/applying/mcat/about/>.

The Business School Admission Test (GMAT)

The GMAT is intended to test the ability of students to exercise the skills they're likely to need while pursuing a graduate degree in business. Like many other standardized admissions tests, it's administered via computer and adjusts automatically to your responses: If you answer a question correctly, it moves you to more difficult material but, if you answer a question incorrectly, it guides you to follow up questions in order to determine more precisely what you know and don't know. The GMAT consists of the following four sections, which take a total of three and a half hours to complete:

1. **Analytical Writing Assessment:** The student writes a single essay on an assigned topic that requires critical analysis of an argument. The goal is to identify any logical fallacies, improper uses of evidence, or possible counterarguments that can be made to the claims that are presented. Time limit: 30 minutes.
2. **Integrated Reasoning:** 12 questions that require the student to draw proper inferences from graphs, organize information effectively into tables, derive correct conclusions from multiple data sources, and engage in similar processes of analyzing information. Time limit: 30 minutes.
3. **Quantitative:** 37 questions that require knowledge of arithmetic, algebra, and geometry. Students are required to solve equations, determine whether they have sufficient data to draw correct conclusions, and solve problems. Time limit: 75 minutes.
4. **Verbal:** 32 questions that test your ability to "read and comprehend written material, reason and evaluate arguments, and correct written material to

conform to standard written English.” <http://www.mba.com/the-gmat/test-structure-and-overview/verbal-section.aspx>. Time limit: 75 minutes.

As should be clear from this outline, the goal of the GMAT is not to evaluate a student’s mastery of accounting, management, marketing, and other aspects of business administration, but rather the ability to apply appropriate techniques of critical analysis to a variety of problems both verbal and quantitative in nature.

What can you start doing now in order to help improve your score on the GMAT?

Certainly undergraduate courses in business will give you practice in the skills you’ll need in order to succeed on the GMAT. But they’re not the *only* sort of courses that can provide these skills. You’d also be well advised to consider taking:

- **Courses that require a great deal of extemporaneous writing.** Since the GMAT requires you to write an impromptu essay, the more practice you have in this form, the easier you’ll find that section of the test. Look for courses that require students to complete a large number of analytical essays, so that you’ll have mastered this part of the test. In your other courses, try using a five-paragraph format (or a variant of it) when writing essays on exams so that this style will become second nature to you.
- **Statistics courses.** Many of the concepts covered on the quantitative section of the GMAT are regular parts of most courses in statistics. By taking these courses as electives, you’ll both prepare better for the test and get a head start on concepts that you’ll use extensively in your graduate program
- **Courses on controversial issues.** On the GMAT you’ll need to analyze the arguments of others and determine their validity. Courses that expose you to complex issues about which more than one point of view is defensible can provide you with frequent practice in dissecting arguments, gauging the strength of the evidence, and drawing your own conclusions.
- **Speech courses.** Even though there’s no oral component of the GMAT, the skills students develop in speech courses — thinking on their feet, remaining calm under pressure — are precisely those that will serve you well in the often tense environment of a long standardized test.

Careers

Even if your plans include graduate or professional school after completing your undergraduate degree, you'll eventually want to find a career that can provide financial support, satisfaction, and the opportunity to make a meaningful contribution to society. While we've already explored various aspects of how to apply and interview for a job, there's much more to finding the right "fit" than simply submitting a compelling application and completing a successful interview. Fortunately, the skills in undergraduate research that you develop throughout your college program are extremely helpful in determining which job is most appropriate for you and how best to obtain it. Let's pull together many of the concepts that we've explored in this course by looking at your **job search as a type of research project**.

Step 1. Focus the Topic

Throughout this course, we've discovered how important it is to *ask the right question* in order to end up with a meaningful answer. In your academic research, we saw in Unit Three that a good research question should be:

- **able to be answered**
- **able to be answered by an undergraduate**
- **able to be answered by an undergraduate at this college or university**

In a similar way, you'll want to find a career that:

- **fits well with *who you are***
- **fits well with *what you know***
- **fits well with *where you're going***

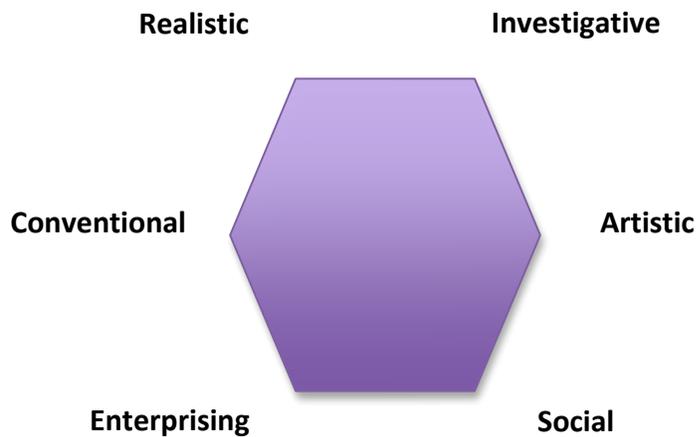
In Unit Nine, we saw that simply looking at income and job prospects in a field is a very narrow way of selecting a major. If you do so, you may find a position and be able to pay your bills, but you're also likely to be unhappy in that job, achieve less success than other people whose heart is really in that field, and come away with a sense that you're wasting much of your life. Remember those factors when you come to apply for jobs as well. It's one thing to take a less than satisfying job because it'll get

you where you need to be in a few years. It's something else entirely to be stuck in a field you dislike for thirty to forty years.

Finding a job that fits who you are begins with making sure that you know who you are. In Units Eight and Nine, we talked about personality and interest inventories, like the Myers-Briggs Type Indicator (MBTI), the Keirsey Temperament Sorter, the DiSC Personal Profile, the Strong Interest Inventory (SII), the System of Interactive Guidance and Information (SIGI), the Birkman Career Style Summary, and the Princeton Review Career Quiz. These tools can be extremely useful in helping you understand yourself more completely, as well as pointing you in the direction of careers that are especially well suited for someone with your interests, temperament, and goals. A particularly common approach to exploring possible careers involves a model originally developed by **John Holland** (1919-2008), a sociologist at **Johns Hopkins University** who developed the concept known as the **Holland Occupational Themes, Holland Codes, or RIASEC Categories**. The last of these titles is an acronym developed from the first letter of six basic personality types that are closely related to career interest or job satisfaction.

Realistic	=	Doers
Investigative	=	Thinkers
Artistic	=	Creators
Social	=	Helpers
Enterprising	=	Persuaders
Conventional	=	Organizers

The basic idea behind the Holland Codes is that our career choice tends to be a function of our personalities. Moreover, these categories are best understood as part of a continuous cycle represented as a hexagram, such as the one seen on the following page.



The idea is that none of us is purely one type of personality or another. We all have secondary aspects of other types. But presented in a hexagram this way, the Holland Codes suggest that we're most happy in careers that address the interests of our primary personality type, as well as the secondary types on either side of it. In other words, people who have strong artistic interests tend to be most satisfied in careers that allow them to indulge in those interests while also including some elements that appeal to investigative and social people. Similarly, people who are primarily realistic in their outlook tend to be most satisfied in careers that take advantage of this desire for practicality while also including some elements that appeal to investigative and conventional people.

Step 2. Refine the Topic

In a research project, after you've chosen the major area of your topic, you'll usually need to refine it. The same thing is true in your career search. For instance, you may decide that you'd like to be a doctor or a lawyer, but there are numerous specialties within those careers to choose from. You may decide that you'd like to be a tax accountant at a large corporation — a decision that may initially seem quite focused already — but you can still consider such variables as which sector of the economy you'd like to work in (services versus products, retail versus wholesale, consumer goods versus equipment, and so on), where you'd like the corporation to be located, what your ultimate career path will be, and so on. Although it won't be possible for you to plan for and predict exactly which job you'll be offered, you stand a much

better chance of obtaining something close to that goal if you refine your hopes and start taking steps that will begin moving you in that direction.

Being Intentional

Refining your career search, in the way that we're approaching the process in this unit, is itself an exercise in intentionality. But in order to be realistic in the planning and preparation that we do, it's important to understand our limits in setting and achieving goals. Choose one or more of the following areas and have several conversations with people who have already experienced the activity indicated. Try to determine from them: 1) What they had been looking for originally and expected that they would discover; 2) What they actually did discover; 3) What their reaction is to any differences between what they hoped for and what actually happened.

The areas to choose from are:

A. CAREER: Before they were employed, what did they hope their work would be like? What is it actually like? How satisfied are they with those differences?

B. MARRIAGE: Before they met their spouses, what did they hope their future partner would be like? What is that person actually like? If the reality is far different from their hopes and dreams, why did they change their minds?

C: CHILDREN: Before their first child was born, what did they hope rearing a child would be like? What is it actually like? Were they surprised by these differences?

Refining the topic of your job search is also important because it will indicate to you what type of internship positions you should begin looking for. As we saw in Unit Twelve, internships sometimes turn into real jobs. In fact, you can think of many internships as a summer-long or year-long interview for a job. If you perform your internship duties well and prove that you're dependable, the company may prefer to hire you rather than to take a chance on an applicant who is completely unknown to them. On the other hand, you could discover that the work environment at that company is not at all what you'd hoped it would be. So, at the same time that the

company is conducting an extended interview of you, you're also conducting an extended interview of *them*. By refining your topic, you'll thus be in a position to make any midcourse corrections or adjustments to your plan as a result of insights you gain along the way.

Step 3. Gather Reliable Data

If your job search is a bit like conducting a research project, what is the equivalent of performing a **literature review** with regards to your career? It would involve discovering what is already known about work in that field: likely salary levels, work conditions, opportunities for advancement, challenges for the field, laws affecting the industry, and so on. Furthermore, just as in Unit Nine we saw the advantage of spending some time with students already working in a field before deciding to major in that discipline, so will you want to gain information from those who work in a career before deciding whether that job is right for you. While an internship is the best

possible way of gathering this information, it's not the *only* way. Shadowing a professional even for one day can give you a far better insight into what a career is really like than can reading



entire books on that subject. Remember that, for something as personal as a career, facts and figures don't tell you the whole story. Reliable data also include how you *feel* in a work environment: Can you handle the pressure? Would you find your coworkers interesting? Would you feel that a lifetime in this career would be meaningful in some way? Is it likely that you would regret wasting your talent if you "settled" for work in this field?

The type of data that you collect in your job search will tell you much more about *probabilities* than about *certainties*. In other words, if you discover that only 3.8% of students with degrees in a certain discipline ever end up working in a field, it's still up to you how you'll interpret that data. You may conclude that, since at least *some* people find jobs in that profession, you're going to be part of that 3.8%. Or you may conclude that the pressure of working towards such a goal is not worth it in light of all the other goals you'd like to achieve in your lifetime. Your interpretation of the data is going to depend on a candid assessment of yourself: How hard are you willing to work? What are you willing to sacrifice in order to achieve this career goal? If you're not a straight A student, what attributes do you have that will make you more desirable to the person who will hire you than a student who never earns less than a perfect score on every exam? Can you see yourself living on a small income for ten or twenty years until you finally "make it big" in the field? In short, the data you'll need to collect during your career research should include information about the profession, the employment marketplace, and *yourself*.

Step 4. Test Your Hypothesis

In the end, like every good research project, there will come a time when you'll just have to move ahead. Remember that you'll *never* have all the information you'd like to have before you proceed. In most cases, you won't complete a paper for your class before you feel that it's as perfect as it can be; you'll complete it because it's due on a certain day. The same principle applies to your job search. If you wait for the absolutely perfect job to come along, it probably never will. At some point, you'll have to go with the best of the options you have available, even if that option is nowhere near what you feel it should be. Think of this step, not as closing the door to all future opportunities, but as testing your hypothesis that accepting this job will bring you one step closer to your goals. If, after several years, it begins to be clear that your hypothesis was not correct, remember the key principle we encountered in Unit Nine: **Decisions that result in either a birth or a death are irrevocable. Almost every other choice you make in life can be modified later.** Even career decisions that seem to have you locked into a certain path are often changeable later. But doing so

effectively requires use of all the skills of intentionality, reflection, critical thinking, creative thinking, and inquiry that we've explored throughout this course.



The goal of this First Year Experience course has been to give you some of the tools you'll need in order to succeed in college and beyond. College-level learning isn't just about discovering what other people have said and discovered; it's also about learning how to make your own discoveries. Throughout this course, we've approached your First Year Experience as though it were a research project and considered what you'd need in order to draw reliable conclusions about it. But research is certainly not something that needs to be limited to your undergraduate program or even to your formal education. Research, creative scholarship, and innovative inquiry are really a **way of life**, one that does not depend on accepting what you're told but on finding things out for yourself. We hope that the habits you've developed throughout this course will continue to guide you for many years to come.

Exercises

1. If you are currently in your first year, how do you expect your second year of college will be different from what you're experiencing now? Base your opinions both on what you have read in this chapter and experiences that other students may have related to you. If you are currently in your second year or beyond, what is the most important thing you know now that you wished you had known when you started college?
2. Go through your institution's catalog and find a course in a discipline that you have never heard of, are not quite certain what it entails, cannot envision yourself studying at all, or are least familiar with when compared to other areas. Do some research through the Internet, your library, and (if possible) by contacting that department on your campus. What is studied in the course you have chosen? Who tends to take the course (majors in that field? majors in another field? students from no particular major who are seeking an elective? some other profile of student?)? If you can find a student who has taken this course, see what you can learn from that person's experience? What

- did the student gain from the course? Was it enjoyable? Would the student recommend it to others?
3. After preparing an aspirational résumé, identify three specific things you can do within the next year or two to place yourself in a better position for reaching your long-term goals. Are there any specific actions that you can take *right now* so as to make attaining these goals more likely?
 4. Imagine that you are in charge of selecting students who are qualified for admission into a graduate or professional program. Select the academic focus of the graduate or professional program according to your individual interest. Then develop an outline for a five-section admissions exam that will help you identify the most qualified applicants. What will be the focus of each of the five sections? What sort of question will you ask in each section? If any of your sections will incorporate multiple-choice questions, how will you design these questions? For instance, would you ask direct questions, use synonyms, antonyms, or analogies, pose questions in response to a passage, diagram, or equation, or construct your questions in some other way? Why have you chosen this particular content and format for your five sections as the best way of selecting students who are most likely to succeed in your program?
 5. If you could choose (or *had* to choose) a study abroad experience, where would you go and for how long? What courses would you most like to take while studying in a foreign country? If you were required to do an internship overseas, what sort of internship would appeal to you? What benefits would you expect to result from your experience studying in another country?

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Appendix A:

Tips Known by Every Successful College Student

Tips for Taking Notes

College courses require a more thorough and systematic system of taking notes than was probably necessary in any of your earlier schooling. In at least some of your earlier courses, you probably could listen to what was being discussed in class, read the textbook a bit, and retain enough information to succeed on quizzes and exams. College courses tend to introduce material at a much faster rate than most of your high school courses. In addition, the goal of many of your college courses isn't going to be teaching you facts and information — you'll be expected to learn those things on your own through books, articles, and reliable websites — but helping you to see the world in new ways, developing your ability to think critically and creatively, and improving your ability you discover things on your own. Without a good set of notes, it's easy to reach the first test in a course and discover that things which seemed so clear only a few weeks ago now appear hazy or confused.

Moreover, you're going to have a substantial amount of reading in your courses. Depending on the nature of the material, roughly twenty to one hundred pages of reading will be assigned per class period in each course. That means that, with a five-course load, you could easily find yourself reading between one and two thousand pages a week. Even for the student who takes pride in his or her "photographic memory," that's a *huge* amount of reading to master. Without some system of keeping notes, much of what you gained through your reading will be lost, and then you will have wasted a great deal of time. Finally, you'll be doing research for various courses, perhaps leading up to one or more capstone projects in your major. That research is also going to require a significant amount of note taking. Different situations require different note-taking strategies, so in this appendix we'll explore three major approaches to taking notes.

Taking Notes in Class

Sitting in a college classroom shouldn't be an exercise in taking dictation, nor should students emerge from class without any record at all of what occurred. There is, in other words, a delicate balance between trying to write too much and not recording enough that your notes can jog your memory about key points later. Since proper note taking is an excellent way to focus your attention on what the instructor and other

students are doing, it can help prevent your mind from wandering, even during those long afternoons when you haven't had as much sleep as you need. As a way of improving your skills at taking notes, here are a few tips that every successful student comes to know.

- **How to deal with information that the professor writes on the board or includes in a slide presentation.** Some students believe that it's only important to write something down if the professor does so also. This assumption can get you into trouble in a number of different ways. To begin with, professors frequently make the class presentations created by software such as PowerPoint or Keynote available to students outside of class, often through a course management system like Blackboard or Moodle. If the instructor writes on the board using a SMART Board Interactive Whiteboard or similar technology, even the notes from the board may be distributed to students later. In other words, the notes that students sometimes take in class only preserve a record of *precisely the same charts and information they were going to receive later anyway*. Second, a professor may write something on the board or include it on a slide for reasons other than that it's one of the most important concepts you will discuss that day. Perhaps the term is difficult to spell or pronounce. Perhaps it'll be introduced only later in your textbook. Perhaps the professor is simply going to contrast that concept to a different idea. Professors may also write a term on the board simply as a means of gathering *their* thoughts. So, there's no direct correlation between what's written on the board and the most important concepts being discussed. Third, you can't assume that, simply because a professor presents certain terms or ideas in written form, these are the *only* concepts the professor wants you to know. Using the material that's written on the board or displayed on slides during class may thus be a convenient framework for *organizing* or *outlining* your notes in class, but it's highly unlikely to be the only information you should record in class.
- **How to tell if something is important.** Trying to create a verbatim transcript of everything a professor says in class can leave you with notes that are nearly impossible to decipher. The goal in taking class notes is to separate the truly significant comments, terms, and ideas from other, less vital information. So, if you can't tell that something's important simply because the professor writes it on the board, how *can* you tell? Sometimes the professor will tell you through helpful phrases like "Now, the really important thing for us to observe here is ..." or "One of the key concepts that we'll be using in this unit is ..." In the

absence of verbal cues such as these, the instructor may provide you with other hints, such as becoming more animated, excited, or intense when talking about specific points. Thoughts or ideas that are repeated several times are also likely to be extremely important, particularly if the instructor refers to earlier concepts repeatedly while discussing new material that is introduced later. In a similar way, concepts that are reinforced through demonstrations, film clips, or illustrations are likely to be highly significant. Sometimes a professor or teaching assistant will be willing to glance at your notes during office hours in order to tell you whether you are recording the right information. If this opportunity exists for you, be sure to pursue it early in the term so that you can correct any bad practices you've fallen into.

- **How to organize your notes so that you'll easily find information again.** Without any structure or organization, it can be very difficult to find anything in your notes when you go back over them. For this reason, it's usually better to keep your notes in an outline format rather than as paragraphs of text or mere random words. Before each class begins, draw a line across the page so that it's clear a new day's notes will begin. If you're taking notes electronically, start a new page in your word processing document. Record the date, so that you'll be certain which sets of notes need to be studied for which exams or quizzes. If the professor has given you a title for that day's class (either on the board, a slide, or the syllabus), write that title at the top of that section. If the professor hasn't created a title, leave the space blank and come back to it after the class is over: What then would *you* title that day's class, based on its central theme or the most important topic you covered? From that point on, try to group the most important ideas, terms, and information into a general outline. It's not important that your outline be absolutely perfect. After all, in a formal outline, for every point 1, there must be at least a point 2; for every subpoint A, there must be at least a subpoint B. If you try to develop that type of form during class itself, you'll spend your time focusing on the wrong things. Simply group information in the best way you can under a few clear headings. If you find that you lose track of your outline once you get beyond the main headings, just number the headings and then use bullet points for all of the information that falls beneath it. Remember that what you really want is *some* structure, not a perfect outline of the kind that you might submit as part of an assignment.
- **How to use symbols or abbreviations as a type of shorthand.** Since you'll often have to take notes quickly as the pace of a lecture or discussion begins to

build, you'll want to use a system of symbols or abbreviations that can help you write down as much as possible. It's not necessary to adopt any particular system of shorthand or abbreviations to do this; simply use whatever method makes the most sense to you. One important principle to keep in mind, however, is to **use abbreviations and symbols to represent common words or phrases, not the new concepts and terminology that is being introduced.**

For instance, in a modern philosophy course, it's a bad practice to write a note such as "For the first exam, be able to compare and contrast central issues in Witt PI to A's concept of the PU." Weeks later this particular note is likely to be meaningless to you because you wrote out all the common words and abbreviated all of the new terms. It would've been far better to write something like "4 1st ex, c/c Wittgenstein Philosophical Investigations 2 Austin's performative utterance." Although this version contains roughly the same number of characters as the first note, the second comment is decipherable, while the first isn't. One very effective way of saving time while taking notes is to adopt a few symbols you know from math, science, and logic courses even in classes taken in other disciplines. Particularly valuable symbols when taking class notes include:

~	not
∅	nothing
√	check
∴	therefore or end of the discussion
→	results in
∀	for all/every
∃	there exists
⊃	contains/includes
<	is less/smaller than
>	is greater/bigger than
T	true
⊥	false
⊆	is a subset of, is contained in
⊇	is a superset of, contains
=	equals, is the same as
≡	is absolutely identical to, "if and only if"
≠	does not equal, is different from
≈	almost comes to, is almost the same as

≅	approximately equals/the same as
∝	is proportional to
Ā	with
ā	without
ḡ	after
ā	before
q	every

These symbols can then be combined with any other kind of abbreviation you'll be sure to understand later. For instance, other common note taking abbreviations include ^c for "century" (as in "14^c," instead of writing out "Fourteenth Century"), "ca." for "about" or "approximately" (an abbreviation of the Latin word *circa*), "cf." for "compare" (Latin *confer*), Ψ for "psychology" or "psychological" (from the Greek letter *psi* which begins the word *psyche*), and "pp" for "pages." Also, if you're familiar with some of the common abbreviations used in text messages — such as 2 for "to," 4 for "for," *gnrδ* for "generate," and *otob* for "on the other hand" — many of these forms may be easily adapted to note taking. You can also invent your own personal abbreviations, such as the *c/c* for "compare and contrast" that we saw earlier. Just be sure that you're consistent in your usage. For example, if you use *cos* for "because" in one place and for "cosine" in another, you're likely to become confused when you review your notes later.

- **How to recopy your notes after class as a way of learning the material.** One extremely valuable way of remembering what your notes mean, and at the same time reviewing what you learned in class, is to recopy your notes into some other form before the next class period. One of the best ways to do this is to take notes by hand in class, then afterwards create a document on your computer and retype the notes from the last class period, fleshing out all abbreviations with complete phrases. By recopying the material in this way, you'll find yourself easily remembering more material from the class because it's still fresh in your mind. Add that information in as you think of it; don't assume that, just because you remember it now, you're likely to recall it three or four weeks from now. There are two additional benefits to this practice. First, it gives you a chance to organize any part of your notes that is messy or that may be indecipherable later. Second, simply by reviewing the notes as you retype them, you're doing some advance studying for the next test. You'll also be able to incorporate additional insights that you gained from your reading or

from thinking further about the material after class. What you'll end up with is a very comprehensive set of notes that you'll find easy to study from since you've been reviewing them all along.

Students sometimes wonder what sort of notebook they should bring to class. Unless your professor specifies that your notes be kept in a particular way, use any type of notebook that best suits your individual needs and style. Some students prefer to keep notes on loose sheets of paper in binders so that they can add pages to these notes later. Other students prefer spiral notebooks because it's harder for the pages to fall out of these notebooks or to get them mixed up. Either preference is fine. If you do choose a spiral notebook, however, just be certain to use a new one for each course. Combining multiple courses in the same spiral notebook tends to make the material far harder to locate if you ever need it after the course is over. Also, when you come to class, always bring at least two pens or pencils. Inevitably the lead in your pencil will break or your pen will run out of ink at the worst possible moment. Being prepared for class means having the right materials ready when you need them. With the widespread use of laptops in courses nowadays, you may wish to keep your notes in a file on your computer from the very beginning. If you do so, be sure to use abbreviations and symbols during class, but to go over those notes and flesh them out into full sentences later. The automatic outlining feature of your word processing program can be a very convenient way of keeping your class notes in a logical order. Finally, be sure to back up your notes somewhere after each class: Your computer could fail or your disk could crash before a major test, so having an alternative way of accessing that information is always desirable.

Taking Notes While Reading

Many of the principles that we discussed involving class notes also apply to the notes you take while reading. Organize information in a loose outline form. Use standard symbols and abbreviations to make your task easier. Rewrite your notes periodically to make certain you understand them and to get a head start on studying for the next test. But there are also a few additional principles you should consider as you read.

- **How to use highlighters while reading.** If you've ever purchased a used textbook, you've probably seen at least one example of bad highlighting: Almost every sentence is highlighted for the first chapter or two, and nothing is highlighted after that. At first the student using the textbook couldn't easily identify what was truly important. Then, since so much highlighting took a great deal of time and made the text more difficult to read, the student soon

abandoned the practice as not worthwhile. Some professors may tell you that any use of a highlighter is a bad idea. The truth is that highlighters can be useful if used correctly, particularly by **not regarding them as a substitute for taking notes**. For instance, you might use a highlighter to mark a key formula in a science text, a passage in a poem or play that you'll want to cite in a paper or some data in your psychology text that you want to discuss in class. You don't want to use a highlighter to mark every passage that may be important or that you might want to review for the test. Because of the way in which most textbooks are designed, with information contained in each sentence and very little space available for elaboration, you'll be tempted to highlight every line. The fact is that, when you highlight a passage, you don't process it as completely as you would if you made even a short note about it in a separate document. So, don't use highlighters as an alternative to taking notes while reading. Use them only to mark short material that you'll need to find easily later. If you find that you're highlighting more than a phrase or two per page, you're probably highlighting too much.

- **How to organize the notes from your textbook.** If you're taking a class in which the textbook follows the topics of your class sections quite closely, one of the best ways to keep these notes organized is to put them side by side with your class notes. Some students prefer to draw a vertical line dividing each page in half, keeping class notes on the left, textbook notes on the right. Others prefer to devote full sides of the paper to each source, with class notes on the front of each page and textbook notes on the back. By organizing your notes in this way, you'll be studying relevant material from both the textbook and your class sessions each time you review. Many students like to organize their notes according to the "Cornell System," in which key words and topic headings are recorded in a blank column on the left while more detailed notes are written out in complete sentences on lines to the right. You can find a free template for formatting "Cornell System" pages exactly to your specifications at <http://incompetech.com/graphpaper/cornelllined/> or <http://www.eleven21.com/notetaker/>. For more on the "Cornell System" from the college professor who devised it, see Pauk and Owens (2004). As a further way of keeping straight which set of notes is which, you might consider taking your class notes in blue ink, your textbook notes in black.
- **How to decide what to take notes on from the textbook.** As we saw earlier, most college textbooks tend to be very rich in information. If you try to take

notes on “only what’s important,” you’ll end up taking notes on *everything*. The most essential things for you to take notes on from the textbook are **things that you don’t understand** and **things that appear to have been contradicted by something said in class**. These are the notes that will help you to ask questions in class or during a study review session. Don’t be surprised if you can’t understand everything immediately; in many college classes, certain material becomes clearer only after you’ve worked with it for a while. But if a certain statement seems totally baffling, incomprehensible, or contrary to what you are learning in the course itself, that’s usually something you’ll want to ask about. In addition to material that seems confusing, you’ll also want to take notes on the key points raised by the book. As you reach the end of each paragraph and subsection of a chapter, pause a moment to ask yourself, “What was the single most important idea or theme that appeared here?” By doing so, you’ll force yourself to become, not a passive reader whose eyes merely take in words without thinking them through, but an engaged and active reader. When you formulate the key point of each paragraph or section, write it down in your notebook, using the loose outline form that we discussed earlier. This outline will then make it quite easy for you to review these points before class or when studying for a test.

Key Principle

When taking notes from your textbook, keep track of the page number in the margin of your notebook. In that way, you’ll find the information much more easily if you need to go back to it later.

Your textbook notes should provide you with a brief summary of the questions you wish to ask about this material and the major points that appear in each chapter. Whenever possible, it’s an excellent practice to re-read all relevant chapters from the textbook prior to a quiz or test. When this isn’t possible, however, a properly constructed set of notes will help you go over the most important material quickly and easily. You’ll find it much easier to digest all of the material this time than you did when you first encountered it. After all, you won’t be learning something new; you’ll be refreshing the knowledge that you already had when you first wrote that note.

Taking Notes for a Paper

The way in which you keep your research notes will either make it much easier or much harder for you when it comes time to cite sources in a paper. For this reason, structure your notes in such a way that you have all the information you need to make a proper citation later.

- **How to head each section of research notes.** The first thing you should do whenever looking at a book, article, or online site for research is to begin a new section of your research notes that's headed with the full bibliographic information of that source. Err on the side of recording too much information, rather than too little. For instance, if the citation system that you're using requires you to list authors by full last name but to use only initials for first and middle names, record the full first and middle names of each author anyway. This practice will save you from later wondering whether you should use the pronoun "he" or "she" if you talk about the author in your paper. Moreover, within the text of your paper itself, it looks much better if you write "Throughout the 1990's, Eric Maskin's work in game theory ..." rather than "Throughout the 1990's, E.S. Maskin's work in game theory ...". Be sure, when you're using electronic sources, to indicate the date on which you retrieved that information; unlike printed resources, web sites are "living" documents, and the information you find there one day may be missing or altered the next.
- **How to begin each note within a section.** Start each note you take with a specific reference to where that information occurs. In books and articles, record the page number. In electronic sources, cite the URL (i.e., the Uniform Resource Locator or precise Internet address) every time it changes from that which appears in your heading. For instance, the URL might change because you clicked on a hyperlink or proceeded to a subsequent "page." Knowing the precise page on which ideas are first introduced, terms are defined, or quotations appeared will make it much easier for you later when you wish to turn these notes into citations. If you're copying out a passage from a book or printed article that spans several pages, adopt a consistent convention in your notes every time the page breaks. Use of // or ¶ to mark page breaks is particularly common. In this way, if you end up using only *part* of the quote within your paper, you won't end up confused as to which specific passages appeared on which pages.

- **How to format each note within a section.** It's important, when you're taking notes for a paper or research project, to distinguish carefully between actual quotations that you're taking from a source and ideas that you're paraphrasing. (This principle is discussed in greater detail in Unit Three.) Resources available to your instructor, including turnitin.com and catchitfirst.com, as well as classroom grading systems such as Scriptum, make it extremely easy for professors to identify text that has been taken from books, articles, and other students' papers. For this reason, you should always record quotations in a different color from the rest of your notes, *as well as* beginning and ending them with quotation marks. After all, if you don't change colors of ink, it's all too easy to mistake a sentence in the midst of a long passage as a comment of your own rather than as part of an extended quote. If you're taking notes in ink, using red or green ink for quotations will clearly differentiate them from the blue and black ink that you used for your class notes and textbook notes respectively. If you're taking notes in a word processing file, simply change the color of the font whenever you are recording a quote. This practice is particularly necessary when you're "cutting and pasting" from an electronic source; unless you clearly indicate through a different color that a block of text is a quotation, you may mistake it as your own writing later. It's also probably a good practice to begin each paraphrase with a statement like, "Lessing concluded that ..." or "Parker believes that" as a clear marker that you're summarizing someone else's idea. In the course of doing this research, you may also find that you develop your own ideas even while you are reading the works of another author. To distinguish these observations from concepts addressed by your source, it's probably a good practice either to record them in another notebook (such as the one you use for your class and textbook notes) or to mark them clearly as your own insight, using a convention like "[MY OWN OBSERVATION: Despite Littleton's claims here, it seems more likely that ...]."

If you keep your notes on paper, use the top of each page to write down a brief reminder of the content on that particular page. If you keep your notes electronically, you can use your word processor's automatic outlining feature to help organize your information, to insert topic headings, and to rearrange material that could be more logically organized. Paper notes should not fill too much of the page: margins, skipped lines, and partially completely pages are all good places to write in additional information or questions later. Avoid the temptation to doodle in the margin of your

notebook, unless you are reproducing a graph or important image from class. Unnecessary filler will simply make your notes harder to read later. Most important of all, review your notes on a regular basis: the purpose of creating them is not to leave an historical record, but to aid you in learning. That goal can only be achieved if reviewing your notes becomes a regular part of your daily routine.

Tips for Distinction on Quizzes and Exams

There are few experiences that fill college students with as much anxiety as taking exams or quizzes. Students worry whether college tests will be much harder than those they took in high school. (They will be.) They worry that the exams and quizzes will be so difficult that they can't possibly get a good grade on them. (They won't be.) And they worry most of all when they're taking a test for the first time from a professor whose courses they haven't taken before, wondering whether they're studying the right material in the right detail. (They may or may not be). The fact of the matter is that there are no shortcuts to studying for college exams and quizzes. If you're the sort of student who rarely had to do serious studying in your earlier education because you could absorb all the information you needed from class, it's time to change tactics. College work is going to require a more focused, intensive sort of studying than your earlier academic work. Nevertheless, college tests aren't impossible, and very few professors actually use exams to "separate the wheat from the chaff," despite the impression you may receive from television and the movies. That mainstay of fiction about college life, the professor who creates nearly impossible tests because he or she wants to drive away all but the most outstanding students is, you'll be relieved to know, largely an imaginary creature. To be sure, the vast majority of college professors want to test your limits, but they also want their students to succeed. After all, the instructor who fails 98% of his or her students isn't regarded by administrators as "enforcing high standards"; it's more likely that such an instructor will be regarded as someone who was unsuccessful in meeting the needs of most of the students in the course. But make no mistake about it: Your success at college-level exams and quizzes is largely up to you, how much time you put into your work, and how *effectively* you use that time. You probably already know a number of effective study strategies from your earlier academic work. Combine what you have already found to work for you with the suggestions below, and you'll greatly reduce your level of anxiety before tests. Even more importantly, you'll do your absolute best on every test you take.

Start early. The time to begin studying for a test isn't the night before or even the weekend before; it's the day of the last test. Keeping up in your courses, studying material in manageable amounts, and making steady progress are the most important ways for you to succeed on tests and help reduce your level of anxiety. "Cramming," the term commonly used for intense studying shortly before an exam, is not an effective way to learn material for the long term. To be sure, "cramming" does have its place: There will be *occasional* situations in which specific dates, formulae, and technical terms will need to be memorized for use only during a test. Your ability to learn complex material quickly, use it successfully, and then move on to other tasks is a useful skill that you are likely to draw on repeatedly in your professional life. But this is not an effective way in which to learn skills, techniques, and information that you are likely to need repeatedly or on which you will build later. By "cramming," you're really only taking advantage of your short-term memory; information you study in this way is only memorized, not really *learned*. So, starting early and working systematically in your studies is one of the most effective ways you can prepare for the test and ensure that you still know the material *after* the test. Another advantage of starting early in your preparation for an exam is that, if you find that you truly don't understand something, there is plenty of time to get help with it from your instructor, teaching assistant, or study group. You will find that the vast majority of college professors are quite willing to help students who are sincerely trying to do their best but having genuine difficulty understanding something.

Sit in the "T-Zone" in as many courses as possible. Another very effective way to prepare for exams and quizzes is to choose your seat in the classroom based on where students tend to learn most effectively. The "T-Zone" is the section of the classroom or auditorium that consists of the very front of the room and the center rows, an area that's shaped like the letter "T." Students sometimes avoid this part of the classroom because they're afraid that they'll be called on more frequently or receive greater eye contact from the instructor. Ironically, those are the very reasons why students *should* prefer these seats! In the "T-Zone," you will find it more difficult for your mind to wander during class. Paying closer attention can lead to more active learning. And even getting called on occasionally will force you to remain more alert and engaged. It may seem that merely changing your seat in the classroom is an unusual way to study for a test, but this approach can actually be extremely effective.

Take full advantage of any questions or problems that haven't been assigned.

Textbooks frequently have problems, review questions, or suggested essay topics at the end of chapters or units within chapters. It's not uncommon for professors to assign a selection of these questions or problems as homework. If you're in a class where this has occurred, the unassigned exercises provide perfect aids while studying for an exam. For instance, if you've been assigned the odd-numbered problems in a math class, now see if you can also do the even-numbered ones. If a history professor has asked you to turn in question #6 at the end of a unit as homework, try drafting answers to all the other questions. It is sometimes the case that teachers will even base actual test questions on the unassigned problems from the book. If that occurs, you will be preparing for the test in a way that gives you a definite advantage. But even if those questions don't appear on the test, by answering them you'll be reviewing key material from your textbook and practicing the skills that will help you succeed when you take the exam.

Use study guides wisely. Some college professors will give you a study guide or a practice test to help you prepare for an exam. These materials can be extremely useful but, unless your professor specifically tells you otherwise, **don't assume that the material on the study guide is all you need to know.** In many cases, study guides are intended to be the *start* of what you need to know, not the *finish*. Study guides help guide you to the most essential points, but there may also be additional material or secondary points that you will need to know in order to do well on the test. Practice exams can be particularly treacherous: Many instructors create them in order to give you a feeling for the type of question they will ask, the level of difficulty, and their general expectations. This is extremely useful information, particularly if you've never taken a course from that professor before. But practice exams are rarely intended to *limit* the material you should study for the test. In many cases, the one thing you can conclude from a practice exam is that the questions that are on it *won't* appear on the test itself. So, use practice exams carefully. Save them until fairly far along in your study, then take them out and complete them under realistic exam conditions (such as with your notebook and text closed, and under strict time limits). The ease with which you are able to complete the practice exam should tell you how effective your strategy for studying has been. If you find the test easy, then you've been studying effectively and should continue on your current path. If the entire test or a particular section of it appears difficult for you, use this information to redirect what you are reviewing. But

never assume that, just because you know all the material on the sample test, you have mastered everything you'll need to know for the actual exam.

Use what you know about your individual learning preference in order to make your studying most effective. In Unit Two, we explored your individual learning preference. Armed with that information, you are now in an excellent position to take full advantage of how you tend to learn best. For example, if you found that you are a visual learner, try to outline or diagram the information that you've covered in the course. Make flash cards of key terms or ideas, and then review these cards until you're able to visualize that information during the test itself. Use a mnemonic device, such as an acronym, that helps you "see" the essential facts about a concept. For instance, in a course on ancient history, can you think of five important facts about ancient Sumerian society, each of which begins with a letter in the name of the city-state "Sumer"? In a biology course, can you think of a sentence that helps you remember the various steps in mitosis? (You might think of something like "*P*reston *m*et *a*nother *t*elemarketer" to help you recall the order "prophase, metaphase, anaphase, telophase.") If you are an audio learner, you might read over your lecture notes, recording what you say on a tape recorder or mp3 player. Then you could listen to this material over and over again as you are getting dressed for class, driving in your car, or walking across campus. You might also think of a rhyme, limerick, or pun that helps you recall key concepts from class. If you're an experiential learner, you'll want to take full advantage of practice questions, perhaps even developing some of your own if you do not have enough available from the textbook. See if the library has any software related to the material of the course that will assist you in running a simulation or performing active learning in some other manner. The important point is that, regardless of what your individual learning style may be, you can find some appropriate manner of reviewing course material that is well suited to that particular approach or preference.

Create your own sample exam. After reviewing your notes and the textbook for a while, one of the most productive strategies you can adopt is to design a sample test of your own. Doing so causes you to think through the process that will lead your instructor to design the test. What are the key concepts that are certain to give rise to questions? Which names and new terms could form the basis for an identification question? Are there processes or principles that could form the basis of an essay question? By thinking through the questions that you are likely to be asked, you'll not

only be reviewing the material itself, but you'll also be getting into the mindset you will need for the test. If you are studying on your own, designing one or more sample tests and then answering the questions may well help you to anticipate some of the questions you will be asked on the actual exam. If you study with a group, having each person design a sample test and then exchanging them can give you some realistic preparation in answering questions you may not have thought of yourself.

Study in multiple, short sessions rather than a single, long session. One of the other reasons why it's important to begin studying for a test early is that people tend to retain only a certain amount of information from any single study session. You may already have had the experience of studying a specific subject intensely only to notice that it becomes more and more difficult to remember new information after several hours. The **Law of Diminishing Returns in Studying** suggests that there's an inverse relationship between the length of time you study and your ability to learn, recall, and apply new information. For this reason, five one-hour study sessions spread over several days are *far* more effective than a single five-hour session. If you parcel your studying out over several days, you will actually be spending the same amount of time that you would have spent in a single, prolonged period of studying, but you'll have far better results from your efforts.

Paraphrase information. Sometimes when we study, we tend to repeat information *exactly* as it appeared in the book or as it was explained in class. This is a less effective study strategy than putting the concepts into our own words. Paraphrasing ideas helps us "make these ideas our own" and prepare for essay questions where we may need to apply information in a new context rather than merely repeat it verbatim. As you study, try to phrase your answers differently every time you go over them. Doing so will make sure that you have truly understood the underlying concept, not just memorized the words. It will also reduce the likelihood that you will panic during the exam itself when, under pressure, you "blank" on the one phrasing you have memorized.

Summarize material both in writing and aloud. One mistake students often make in preparing for a test is simply going over information "in their heads." This practice can sometimes lead them to *believe* they understand material completely, when there are actually gaps in what they have grasped. If you write out possible answers or recite them aloud, it will be far clearer to you when you come to a part of the explanation

where you hesitate or have difficulty making a smooth transition. Those hesitations are key indications that you have come across an area that you need to know better or that you haven't studied as well as you may have thought.

Learn specific examples. In addition to learning general concepts and principles, always try to learn at least three or four specific examples that illustrate those concepts or principles. Not only will these examples help you remember the general information more effectively, but they will provide you with useful material that can make your short answers or essays more compelling. Professors tend to reward students who introduce well selected illustrations of key principles in their essays and who draw on multiple examples throughout an essay, rather than repeating the same illustration over and over. (Too frequent reference to the same example makes it appear that that is the only case you bothered to study.) In fact, while writing essays, it can be extremely effective to cite clear examples of a principle even when the instructor has not requested any illustrations in the question itself. Your answer will suggest that you have not simply learned the formula, principle, or concept but that you can identify specific instances of that idea at work.

Get a good night's sleep before the exam. Another mistake that students often make is extending their studying late on the night before the test, assuming that "more is always better" when it comes to preparation. We saw earlier that the Law of Diminishing Returns in Studying indicates that, beyond a certain point, your studying is likely to become extremely ineffective. Even worse, you want to be fully awake and attentive at the exam itself; pulling an "all-nighter" on the day before a big test will probably lead to problems focusing your attention when you are actually taking the test. A solid night of sleep before a major test can actually help you "digest" the terms and ideas that you had studied earlier. At the exam itself, you'll find that you remember more than you think if you're well rested and less than you think if you're tired or sleep-deprived.

At the test itself, remember that a little anxiety can be a good thing. Although you don't want to be so nervous during a quiz or exam that you "freeze" or forget important information, you also don't want to be so blasé that you don't give the test the importance that it deserves. Every grading opportunity is important, and it takes a large number of extremely high grades to average out even one poor grade. For this reason, a little bit of anxiety during a test is a good thing. It helps keep you focused

and alert. It means that you recognize the significance of what you're doing. So, if you find yourself becoming a bit anxious before tests, your concerns are not necessarily a warning sign that you haven't studied enough. If you've reviewed your notes several times, gone back through the readings to identify central points, tried to imagine some likely test questions, and practiced some answers, you are probably in very good shape. Use the anxiety you feel to give you that extra "edge" during the exam. Don't let it distract you from doing your absolute best.

Scan the entire exam before you begin and allocate your time to the various sections you will need to complete. Reading the directions for the entire test can save you from wasteful mistakes. Nearly everyone has a friend who tried to answer all five essay questions during a final, even though the instructions said to choose two out of the five topics. In addition, knowing what the exam as a whole will be like will assist you in allocating your time properly. It does you no good whatsoever to write an absolutely brilliant answer to one question, but use up all the time that you should have devoted to the other questions. So, look at the questions, and set yourself some general time limits for each part. If you find yourself running out of time on one section, go on to the other questions. You can always come back to the section that was giving you trouble if there is still time left at the end. It is almost always better, however, to have at least the core of a good answer written, even if it is not fully developed, rather than to have most questions completed but some not even attempted. If it is possible for you to do so, you may wish to start the test by answering the questions that you find easiest. These will give you confidence and may help your thoughts flow more easily throughout the rest of the test.

Tips for Distinction in Math and Science Courses

Courses in mathematics and science often pose a great deal of challenge to college students, even if they've done rather well in similar classes before. Part of the reason for this difficulty is that, as we saw in Unit One, math and science are taught differently in college than, for instance, at the secondary level. The pace is faster. The exams are less frequent. Homework and lab manuals may either not be checked at all or reviewed only occasionally and without a great deal of guidance. If you were used to relatively small science classes with active lab components in high school, you may find yourself faced at least for a year or two with extremely large lecture sections of courses that don't give hands-on experience. Even if your courses do have active lab components, you may find that you're expected to work far more independently and to

progress much more rapidly that you're used to. In your math classes, you may find that you're expected to take a more independent role in keeping up with the class, that no one will slow down and be sure you've mastered the material before moving on. Even worse, if you've never felt comfortable with math and science classes before or have been away from these subjects for a year or more, you may discover that trying to get back into these disciplines is like trying to jump onto a moving train. More students find themselves on academic probation or with poor academic records in their first or second year of college because of math and science courses than because of any other discipline. Fortunately there are steps you can take to improve your chance for success in these classes, even if you have always found these subjects challenging.

Do *all* the problems. Math and science textbooks frequently have problems or review questions at the end of each section, chapter, or unit. Take the time to do all these problems, even if they are not assigned. Your instructor may ask you to do only the even-numbered problems, or to answer only the odd-numbered questions. If so, those are the only problems you should turn in, but they are certainly not the only ones you should do. Complete all the problems and review questions, *even if your instructor skips over them entirely*. The vast majority of what you learn in a math or science class is gained only from actively engaging in the material, not from simply listening in class or reading the textbook. Experiential learning is essential in these courses, even if you regard yourself as an audio or text-oriented learner. (On concept of learning preferences, see Unit Two.) For this reason, you should approach each section of problems or review questions as an opportunity to improve your mastery of the material, not as optional work you can safely skip over. There's frequently a very close positive correlation in math and science courses between those students who do all the problems and those who do well on quizzes or exams.

When you do problems, don't check the answer key until you believe you've solved it. Many books have answer keys at the back of the book or at online sites. Sometimes these keys solve every problem; sometimes they only provide solutions to alternate problems. It's a great temptation to know in advance what the solution to a problem is, but this is a temptation that should be avoided at all cost. If you already know the answer, you will find yourself rejecting possible approaches that won't yield that answer. You won't have this type of support on quizzes or exams, so you want to use answer keys only for the purpose for which they were designed: To check yourself *after* the problems have been completed in order to make sure that you have used the

correct formula, adopted the correct approach, or made the correct assumptions. Sometimes it's actually the struggle and the frustration you go through when confronting a difficult problem that teach you the most, not simply knowing the right answer.

Learn essential formulae and other overall approaches; don't memorize the way in which particular problems were solved. The purpose of solving problems isn't to learn those particular problems; it's to teach you an overall method and to enhance your skills at critical thinking. If you encounter a later problem with a different constant, an altered situation, and a new type of variable, you won't be able to solve it if you simply go through the same steps you used on an earlier problem. You need to understand *why* those steps were appropriate in that situation. Only then will you be able to see how your approach should be revised, if necessary, in the new problem. Ask yourself what you know from the assumptions that you have been given. What do you *need* to know? If the situation has been presented to you in words, see if you can write it in the form of an equation. What are the unknowns in this equation? How can you reconstruct the equation in order to isolate the unknown variables and solve the equation for each of them in turn?

Keep in mind that college-level math and science courses tend to be far more theory-oriented than equivalent courses in high school. Whereas many high school math and science courses supply you with an equation into which you're expected to insert numbers to calculate a solution, many college-level math and science classes will expect you to be able to *derive* an equation based on a particular theory. Sometimes students who did extremely well in math and science before they came to college find the way in which math and science are taught at universities to be quite challenging. These courses tend to be far more about developing theories and formulating hypotheses based on those theories than about solving problems and learning facts. This approach can make college courses in math and science very interesting. After all, it's far more fascinating to perform an experiment that's never been done before than to replicate an experiment simply to have a hands-on experience in a laboratory. But the same factors that make these courses more interesting can also make them more frustrating for students who prefer their answers to be definite rather than tentative.

Be certain that you have successfully completed all of the proper prerequisites for a math or science course. Many science courses require students to possess substantial knowledge of algebra, calculus, or trigonometry in order to succeed. In a similar way, many math classes require mastery of certain mathematical approaches or concepts as the basis for what students will learn in that particular course. Students will sometimes feel that they can ignore prerequisites because they're "good in math and science." Unfortunately, the reason why these prerequisites are in place isn't because a certain *aptitude* for math or science is important, but because they require a sound *familiarity* with the approaches, theories, and methods of another math or science course. Even if you can get a faculty member to waive a prerequisite — or discover that these requirements are not carefully checked — it's rarely a good idea to skip that prerequisite. Very few students who do so are then successful in the upper-level course. Keep in mind, too, that even a course in math or science titled "Introduction to ..." or "Survey of ..." may require a substantial amount of prior knowledge and contain established prerequisites. If a course has an upper-level number, it's very rarely intended for students who have little or no prior background in math or science.

Prepare for quizzes or exams by writing down key formulae and concepts. Writing material out helps us retain it far better than simply reading it over. The more complicated the formula is that you're expected to know for an exam, the more frequently you should write it out in order to master it. At times, instructors will allow you to bring notes into a test, often with certain limitations as to the amount of material you can consult. You may be limited, for instance, to both sides of a single sheet of typing paper, a 3" x 5" index card, or some other common page size. Condensing the material that you believe you'll need for the test is in itself an excellent exercise. Thus, even if you're not allowed to use these notes during the exam, preparing them helps you study. (You should never, of course, consult these notes during a test without having received prior permission from an instructor because doing so would constitute a blatant form of cheating.) If you're not allowed to bring your notes into the exam, you may wish to spend the first minute or two of the test writing key formulae on the blank pages of the exam (as long as writing on the test form is permitted) while these concepts are still fresh in your mind. Don't spend *too* much time writing out these notes, however, because you don't want to detract from the time you need on the exam itself. But having a clear statement of a few critical formulae or concepts in front of

you can help you greatly when you find yourself getting tired or confused later in the test.

In math and science courses, it can be very helpful to read the textbook material both before and after the class in which it's discussed. Reading over material before you go through it in class helps introduce you to key terms that'll be discussed and to orient you to the basic issues you will cover even if you don't understand these ideas completely at the time. Reading the material again after class helps to reinforce the ideas that you have discussed and permits you to identify any ideas that you may not completely understand. You may sometimes discover that a concept, which appeared to be quite difficult when you first encountered it in your textbook, later seemed to be perfectly obvious when you reviewed the chapter after class. You may be tempted when this occurs to revise your reading schedule and only look at the textbook after the lecture. This practice is almost always a mistake. The concept was easy on the second reading *because* you'd grappled with it before class and then experienced it again when your instructor explained it. Leaving your reading go until after the class is over could easily put you in a situation where you don't understand an idea your instructor mentions because you haven't thought about it before. The best practice to adopt in math and science classes is, therefore, to "sandwich" each course session with reading in your textbook, particularly in subjects or units where you are feeling that the material is in any way difficult.

Follow all protocols and procedures, even if they don't seem immediately relevant or important. In your science classes, you're learning many things simultaneously. Among the aspects of scientific knowledge you're learning are certain **facts** (such as formulae and universally valid descriptions of phenomena), **theories** (an explanation supported by numerous observations and capable of predicting new observations or yet undiscovered phenomena), and **methods** (the approach used to ascertain facts and to develop or reinforce theories). One of the reasons why protocols and procedures are enforced so strongly in science classes is that you're being trained to develop good habits of learning, testing, and observation. It can seem ridiculous at times to be compelled to wear goggles in a chemistry lab when you're working with nothing more dangerous than saline solution, but following the approved procedure is still important. It both protects you from other hazards, such as equipment that could fail or other substances that are present in the lab but not being used in your current experiment, and reinforces good experimental habits. Soon the idea of putting on goggles and

other protective clothing every time you enter a lab will become second nature to you. On that extremely rare occasion when it proves necessary, you'll be protected. In a similar manner, some of the protocols for recording your data from experiments may seem puzzling or even archaic. Why, for instance, might your instructor insist that you keep your lab results in a continuously numbered spiral-bound notebook rather than on separate sheets of paper in a three-ring binder or on your laptop computer? Your instructor is trying to cultivate habits that allow scientists to rely on the data collected by others. Computer files can be altered. Sheets of paper in binders can be replaced. Tracking data and lab notes in a spiral-bound notebook cannot *guarantee* that results have not been falsified, but it does make it much more difficult to change information once it's been recorded. In other words, science classes often intend to teach you just as much about *how* scientists learn about the world as about *what* they have learned. One of the best ways to succeed in these courses, therefore, is to adhere as closely as possible to the procedures and instructions you receive in them even if you don't yet see the point. It's likely that, as you continue your education, the reason for a number of these practices will become apparent later. In truly confusing situations, ask your professor, lab instructor, or teaching assistant. Out of your current confusion could emerge an important lesson that could benefit others in the course as well.

Start working on homework as soon as possible after the previous class ends, not shortly before the class in which it is due begins. Students frequently have a lot of questions about math and science homework once they begin to work on it. If you start doing your homework early, you'll have plenty of time either to figure it out or to consult the professor, teaching assistant, someone else in the class, or a tutor. If you leave your homework go until shortly before it's due, you won't have many options when you discover you don't understand something. Moreover, if homework takes advantage of a concept just discussed in class, it'll be fresher in your memory if you start your homework early. A good strategy for success, not only in your math and sciences classes, but also in *all* your college level work is the following.

Key Principle

Study early. Study often. Study regularly. Keeping up is far more productive than catching up. You will do much better in any course if you work on it a little bit every day, even when that course does not meet.

Or, in the wise words of the late John N. McDaniel, Dean of the College of Liberal Arts at Middle Tennessee State University, “Since you have paid for it, get what you paid for: Attend class. Pay attention. Ask questions of your professors and fellow students. College brings with it an incredible amount of freedom. So, respect that freedom. Fear that freedom. Enjoy that freedom. But at the same time take notes, sweat the small stuff, and sweat the big stuff, too. And try to understand the difference. Sometimes it’s only school, and something that seems terribly important now will seem insignificant in a very short time. Make friends, make a difference, and make room for errors. You’ll have your successes, too. Plan on laughing more than crying — both now and after you graduate. ... And did I say attend class?” (Personal communication with the author.)

Be sure that you understand how the periodic table of the elements is organized and how plant and animal taxonomies work. In college-level science courses, you can expect frequent reference to the periodic table of the elements (or simply “the periodic table”) and to a plant or animal’s phylum/division, class, order, family, genus, and species. Not only does this information consist of material that your instructors will assume you’ve mastered in your earlier education, but also your success in your college science classes will depend on your ability to incorporate new insights into an existing framework of scientific knowledge. Before entering any college-level science class, you should know what’s “periodic” about the periodic table, what the different numbers and symbols on it mean, what an “atomic number” and “atomic mass” are, and what you can and cannot conclude about an element from its position on the periodic table. In the taxonomy of life, you should understand the structure of the hierarchy, the degree of difference or similarity among plants or animals that is implied by each level, and how Latin naming conventions are used to designate individual species. Having this knowledge as a framework will provide the bare minimum of what you will be expected to know already before any of your college-level science courses begin.

If there is *any* possibility that you will be taking another math or science course, keep your textbooks rather than selling them at the end of the course. Math and science courses build sequentially, much as do courses in such fields as foreign languages and music theory. That sequential nature of the material helps explain why it’s so important to keep up as a course progresses: You’ll need to master the current unit because you’ll be building on those techniques in all subsequent units. But these

courses also build sequentially as you progress through the curriculum. You'll need to know what you learned in your calculus course in order to succeed in your physics and engineering courses. Once a course is over, your textbook becomes part of your personal reference library that you can draw on later in your program. You don't want to get to a course in quantum chemistry and discover you need a quick review of integration, only to find that your calculus text was sold several semesters earlier. Your textbooks become *more*, not less valuable to you once you've covered the material they contain.

Take advantage of the many resources available to you. Many university campuses have "math labs" and maintain lists of qualified tutors in both math and science. Don't wait to ask for help until you're already in trouble. If you find your work in a course particularly challenging, take advantage of these resources as soon as you can. In addition, there are a large number of electronic and printed materials that can help you succeed in your math and science courses. Several of these resources provide assistance in helping you to break down the steps needed to solve a problem, relate one type of challenge to another that you already understand how to resolve, and provide further guidance that can assist you in all of your math and science courses. For instance, Oman and Oman (1996) walks students through a wide variety of problems commonly encountered in physics courses, including momentum analysis, rotational dynamics, Kirchhoff's laws, and special relativity. Daepf and Gorkin (2003) take a similar approach for calculus students, with units on functions, induction, modular arithmetic, and other key concepts. If your challenge is not with problem-solving itself but rather with writing in the style and format required in college-level science courses, see Porush (1997), Beall and Trimbur (2000), and Pechenik (2006). If you need more general advice on how to succeed in college-level math or science courses, consult the excellent websites maintained for students by Saint Louis University (<http://mathcs.slu.edu/undergrad-math/success-in-mathematics/>), Brenna Lorenz of the University of Guam (<http://www.heptune.com/passchem.html>), and the University of Texas at Austin (http://www.utexas.edu/cola/student-affairs/_files/UTurn%20Handbook%20Spring%202013.pdf, see especially page 36, and <http://www.utexas.edu/ugs/slc/study/tests/problem-solving>).

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Appendix B:

The Structure of a College or University

One of the keys to success in any organization is understanding how that organization works. In Unit One, we saw enough of the organizational structure of colleges and universities to realize that they function very differently from corporations, military units, clubs, retail stores, and even other types of educational institutions. But in order to make your time in college most efficient, you'll want to understand how a university works in greater detail. This knowledge will allow you to get your questions answered more quickly and to have your needs addressed more effectively. For all these reasons, you'll want a greater depth of knowledge about "how the system works" in higher education.

The Governing Board

Almost all colleges and universities have a governing board — often known as a **Board of Regents, Trustees, or Visitors** — that establishes basic policies and is ultimately responsible for the fiscal operation of the institution. At private, non-profit universities, the school's tax-exempt status requires a governing board for the purposes of general oversight and ultimate **fiduciary responsibility** (i.e., legal responsibility for responsible supervision of financial decisions). Most boards approve operating budgets and auditors' reports, as well as the hiring, evaluating, and (if necessary) dismissal of the president. At public universities, the governing board's responsibilities may be similar, although this body will also be responsible for the funding provided by the legislature, not simply private funds and tuition. As at private schools, boards of public universities usually evaluate the president, although the right to appoint or dismiss a president may be held by a governor, legislator, or system that includes several universities. Boards rarely involve themselves in the day-to-day running of an institution, viewing their responsibilities as *supervisory* rather than *operational*.

The Chief Executive Officer

The chief executive officer of an institution is usually called either a **chancellor** or a **president**. Nevertheless, there is a great deal of inconsistency in how these terms are actually used. For instance, in North Carolina, the multi-campus university system is headed by a president, with each individual institution being directed by a chancellor. In Georgia, exactly the opposite is true: The University System is headed by a

chancellor, while presidents are in charge of individual colleges or universities. Regardless of the specific title used, however, the institution's chief executive officer is responsible for the overall management and operation of the institution. All vice-presidential areas report to the chief executive officer who, at most schools, evaluates the job performance of each vice president, appoints or replaces them as appropriate, and serves as the official voice of the institution.

The Vice President

In higher education, a vice president heads one of the major organizational divisions of the institution. Different divisions will be found at different colleges and universities, but the following areas within the organizational structure are quite common.

1. **Academic Affairs** is the division of the school that has primary responsibility for all of the institution's **credit-bearing** programs. It's this division of your college or university that hires and evaluates your professors, establishes curricular requirements, teaches your courses, and ultimately issues your degree. The vice president for academic affairs is sometimes known as the **provost**. At one time in North American schools the provost served as the institution's chief operating officer or executive vice president. Provosts were responsible for the day-to-day operation of the institution while presidents focused primarily on interactions with the governing board and the institution's external constituents. In a true provost system, therefore, the other vice presidents report to the president through the provost. This traditional practice has now become far less common, and many institutions use the term "provost" interchangeably with "vice president for academic affairs."
2. **Student Affairs** is the division that is responsible for most aspects of student life that do not involve credit-bearing courses. The vice president for student affairs is usually responsible for the institutional code of conduct, campus clubs and organizations, residence life, Greek life, disability issues, campus diversity and multicultural affairs, health services, counseling services, and similar areas. The vice president for student affairs may also hold the title of **dean of students**, or the dean of students may report to a vice president of student affairs who also supervises several other deans and directors of various aspects of student life.
3. **Enrollment Management** is the division that is responsible for seeing that an appropriate number of qualified students are enrolled at the institution. The division of enrollment management usually contains such offices as admissions,

- retention planning, and financial aid. If diversity issues are not formally addressed within the division of student affairs, an office of diversity or multiculturalism may be housed in the division of enrollment management.
4. **Business Affairs** is the division that handles most aspects of the institution's finances. Responsibilities commonly assigned to the division of business affairs include **accounts receivable** (the office where people send payments to the college or university), **accounts payable** (the office that makes payments from the institution to others, such as for utility bills and the purchase of supplies), employee payroll, and contracts. The **comptroller** (correctly pronounced "controller," although now widely mispronounced because of its unusual spelling) oversees the development and implementation of budgets. The **bursar** is the individual or office in charge of funds, essentially acting as the treasurer of the institution. Although this title has fallen into disuse at many institutions, at some schools it is at the bursar's or cashier's office where a student makes payments, cashes checks, purchases parking permits, and makes sure that his or her account is in good order. Increasingly, functions that used to be assigned to a bursar's office are now being handled online.
 5. **Human Resources** is the division responsible for hiring and training employees other than faculty members (for whom the division of academic affairs usually has primary responsibility). The office of human resources handles the hiring of all staff members, overseeing the entire process from the time that a job announcement is placed through the time that candidates are interviewed and a position is filled. While an employee works at an institution, the division of human resources handles day-to-day employment issues and all matters that lead to an employee's separation from the institution (retirement, resignation, dismissal, and so on). This division is in charge of employee benefits, the health of employees and the safety of the workplace, compensation issues, employee relations (i.e., maintaining professionalism, discipline, and appropriate forms of interaction on the job), protection from discrimination or harassment, and equity issues. The office of human resources may be part of the division of business affairs, or it may exist as a separate unit.
 6. **External Relations** deals with fundraising (sometimes called **institutional advancement** or **development**), alumni relations, marketing, communications, public relations, and publicity.
 7. **Research** is the division that supports advanced faculty scholarship (and, at some institutions, student research as well), grants, and sponsored research

(scholarly projects that are funded by external sources such as contracts from foundations and corporations). **Institutional research**, which deals with program assessment, program review, strategic planning, and institutional self-study, may be part of the division of research, or this function may be assigned to another office at the school.

8. **Administration** is the division charged with caring for the institution's physical plant, supervising new construction, parking, and **auxiliary services** (income that the institution receives from enterprises not directly related to its educational mission, such as the dining hall, bookstore, and vending machines).

Keep in mind that this structure will vary considerably from institution to institution. Small schools will collapse these divisions into perhaps three to five major offices; larger schools may elaborate these divisions beyond the eight offices outlined above. Moreover, certain functions may be assigned to different vice presidential areas due to the specific mission or philosophy of the institution. For example, the **registrar**, the individual in charge of maintaining the institution's official set of academic student records, may report to the division of academic affairs, the division of enrollment management, the division of institutional research, or some other area, depending on how the role of that office is viewed at the institution. **Information technology** may be the responsibility of the division of academic affairs, the business office, the division of administration, or it may be decentralized with different types of technology supervised in different areas. **Athletics** may be assigned its own division or it may come under several of the different areas that we've explored.



Looking at the general organizational outline above, see if you can determine how these responsibilities are assigned at the school you attend. Performing this exercise will make you better informed about where to go to get questions answered and problems solved. In addition, it may reveal something interesting about the way your school views different parts of your college experience.

- Is the organizational structure similar to or different from the common structure summarized here?
- Are there clear reasons, such as institutional size or philosophy, that account for these differences?
- For instance, does your college or university seem to regard the function of athletics as primarily educational by assigning it to academic affairs,

extracurricular by assigning it to student affairs, economic by assigning it to business affairs, a matter of student retention by assigning it to the division of enrollment management, marketing by assigning it to the office of public relations, or wholly unique by assigning it to its own unit?

The Dean

Within vice presidential divisions, specific areas of responsibility are assigned to individuals called **deans** or **directors**. At a very small school, there will be relatively few deans, perhaps only an **academic dean** (sometimes also known as the **dean of the college** or **dean of the faculty**) and a **dean of students**. As these titles imply, the academic dean has responsibilities largely in the area of curriculum and supervision of faculty, while the dean of students is focused on the co-curricular and extracurricular activities of students themselves. (On the distinctions among curricular, co-curricular, and extracurricular activities, see Unit Twelve.) At larger institutions (and increasingly also at smaller schools), it is not uncommon to divide the responsibilities of deans even further. For instance, within academic affairs, there might be deans of arts and letters, natural science, business administration, education, nursing, engineering, and a number of other fields. A dean of undergraduate studies might be in charge of the program for first year students, the general education program, and the honors program. The dean of the graduate school may supervise all academic programs beyond the baccalaureate level.

The duties of academic deans regularly involve hiring, evaluating, and developing the faculty, preserving a high level of quality in curricular matters, and securing the resources needed for their assigned academic areas. Academic deans usually have no authority in such areas as financial aid, the bills that students receive for tuition and fees, healthcare, or problems related to residential life. The dean of students may be able to assist you with problems that arise in many areas of your college experience apart from your coursework. Nevertheless, as we've seen, several of these issues are usually addressed by different vice presidential divisions. In any case, the office of the dean of students should be able to provide you with assistance in learning where on campus you may need to go to deal with an issue, making a phone call on your behalf, or providing you with advice on how to handle a specific situation. Some schools also have an official known as an **ombudsman** who serves to direct students to the appropriate offices for various issues and, at times, to act as their advocate.

The Department Chair

Deans of academic areas frequently work closely with the administrators in charge of specific disciplines, known as **department chairs** or **department heads**. The duties of department chairs vary widely from institution to institution. At small schools, the department chair may have few responsibilities beyond scheduling meetings of his or her colleagues in the discipline, collecting and coordinating course schedules, and officially signing various types of documents for that academic area. At other colleges and universities, the department chair may be a full-time administrator who evaluates all the faculty members in his or her area, assigns or adjusts their salaries, and spends relatively little time teaching or doing research. Moreover, there is a wide range of possibilities between those two extremes. No matter what specific responsibilities department chairs have at your school, these administrators can be important contacts when you are declaring a major, having trouble getting into a course, or encountering a problem with a faculty member that you are unable to resolve directly with the professor.

The Faculty

Members of the faculty teach your courses, assign your grades, and certify that you have completed your degree. At most institutions, the ranks of faculty members are as follows.

- **Instructor.** An instructor is usually someone who holds an entry-level position on the college faculty. Many times instructors are people who have not yet earned the highest degree in their disciplines and who are hired primarily for teaching duties, rather than conducting research and academic service. At some institutions, faculty members can remain at the level of instructor only for a fixed period. At others, they can continue as instructors throughout their entire careers. At still other schools, a faculty member is automatically promoted from the level of instructor as soon as he or she completes the **terminal degree** i.e., the highest academic degree in a discipline, usually the **doctorate**).
- **Assistant professor.** An assistant professor is a junior member of the faculty who usually holds the highest degree in his or her discipline. Most faculty members are initially hired as assistant professors, while some are promoted to this rank after having served as an instructor. Assistant professors frequently

hold annual contracts, with their employment subject to evaluation and renewal from year to year.

- **Associate professor.** An associate professor holds a more senior rank than does an assistant professor or instructor. Associate professors may — and at some institutions *must* — possess **tenure**, which may be defined as an expectation that the faculty member’s annual contract will be renewed unless he or she is terminated for good cause.
- **Professor.** Unless an institution creates a higher rank, such as **eminent scholar** or **distinguished professor**, the rank of full **professor** is the highest promotion that a faculty member can receive. In most cases, professors have proven the quality of their teaching, research, and academic service through ten or more years of full-time service. Faculty members who reach the rank of full professor have been evaluated repeatedly by both faculty and administrative committees and have received their strong endorsement.

At times, you may take a course from a faculty member who has the word “visiting” in his or her title, such as **visiting instructor** or **visiting professor**. This term means that the faculty member is a temporary employee, usually with an annual contract.

Colleges and universities often hire visiting faculty members to cover courses for someone who is on leave of absence or to provide additional instruction in an area that has had fluctuations in student demand. The expression **adjunct faculty member** is usually synonymous with **part-time faculty member**, although it may also be applied to a staff member or administrator who teaches one or two courses in addition to his or her regular duties.