August 1999

CLASnotes

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The Dean's Musings

A Matter of Image

UF seems to be very image conscious lately, and it's not such a bad idea. True, some faculty are uneasy about it, and that's also not necessarily a bad idea. The litmus test will be how the image development plays out.

We shouldn't undervalue the attention to image now under way in the upper administration. How we are perceived affects academics in many ways, including the ability to attract the best faculty and the best students. But image also enters into other critical areas such as competition for individual grants, institutional awards, and academic prizes. Anyone who has ever served on national panels knows that there can be a halo-effect associated with certain universities, sometimes making a difference in highly competitive situations. Yes, quality comes first, but name-brand recognition doesn't hurt.

So why should some people be made uncomfortable by image taking on Vice Presidential proportions? It probably sounds too much like Madison Avenue, where often we see corporations attempt to create a virtual image that has minimal coincidence with reality. By contrast, the UF initiative seeks to mold a clear-eyed image of this rapidly changing university, one that reminds people of how far we have come, something even those in the UF family may not all fully appreciate.

The UF of a decade ago was a good place, but a striking contrast to where it has since arrived, probably more so to those outside the university than to those faculty and administrators who worked to make it happen. It is so easy to see the flaws in our own place; we know it so well. And there is the tendency to overrate the imagined perfection we view at a distance. For example, when I arrived at UF, I found some people telling me about programs elsewhere—programs that I knew pretty well—and the message

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Overcoming Reading Disabilities

Linda Lombardino investigates effects of therapy on reading skill and brain function

Imagine staring at a page of text written in plain English and not being able to recognize words that you know you have seen before. The letters make familiar shapes spaced evenly across the page, but you can't recall the sounds associated with them. This sensation—kind of like trying to decode a foreign language—is common for persons who suffer from a learning disability called developmental dyslexia.

More than 30% of school-age children read below grade level (which could be the result of a variety of social and cultural factors), but only a small percentage of these kids have the kind of dyslexia mentioned above, a neurobiological weakness that renders common remediation strategies ineffective. "These are not individuals who have had a lack of exposure to reading, have depressed intelligence, or lack the motivation to read. They have reading and spelling difficulties because they possess a different brain processing capacity for integrating sounds and letters," explains Communication Sciences and Disorders professor Linda Lombardino, who specializes in diagnosing and treating the disorder.

"Developmental dyslexia is a specific learning disability caused by a problem in the brain system which affects phonological processing (processing sounds and mapping them onto corresponding letters)," she says. Although reading can be terribly difficult for children who suffer with the disorder, specialized intervention—part of what Lombardino does in the UF Speech and Language Clinic—can make a big difference.

"Patients come to the clinic to be evaluated, to receive treatment or both," she explains. "Evaluations take four to five hours. We examine all aspects of reading, spelling and writing, and based on the

CSD Professor Linda Lombardino

results, we recommend treatment if appropriate."

Since developmental dyslexia runs in families, when a sibling or parent has similar problems, it helps practitioners identify the disorder. "I can only think of two or three cases I've worked with in the past four years where there wasn't a clear family history," Lombardino recalls.

Once the condition is identified, there are several types of reading programs available to help persons with dyslexia, but the most effective, says Lombardino, are multi-sensory strategies, meaning that children learn sound-letter associations through utilizing every possible modality: listening to sounds, repeating sounds, tracing letters associated with the sounds, reading aloud, and writing and pronouncing words simultaneously. In addition, multi-sensory programs teach patients the specific rules of language that most people are able to pick up implicitly. "For example, there are

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This month's focus: **Communication Sciences and Disorders**

Around the College

DEPARTMENTS

African Studies

Michael Chege delivered a paper entitled "Reform of National Governance Institutions" at the major conference "Can Africa Claim the 21st Century" held in Abidjan, capital of Ivory Coast (West Africa), between July 5-10. The conference was organized by the World Bank (Washington DC), the African Development Bank (Abidjan), and the United Nations Economic Commission for Africa.

Anthropology

Irma McClaurin presented a paper entitled "Changing Patterns in Caribbean Migrations: Some Policy Implications" for a panel on "Human Consequences of Interregional Migration Within the Caribbean" at the XXIV Annual Conference of the Caribbean Studies Association held in Panama City, May 24-29. At the same conference, she was in invited discussant for a panel on "Inter-American Discussions of Rape, Slavery, and Patriarchy."

Astronomy

Bob Wilson is currently spending a sabbatical year working with Cambridge astronomers at the Institute of Astronomy, University of Cambridge, on problems of binary star structure and evolution. He will remain at Cambridge until July 2000.

Geography

Peter Waylen presented a paper entitled "The Effects of Caribbean Hurricanes on Rainfall in Pacific Costa Rica," at a Conference of the International Geographic Union Study Group on Climate Change and Hydrologic Extremes, at the University of Aberystwyth, Wales, in July. Waylen coauthored the paper with Germán Poveda (Universidad Nacional of Colombia).

Statistics

In April **Alan Agresti** presented seminars at Northern Illinois University, Abbott Labs, University of Florence, and the University of Perugia, and he gave an invited talk at a conference in Prague. Agresti was granted an Honorary Doctor of Science, De Montfort University in Leicester, England on July 14. The award marked his "outstanding international contribution to research and scholarship in applied statistics, particularly categorical data analysis."

Sociology

Jaber Gubrium was invited to present the Distinguished Scholar Lecture at the annual meetings of the Society for the Study of Symbolic Interaction on August 8 in Chicago.

Richard Hollinger made an invited presentation on Retail Crime at the University of Sao Paulo, Brazil in April. He also delivered a keynote speech at the National Retail Federation Loss Prevention meetings in Philadelphia.

CLAS Welcomes Two New Associate Deans

Carol Murphy (Romance Languages & Literatures) is the new CLAS Associate Dean for Academic Affairs. She takes over Pat Miller's duties, including curriculum, interdisciplinary studies, the O. Ruth McQuown scholarships and the overseas studies office. The Associate Dean for Academic Affairs is also responsible for Board of Regents reviews and sexual harassment issues.

Neil Sullivan (Physics) succeeds Jim Dufty as CLAS Associate Dean for Research. He will oversee the promotion of new research opportunities and the facilitation and coordination of multidisciplinary research proposals. Sullivan will also act as research liason to RGP (Research and Graduate Programs, previously ORTGE) and other colleges.

Mathematics

James Keesling has been selected as a managing editor of *Topology And Its Applications*, one of the premier journals publishing in topology. Keesling will be giving an invited address at the International Conference On Topology And Its Applications to be held at Kanagawa University, Yokohama, Japan, on August 23-27, 1999.

Zoology

Harvey Lillywhite presented an invited paper at a symposium on the ecophysiology of amphibians at the International Congress of Comparative Physiology and Biochemistry in Calgary, Alberta, Canada, Aug 21-28.

Karen Bjorndal gave one of five invited lectures at a special meeting on the biology of freshwater turtles in Laughlin, Nevada, August 13-16. The meeting focused on evaluating trends and goals for the recovery of freshwater turtle populations.

CLAS Faculty Honored

Buzz Holling (Zoology) will be awarded the Eminent Ecologist Award at the Ecological Society of America meeting August 7-14 in Spokane, Washington. This is the premiere award of the ecological society.

English professor **Jim Haskins**' book *Separate But Not Equal* (Scholastic, 1998) has been named to Voice of Youth Advocates' fourth annual Nonfiction Honor List.

Sociology professor and Center for Criminology and Law Director **Ron Akers**' alma mater, the University of Kentucky, has announced that it has received a gift from one of the CLAS professor's former students, allowing UK (with matching state funds) to establish a permanent endowed professorship in Akers' name. Sociology chair Mike Radelet calls the new endowment "unquestionably one of the very highest honors ever received by any member of this faculty."

CLAS Professors Organize International Conference

English professors **Norman Holland** and **Andrew Gordon** organized the 16th International Conference on Literature and Psychology, held July 8-12 in Urbino, Italy. Sixty-five papers were presented by 105 conferees from Italy, France, Portugal, the Netherlands, Germany, Hungary, Poland, Russia, Sweden, Israel, Cyprus, South Africa, USA, and Canada. Participants from UF were **Holland**, speaking on "My Shakespeare in Love"; **Gordon**, "Racism as a Project: Guess Who's Coming to Dinner" (written with **Hernan Vera** of the Sociology Dept.); **Maureen Turim** (English), "The Fantasy Image: Fixed or Moving?"; **Sylvie Blum** (Romance Languages), "Memento Mori: Boltanski's Monuments to Mourning and Loss"; **Anne Wyatt-Brown** (Linguistics), "The Rise and Fall of Jerzy Kosinski"; and **Bertram Wyatt-Brown** (History), "Poe's Raven: Influence, Alienation, and Art."

Faculty Nominees Sought for Howard Foundation Fellowships

The George A. and Eliza Gardner Howard Foundation seeks to aid the personal development of promising individuals at the crucial middle stages of their careers. Nine fellowships will be offered for 2000-2001 to support persons engaged in independent projects in the fields of **Anthropology**, **Philosophy** and **Sociology**.

Stipends of $20,000 will be given for a period of one year; awards are made for projects requiring full-time work over an extended period of time. Applicants should be in the middle stages of their careers and free of all other professional responsibilities during their fellowship year. Support is intended to augment paid sabbatical leaves, making it financially possible for grantees to have an entire year in which to pursue their projects. Accepted nominees should therefore be eligible for sabbaticals or other leave with guaranteed additional support. Nominees should normally have the rank of assistant or associate professor or their non-academic equivalents.

Applicants associated with an academic institution must be nominated by the president of the institution or a designated representative. Each institution may nominate only three candidates—one in each eligible field. To permit coordination of UF nominations, **projects should be submitted to Ms. Rosie Warner, College of Liberal Arts and Sciences, 2121 Turlington Hall, 2-0783, by SEPTEMBER 24, 1999.** Final nominations are due October 19, 1999.

Anderson Empties in Wave of Departmental Moves

CLAS departments and offices located in Anderson Hall relocated this summer to accommodate extensive renovations of the building. Both historic Anderson Hall and its mate, the long-abandoned Keene-Flint Hall, should be restored and ready for rehabitation late in the year 2000.

Previously in Anderson Hall	New Location	Mailing Address	Phone Number
Academic Spoken English	Yon Hall, 2nd floor	Box 115454	392-3286
English (overflow TAs)	McCarty C, 1st floor	Box 117310	392-0664
Linguistics	Yon Hall, 2nd floor	Box 115454	392-0639
Oral History	Yon Hall, 2nd floor	Box 115215	392-7168, 392-6584
Political Science (overflow TAs and faculty)	Yon Hall, 2nd floor	Box 117325	392-0262
Romance Lang. and Lit. (overflow TAs and faculty)	Yon Hall, 2nd floor	Box 117405	392-2017
Women's Studies	Turlington 3355 & 3357	Box 117352	392-3365

New Chairs

Fitz Brundage, Chair
History Department

The Department of History continues to be engaged in an ongoing process of transformation. During the past decade we have had an infusion of new talent to such an extent that roughly a third of the department of 36 were hired after 1990. Despite this turnover in faculty, the department has maintained its core strengths in American, Latin American, African, and European history. These recent hires partially compensate for the loss of distinguished colleagues and ensure our program's vitality for the foreseeable future.

The department's dedication to undergraduate teaching also endures. We face, along with all departments in the humanities, the challenge of insisting upon the relevance of thinking historically and of promoting the value of the humanities to students who generally are oriented toward non-humanities majors. One reassuring sign that we are succeeding in this mission is the recent increase in the number of majors in history. Despite enrollment pressures, we remain committed to offering rigorous undergraduates courses, as evidenced by our intensive, limited enrollment junior colloquia. The department also has introduced a 3/2 degree program so that some of our best undergraduates can enjoy the challenges and benefits of intensive study in graduate seminars.

A recent and exciting development is the University's expanding resources for graduate education. This year we welcome 25 incoming graduate students, one of our largest classes in years. These students include a sizeable number of 3/2 and MA students, as well as PhD students from across the country. Our graduate program's strengths, which reflect the geographical and methodological diversity of our faculty's interests, attract an equally diverse graduate student population. Our challenge now is to make sure that the graduate students we train are competitive in an unusually complex and cutthroat job market. To date, the department's placement record is impressive, but we fully understand that in an era of adjuncts, part-time appointments, and diminishing post-docs, we cannot be complacent.

A final challenge facing our department is the same one confronting the broader academic community, namely how can a vital and creative community of scholars be sustained at a time when the forces of academic entropy are great? Not only must we merge the talents of established senior faculty with junior faculty, but we must also forge a broader community across disciplinary boundaries. This goal is obviously an ambitious—perhaps even utopian—aspiration, but it nevertheless remains a vital one.

Nigel Smith, Chair
Geography Department

Here in the United States, the discipline of geography suffers from a bit of an image problem. In the public's mind, geography is often confused with geology (no offense intended to distinguished colleagues in the Department of Geology). And for many, geography consists of the rather boring task of locating capitals of the world on a map. In Europe and most developing countries, however, geography is seen as a vital part of the core curriculum beginning in elementary schools. Fortunately, geography in America is undergoing a revival of sorts as our politicians lament a lack of "geographic knowledge" among students and as governments, development agencies, and the business community increasingly appreciate the perspectives and skills offered by geographers.

Although Geography at UF is a relatively small program with 15 faculty, we are well-positioned to take advantage of increased opportunities for geographers both inside and outside of academia. We contribute to the general education of UF undergraduates while also training individuals for employment with bachelors, masters, and doctoral degrees. Our main thematic strengths include natural resource management for sustainable development; climate change, fluvial processes, and impacts of natural hazards; and locational analysis and diffusion of technical innovations. On the regional level, we are one of the top five departments in the nation in Latin American geography, and we also have significant strengths in African geography. Consequently, we have strong ties to two thriving centers on campus: the Center for Latin American Studies and Center for African Studies.

On the "technique" side, we have made a major commitment to strengthen our expertise in GIS (Geographic Information Systems), remote sensing and computer cartography, essential tools that underpin our teaching and research efforts at the thematic and regional levels. Our GIS and remote sensing lab is attracting students from all over campus; GIS serves as a common "language" for so many disciplines and thus reinforces our central position in the academic community, bridging the physical/natural and social sciences.

While geography at UF is relatively high tech (it is near the top of the college, for example, in the use of computers for teaching and research), we value sound scholarship. Several of our faculty are Fulbright, Guggenheim, Linnean Society of London, and Humboldt Fellows, and many of us have recently published books with major scientific publishing houses. We have thus assembled a team that will help society address the many challenges facing humanity in the next century.

Voice Production and Pathology

by Christine Sapienza
Communication Sciences and Disorders

In the Department of Communication Sciences and Disorders' Laryngeal Function Laboratory (located in the lower level of Dauer Hall) we not only study voice production, we help people regain it. In our efforts to combine scientific inquiry with clinical practice, we handle an interesting variety of projects:

Much of our work has focused on the study of Spasmodic Dysphonia, a rare neurological disorder that causes the voice to uncontrollably break. It makes talking effortful, and left untreated, can be very debilitating. In the lab we are examining the characteristics of this disorder, how it changes as a function of treatment and how people learn to compensate for the dysfunction. While the laboratory is dedicated to studying the physiology of this disorder, our long-term goal is to assist in developing a positive treatment outcome for patients.

Jeniffer Dutka, PhD graduate of CSD (now on faculty at UCF), uses a facemask, magnetometer and surface electrode pairs to measure the airflow and muscle movement of a test subject.

One of the other major areas of inquiry in our field is determining the role of the respiratory system in producing voice. Any great singer will tell you that breath support is critical for good voice production. But what is the right amount of breath support for a singer? Does the breathing process for a singer differ from the process for a nonsinger? How do you measure someone's breathing or, for that matter, his or her pattern of breathing? Specialized instrumentation (*see photos above and right*) for quantifying lung volume and for tracking the movement patterns of the rib cage and abdomen during speech and song allow us to gather this kind of data in the Laryngeal Function Lab. Our work indicates that, from a physiological perspective, trained singers operate differently than nonsingers, and that training a singer does indeed influence and enhance his/her pattern of breathing and voice production. Breath alterations (such as changing patterns of lung volume and rib expansion) are most typically learned by the singer in order to help develop the pressure needed to produce an adequate vocal loudness and tone. These alterations are specifically effective in preventing singers from developing larynx and other long-term voice use problems.

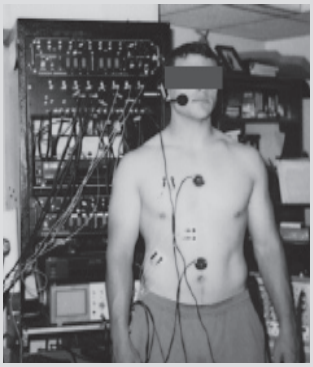
As part of a new Department of Defense-funded project, we are also studying why Navy divers experience a greater sensation of breathlessness when pressed to 1000 feet below sea level. Currently, these divers try to communicate the best they can with helium-altered voices and hand signals at depths that are often greater than 190 feet below sea level. Although there are unscramblers that transmit their voices to the surface, the Navy Experimental Dive Unit (NEDU) in Panama City, FL. still feels the divers are breathing with too much effort and wants our team to improve their breathing mechanics.

With the personnel at NEDU, as well as colleagues from the Department of Physiological Sciences (Paul Davenport) and Physical Therapy (Danny Martin), we are studying the divers' physical adjustments to breathing and speaking in their diving environments. The breathing and voice tests are done in a sophisticated dry chamber in Panama City. The chamber simulates atmospheric conditions of 500 and 1,000 feet below sea level.

Navy divers spend many hours conditioning their legs and arms during their current training program, and our team will enhance this regimen by creating a training component that increases respiratory strength, allowing them to breathe easier, thereby influencing their ability to do physical work and communicate simultaneously while at significant depths. We look forward to the outcome of this study, a truly collaborative effort with potential results that will influence both dive time and safety.

Such high-level scientific inquiry is critical for shaping what we do as rehabilitation specialists, and it also teaches our students that basic science is the cornerstone to clinical practice.✎

Christine Sapienza in the Dauer Hall Laryngeal Function Laboratory



Ana Mendes-Schwartz *(above)*, a PhD student in Chris Sapienza's Laryngeal Function Lab, uses specialized recording instrumentation to document and evaluate the breathing patterns of test subjects. A student subject is shown *(right)* hooked up to a magnetometer on his ribcage and abdomen, and wearing three surface EMG electrode pairs (one for sensing ribcage muscle movement, and two for abdominal movement). The subject talks and sings into a microphone, and voice is recorded along with corresponding physiological function.

four basic syllable types, and once you know them you can sound out and spell words much better," says Lombardino. Most of us understand these rules intuitively, without consciously committing them to memory; in fact, we don't even necessarily know the rules exist. Teaching these kinds of rules to people with developmental dyslexia helps them break down language into its essential parts, bridging a neurological gap and allowing them to grasp explicitly what the rest of us take for granted. "While phonological processing problems make this type of learning and remembering slow and difficult, persons with developmental dyslexia *can* be helped to read, spell, and write more effectively," Lombardino stresses. In fact, many of the patients she treats are gifted students, who thrive when taught through the multi-sensory approach.

This type of research may also eventually lead to the development of imaging procedures that can help identify children who are at risk for reading disorders as early as three or four years old.

Developmental dyslexia, like all learning disabilities, is brain-based and can't be "cured," but Lombardino points out that scientists and health practitioners are beginning to realize that the brain is far more adaptable than was once thought. Lombardino and fellow researcher Christiana Leonard, Department of Neuroscience, hope to prove that certain kinds of intervention may help the dyslexic brain forge new connections, diminishing language problems (not just compensating for them) in the long run. "While I doubt that we can alter biology to the extent that the reading disability can be completely reversed, we are hoping that we can increase the efficiency of the neural processing of print in persons with dyslexia by stimulating areas of the brain that are typically most active during reading." And if multi-sensory intervention *can* enhance the brain's ability to make stronger memories for sound-letter associations and letter sequences (to increase the rate and accuracy of word recognition), then persons with dyslexia should be able to enjoy the permanent ability to read more efficiently and with greater speed.

With Leonard, Lombardino received NIH funding five years ago to study brain-behavior patterns in children as they acquire language. They used MRI technology to compare the size and shape of brain structures associated with language processing in children with normal language and compared them to MRIs from children with specific language impairments but no other learning difficulties. They found definite differences between the two groups, supporting their hypothesis that language impairment is a consequence of an underlying neurobiological defect.

They now plan to extend their research to use functional magnetic imagining (fMRI) to examine the effects of reading intervention on the brain activity of children who have developmental dyslexia. This interest was spawned by a recent Yale study that used fMRI to record images of the brains of adults with dyslexia and controls without dyslexia, taken while these subjects were performing certain reading tasks. They found that adults with dyslexia had less brain activation, due to decreased cerebral blood flow in the posterior areas of the brain, where reading is understood to be primarily processed. "That was the first real evidence that there are truly functional brain differences with dyslexics," she explains. "We're hoping to use the same type of scanning protocols on children with dyslexia. We'll do a fMRI of their brains while they're doing a reading task before we treat them, we'll treat them intensively with multi-sensory program and then do a follow up fMRI to see if we've increased brain activity in posterior brain areas. They are hoping that continued research in this area will help them to document the efficacy of their intervention treatments—such as the aforementioned multisensory approach—and to record associated neurobiological changes. This type of research may also eventually lead to the development of imaging procedures that can help identify children who are at risk for reading disorders as early as three or four years old.

Though a great deal of their time is spent working with children, Lombardino and her CSD colleague Henriette Le Grand also treat adults in the UF Speech and Hearing Clinic. These adults are often college students who, "bright and in spite of their problems, made it here and hit brick wall when they had to take a foreign language or fast paced course–both exceedingly difficult for dyslexics," she notes. "At the adult level we often recommend accommodations rather than treatment, since the person has often developed sophisticated coping strategies." For example, instructors are asked to assist dyslexic students by providing extra time for exams (or giving untimed exams), substituting oral tests for written ones, overlooking spelling problems, and/or waiving language requirements. "We try to give the University the information it needs to best serve each student, but we've found that certain fields, such as journalism, are not wise for these students to go into," she adds, "so sometimes we advise students to redirect their talents."

While I doubt that we can alter biology to the extent that the reading disability can be completely reversed, we are hoping that we can increase the efficiency of the neural processing of print in persons with dyslexia by stimulating areas of the brain that are typically most active during reading.

Lombardino's teaching reflects her research and clinical work. She offers mainly graduate courses focused on preparing students to become speech language pathologists, concentrating on language learning disabilities, both oral and written. Through all aspects of her work, Lombardino's goal remains the same: "to help persons with developmental dyslexia finds ways to conquer roadblocks that stand in the way of achieving their life goals."✎

Improving Patients' Quality of Life

An interview with Carl Crandell

It's been a busy year for professors in the Department of Communication Sciences and Disorders. As part of their new doctoral degree in audiology, the Department teaches on-campus candidates, as well as over 235 students and audiologists from all over the country via distance learning, cementing the program's reputation as a national trend-setter. In addition, CSD faculty are unique in CLAS, as they not only teach, conduct research and publish, but also treat patients in the UF Speech and Hearing Clinic (fourth floor Dauer Hall).

Carl Crandell, Communication Sciences and Disorders, in a UF Center for Speech and Language lab. *Below, left,* Crandell holds two types of hearing aids which can improve patients' quality of life.

Cn: How do you and other CSC professors manage combining so many elements?

CC: I think to some extent we have gotten ourselves in the not so unusual position of being overworked (laughs). Actually, in many ways combining all these elements has practical advantages. For example, cases I treat in the clinic give me ideas for new research projects, teaching ideas come from the lab and the clinic, while my research results often change my approach in the clinic.

Cn: Tell us about your current research.

CC: The most exciting thing I'm doing right now is conducting studies that look at the relationship between hearing loss and overall quality of life. We are finding a very strong relationship between one's degree of hearing loss and his/her quality of life and physical health. This makes sense because hearing loss reduces communication which can increase isolation, eventually leading to withdrawal from society, aggravation, frustration and even depression. Psychosocial problems like these can, in turn, contribute to serious functional/physical health problems.

Our work shows that improving communication via hearing aids positively impacts these problems. Within only three months of wearing a hearing aid, an individual's psychosocial status (and therefore quality of life) improves drastically.

I'm not saying that by improving communication we're *directly* improving physical problems, but improving communication certainly seems to decrease the impact of those physical problems on an individual. If hearing loss has diminished your contact with people and you're sitting at home isolated, not doing the things you like to do, suffering from arthritis, heart problems or other illnesses, you'd probably tune into those problems more than you would if you were out actively enjoying the world.

No one has studied hearing aids and health explicitly, but the literature shows that active, upbeat people are healthier—they beat cancers more easily, for example, than those with psychosocial problems. Hearing aids can help overcome the psychosocial problems which can minimize the quality of life concerns, which in turn overcome a lot of the functional health problems. We're hoping to take these findings into the health care field to show that insurance companies should be purchasing high technology hearing aids for appropriate patients—if for no other reason than because it could be an effective tool in reducing patient visits for other complaints.

Twenty-nine million people in this country suffer from hearing loss, and only around 20 percent are currently using hearing aids. So there are a lot of people out there that could stand to benefit.

Cn: You're currently working on a book with UF architecture professor Gary Seabine which examines how classroom acoustics affect school children.

CC: Yes, we've just started on that. I've been working in this area for about a decade now.

We've done numerous studies that show that noise and reverberations in normal classroom environments can very significantly influence the academic performance of many populations of children, including children with even mild degrees of hearing loss, those under 15 years old (because their auditory abilities haven't fully developed yet), and those with attention deficit, ESL, language, reading or speech problems. In a typical classroom, the noise and reverberation will not allow these children to understand the teacher and learn the way they should.

Cn: Can this be addressed?

CC: Definitely. By improving the environment through technology, we find, for example, that many ADD kids no longer need Ritalin. If you're sitting in a room and can only hear 50% of what is being said, how long is your attention going to be there? It's hard enough for school kids to pay attention as it is.

We've been looking at one technology in particular, called Sound Field FM Amplification [Crandell has a book out on the subject], where the teacher wears a microphone and his/her voice is transmitted through the room on loud speakers. There have been over 40 studies done that have shown very positive effects using this technology in classrooms. Not only can it improve the acoustical environment and

*See **Crandell,** page 10*

Grants (through the Division of Sponsored Research)

May 1999 Total: $3,397,155

Investigator	Dept.	Agency	Award	Title
Corporate $242,215				
Hudlicky, T.	CHEM	Procter and Gamble Company	80,000	Organic synthetic methods and services in matrix-metalloproteases inhibitors and prostaglandin anabolic.
Katritzky, A.	CHEM	Multiple Companies	2,000	Miles compound contract.
Katritzky, A.	CHEM	Upjohn Company	25,335	Upjohn service contract.
Katritzky, A.	CHEM	Multiple Companies	3,880	Miles compound contract.
Katritzky, A.	CHEM	Lancaster Synthesis Inc.	70,000	Chemical reagent development.
Tan, W.	CHEM	Research Corp	50,000	Probing single molecules.
Emmel, T.	ZOO	Expedition Travel Inc	11,000	Miscellaneous donors.
Federal..... $3,051,186				
Bernard, H.	ANTH	NSF	5,000	REU for John Dominy counting the uncountable: investigations into social networks.
Chen, K.	AST	NASA	4,000	USRP: archiving UF observations of photometric binaries.
Elston, R.	AST	NSF	166,256	Exploring the evolution of galaxies and large scale structure at Z>1.
Hamann, F.	AST	NASA	100,000	Chemical abundances and evolution in quasars and active galactic nuclei.
Chege, M.	CAS	DOE	82,000	Administrative: national resource center, foreign language and area studies fellowships.
Chege, M.	CAS	DOE	82,000	Training: national resource center, foreign language and area studies fellowships.
Bartlett, R.	CHEM	US Air Force	49,472	Identification and synthesis of high nitrogen propellants.
Benner, S.	CHEM	NIH	43,500	Expert system for predicting protein secondary structure.
Bowers, C.	CHEM	NSF	75,000	Enhanced sensitivity NMR studies of nanostructured electronic materials.
Butler, G.	CHEM	NSF	12,334	Dispersion, agglomeration and consolidation.
Horenstein, B.	CHEM	NSF	90,000	Mechanism and inhibitor design for sialyltransferase and education in biochemistry.
Kennedy, R. Vickroy, T.	CHEM	NIH	260,987	In vivo chemical monitoring using capillary separations.
Reynolds, J.	CHEM	US Air Force	39,116	Reactive conjugated oligomers for conducting elastomers and star polymers.
Richards, N.	CHEM	NIH	8,700	Arparagine biosynthesis in normal and tumor cells.
Talham, D.	CHEM	NSF	151,009	Supramolecular assembly at interfaces: coordinate covalent networks and polygons at the air/water interface.
McElwee-White, L. Anderson, T.	CHEM	US Navy	46,649	Tungsten complexes as MOCVD precursors to tungsten nitride.
Winefordner, J.	CHEM	NSF	8,871	Advanced measurements and characterization.
Yost, R.	CHEM	US DOA	30,000	Analysis of human and host animal emanations for the presence of attractions to hematophagous diptera.
Mingo, G.	DSSP	DOE	297,760	Upward Bound–University of Florida.
Henretta, J.	GERON	NIH	21,734	Asset and health dynamics among the oldest old.
Hager, W. Davis, T.	MATH	NSF	17,340	Innovative sparse matrix algorithms.
McCullough, S.	MATH	NSF	56,439	Topics in dilation theory.
Chen, Y. Glover, J.	MATH	NSF	93,082	Interdisciplinary study in image and signal processing.
Mair, B. Glover, J	MATH	NSF	97,260	Practical training in emission tomography.
Branch, M.	PSYCH	NIH	133,763	Behavioral determinants of cocaine tolerance.
Rinzler, A.	PHY	US Navy	77,530	Artificial muscle arrays.
Ingersent, J. Dorsey, A.	PHY	NSF	22,000	REU site in physics at the University of Florida.
Sullivan, N. Blackband ,S.	PHY	NSF	227,302	Magnetic resonance imaging user facility.
Dufty, J.	PHY	NSF	64,335	Charged particle dynamics in nonequilibrium states.
Sullivan, N.	PHY	NSF	82,661	Ultra high B/T user facility (NHMFL).
Adams, E.	PHY	NSF	80,000	Magnetic ordering in solid 3He.
Tanner, D.	PHY	NSF	41,664	Thermo-optical response of high-temperature superconducting films.
Ipser, J. Whiting, B.	PHY	NSF	35,149	Theoretical astrophysics and gravitational physics.
Ingersent, J. Dorsey, A.	PHY	NSF	69,000	REU site in physics at the University of Florida.
Carter, R.	STAT	DOH	41,915	RPICC data systems.
Shuster, J. Kepner, J.	STAT	NIH	1,724,178	Pediatric oncology group statistical office.
Garvan, C.	STAT	NIH	8,416	Project CARE (Cocaine Abuse in the Rural Environment).
Agresti, A.	STAT	NIH	83,471	Statistical inference for sparse categorical data.
Evans, D.	ZOO	NSF	77,000	Is nitric oxide or a prostaglandin the endothelium-derived relaxing factor in fishes.
Guillette, L. Denslow, N.	ZOO	EPA	62,184	Endocrine disrupting contaminants in Southern Florida wetlands: effects in non-mammalian vertebrates.
Levey, D. Sargent, S.	ZOO	NSF	220,618	Collaborative research: patches, corridors and dispersal of insects and plants: scaling up from local experiments.

*See **Grants,** page 10*

June 1999 Total: $733,403

Investigator	Dept.	Agency	Award	Title
Corporate $275,012				
Dolbier, W.	CHEM	Specialty Coating Systems Inc	128,950	New methods for the synthesis and production of fluorinated paracyclophones.
Harrison, W.	CHEM	LECO Corporation	41,562	Pulsed glow discharge studies by atomic emission and time of flight mass spectrometry.
Katritzky, A.	CHEM	Coelacanth Corporation	67,500	Coelacanth.
Katritzky, A.	CHEM	Monsanto Company	35,000	Sweetener calculations.
Pleasants, J.	HIST	Gainesville Sun	2,000	Multiple sponsors.
Federal..... $181,220				
Moseley, M. Nash, D.	ANTH	NSF	11,974	WARI administration and residential space in the Osmore Drainage.
Schmink M. Reyes-Garcia, V.	ANTH	NSF	11,960	Effects of market economies on ethnobotanical knowledge among Tsimane communities in the Bolivian Amazon.
Dermott, S.	AST	NASA	22,000	Detecting planets in circumstellar disk.
Lada, E.	AST	NASA	22,000	Looking for variations in the initial mass function: first comprehensive near-infrared spectroscopic survey of young clusters.
Mukherjee, J. Lada, E.	AST	NASA	22,000	The characterization of the chemical and physical properties of the comae of comet Hale-Bopp (1955 01) and comet Hyakutak.
Shyy, W. Mukherjee, J.	AST	NASA	2,600	Florida space grant consortium.
Shyy, W. Mukherjee, J.	AST	NASA	32,400	Florida space grant consortium.
Colgate, S.	CHEM	US DOE	25,000	Acoustic resonance spectrometer.
Duran, R.	CHEM	NSF	19,922	Research experiences for undergraduates in CHEMU at the University of Florida.
Reynolds, J.	CHEM	US Army	39,808	Active camouflage polymer coatings.
Schanze, K.	CHEM	NSF	125,000	Photophysics of mono-disperse metal-organic oligomers.
Hodell, D. Brenner, M.	GEOL	NSF	38,366	Climate variability and ecologic change in Mesoamerica during the late Holocene: implications for Maya culture.
Martin, E.	GEOL	NSF	24,194	ND isotope investigation of North Atlantic deep water population over the past 25,000 years and education in GEO.
Dranishnikov, A.		MATH	NSF	23,843 Asymptotic topology of metric spaces.
Buchler, J.	PHY	NSF	80,000	Nonlinear stellar pulsations.
Hirschfeld, P.	PHY	NSF	156,000	Transport in unconventional superconductors.
Korytov, A.	PHY	US DOE	135,720	Endcap MUON system development for the CMS project in FY 99.
Mitselmakher, G. Tanner, D.	PHY	NSF	110,000	Advanced research at the LIGO Livingston Observatory.
Mitselmakher, G. Tanner, D.	PHY	NSF	325,000	Gravitational waves and their detection: research in LIGO.
Takano, Y.	PHY	NSF	80,000	Quantum nuclear magnets and superfluid 4He innanopores.
Tanner, D.	PHY	US Army	15,192	Active camouflage polymer coatings.
Stewart, G.	PHY	US DOE	5,000	Cooperative phenomena (superconductivity/magnetism/ground state formation) in heavy fermion materials.
Ohrn, Y.	QTP	US DOD	20,000	Instrumentation for dynamics.
Carter, R.	STAT	DOH	2,257	Informatics-database management for Florida Birth Defects Registry.
Bjorndal, K. Bolten, A.	ZOO	US DOI	33,971	Sea turtle monitoring at Dry Tortugas National Park.
Bolten, A. Bjorndal, K.	ZOO	US Dept. of Commerce	24,800	Use of satellite telemetry to estimate post-hooking mortality of loggerhead sea turtles in pelagic longline fisheries.
Foundation..... $117,360				
Burns, A.	ANTH	UF Foundation	12,360	Dissertation fellowships.
Ardelt, M.	SOC	Brookdale Foundation	105,000	Aging and dying well—similarities and differences.
State..... $119,000				
Mossa, J	GEOG	Water Management Districts	24,000	Interagency agreement for review and verification of water-use data.
Colburn, D.	HIST	FL Institute of Government	95,000	The Reubin D. Askew Institute on Politics and Society.
Miscellaneous..... $40,811				
Telesco, C. Kisko, T.	AST	Assn of Univ For Res In Astron	25,616	Design, fabrication and commissioning of the mid-infrared imager for the Gemini 8-M telescopes.
Baum, R.	PHIL	Multiple Sources	10,000	Business and professional ethics journal.
Hollinger, R.	SOC	Multiple Sources	5,195	Security research project.

Office Staff: CSD

Virginia Dawson (left), Senior Secretary for the UF Speech and Hearing Clinic since 1992, collects fees and handles clients and patient scheduling. **Idella King** (center), Communication Sciences and Disorders Senior Secretary for the past seven years, handles departmental and graduate affairs. **Brenda Wise** (right) is the Office Manager for CSD and IASCP (Institute for the Advanced Study of the Communication Processes [the research arm of the Department]); she handles grants, payroll, personnel and appointments, and has been with the department for six years.

Crandell, *continued from page 7*

help academic performance, but it's also extremely cost-effective. Over a ten-year period it costs just a few dollars per child. Reading scores go up, academic scores go up, and failure rates go way down.

It's an area that until now, educators haven't really considered. We're working right now on the Federal level to establish appropriate acoustics standards for classrooms (there are currently no standards). My mentor Fred Bess at Vanderbilt just did a study that shows that children with very slight hearing loss have a 37% failure rate—as compared to a 3% failure rate in the general population. One of the major differences he found between kids with hearing loss and those with normal hearing was self esteem, which was much poorer in kids with even very slight hearing loss. So this work has great implications. We hope to have the federal standards in place in next couple of years. All new classrooms will have to meet these standards, and the Sound Field technology can help with older classrooms. In some cases, just fixing the AC or the lighting system in an older classroom can effectively reduce noise.

Cn: It must be rewarding to see your work improve people's lives.
CC: I really enjoy what I do because it has immediate applications. I like to see kids passing who were once failing. I like to work with patients here in the clinic and see them reentering the world and enjoying life because now they can hear. That's what makes this field so exciting.✎

Grants, *continued from page 8*

Foundation.....$17,851

D'Amico, R.	PHIL	U F Foundation	3,151	Dissertation fellowships.
Emmel, T.	ZOO	Miscellaneous Donors	8,500	Miscellaneous donors.
Emmel, T.	ZOO	Miscellaneous Donors	6,200	Miscellaneous donors.

State.....$84,497

Martin, J.	GEOL	Water Management Districts	72,997	Quantification of ground water discharge and resulting chemical loading to the Indian River Lagoon, Florida.
Scicchitano, M.	POLISCI	University of Florida	8,000	A survey of Florida residents about UF agriculture and natural resource research.
Chapman, L. Chapman, C.	ZOO	Beinecke Memorial Scholarship	3,500	Ugandan student support.

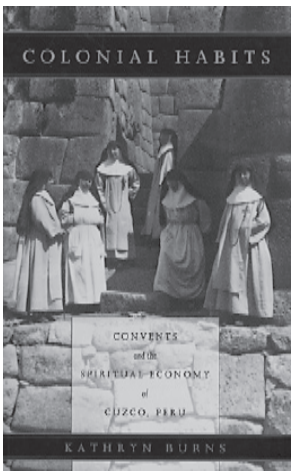
Miscellaneous.....$1,406

Tanner, D.	PHY	Miscellaneous Donors	1,406	Miscellaneous donors.

Colonial Habits: Convents and the Spiritual Economy of Cuzco, Peru
Katherine Burns (History)
Duke University Press

(from book jacket)
In *Colonial Habits* Kathryn Burns transforms our view of nuns as marginal recluses, making them central actors on the colonial stage. Beginning with the 1558 founding of South America's first convent, Burns shows that nuns in Cuzco played a vital part in subjugating Incas, creating a creole elite, and reproducing an Andean colonial order in which economic and spiritual interests were inextricably fused.

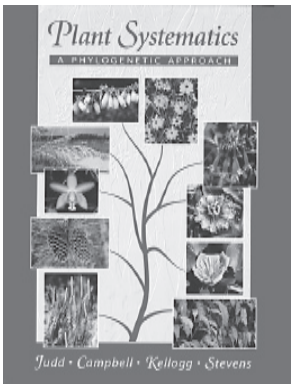
Based on unprecedented archival research, *Colonial Habits* demonstrates how nuns became leading guarantors of their city's social order by making loans, managing property, containing "unruly" women, and raising girls. …By the nineteenth century, the nuns had retreated from their previous roles, marginalized in the construction of a new republican order.



(excerpt)
...Santa Clara [Cuzco, Peru's first nunnery] and its earliest entrants were vital to the production and reproduction of Spanish hegemony in Cuzco, helping remake the former capital of the Incas into a center of Spanish colonialism. For it was not enough for Spanish men to seize the Inca heartland. To gain firm control over the Andes, these would-be lords had to find the means to reproduce themselves—their lineages, authority, culture. Cloistering their mestiza daughters at a particularly sensitive moment in the consolidation of Spanish rule gave the leading Spaniards of Cuzco the means to do this, and thus stake a permanent claim to power in the Andes.

Plant Systematics: A Phylogenetic Approach
Walter S. Judd (Botany), Christopher S. Campbell, Elizabeth A. Kellogg, Peter F. Stevens
Sinauer Associates, Inc., Publishers

(from publisher's summary)
Plant Systematics: A Phylogenetic Approach is an introductory text that incorporates phylogenetic principles and methods throughout—from the careful explanation of phylogenetic methods and principles in the initial two chapters to the taxonomic survey of vascular plant families in the last two chapters.



…A chapter on the history of plant classification puts current systematic methods in a historical context. Issues relating to variation in plant populations and species, including discussion of speciation, species concepts, polyploidy, hybridization, breeding systems, and introgression are carefully considered. Finally, botanical nomenclature and field and herbarium methods are discussed in two appendices.

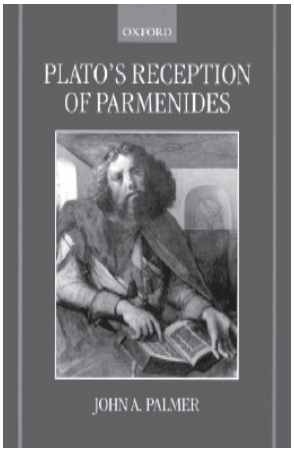
The text is copiously illustrated, using in large part the informative analytical drawings developed as part of the Generic Flora of the Southeastern United States project. The text is accompanied by a CD-ROM, containing over 600 color photos illustrating the variability of the vascular plant families covered in the text.

Plant Systematics: A Phylogenetic Approach is appropriate for any course devoted to the systematics of angiosperms or vascular plants and, secondarily, for local flora courses. The text assumes no prerequisites other than introductory botany or biology.

Plato's Reception of Parmenides
John A. Palmer (Philosophy)
Oxford University Press

(from book jacket)
John Palmer presents a new and original account of Plato's uses and understanding of his most important Presocratic predecessor, Parmenides. Adopting an innovative approach to the appraisal of intellectual influence, Palmer first explores the Eleatic underpinnings of central elements in Plato's middle-period epistemology and metaphysics. He then shows how in the later dialogues Plato confronts various sophistic appropriations of Parmenides while simultaneously developing his own deepened understanding….By tracing connections among the uses of Parmenides over the course of several dialogues, Palmer both demonstrates his fundamental importance to the development of Plato's thought and furthers understanding of central problems in Plato's own philosophy.

(excerpt from introduction)
...we must try to understand Parmenides as Plato did if we are to be in any position to speak meaningfully about Parmenides' influence on Plato. This rather basic principle leads to quite complex results in application. For it involves us in the often difficult process of inferring Plato's understanding of Parmenides from his actual use of him. Plato nowhere simply sets out his view of Parmenides. We are therefore always forced to piece together his interpretation from his integrated use of Parmenides at various periods, with all the difficulties this involves. These difficulties are multiplied by the fact that Plato is, as we shall see, also concerned with contemporary or near-contemporary uses of Parmenides that are in conflict with his own.



Musings, *continued from page 1*

was how much better they were than UF. Often, it just wasn't so. Some of it may be an undercurrent of Groucho Marx: *I don't care to belong to any club that will have me as a member.* Most of it is simply a lack of appreciation for how good the UF programs have become.

Our true image has to be based on the quality of the faculty, students, and programs that comprise this institution. The quality of UF is in constant flux because we are changing rapidly. The most important element in any quality assessment is the faculty. Consider this: approximately half of the current CLAS faculty here were not here in 1988. Yes, many of the good faculty from that time are still here, but normal turnover and new hires have also injected new ideas, new programs, and new instruction areas into CLAS. And the rebuilding continues—about 35 new faculty will join us this fall, and we anticipate another 40-45 next year. The stimulating effect of these welcome additions is incalculable. It also means that our image needs regular updating to reflect the associated invigoration.

We are not yet Michigan or Illinois, but we are gaining on them. And they are looking over their shoulders at this brash upstart coming up on the rail. I have the opportunity annually to meet in a very informal setting with my fellow Arts & Sciences deans from the AAU public universities. There we candidly discuss common problems and opportunities. It is an interesting calibration point for all of us to share data, complaints, and ideas. Sure, I envy some of their programs, but they also are openly envious of UF's advances and, more to the point, the outstanding prospects that we have for the next decade. Florida represents the future. We are a work in progress that much of the country will be watching with great interest.

Image building is a fragile undertaking. If that image reflects faithfully what is taking place at UF—and that is the stated intention—we will do nothing but gain from the process. Our job in the colleges is to see that image has a hard time keeping up with reality.

Will Harrison,
Dean
[harrison@chem.ufl.edu]

A Note From the Chair

Sam Brown, Chair
Communication Sciences and Disorders

Over the past decade or so, the Department of Communication Sciences and Disorders (CSD) has undergone several name changes. The present name is consistent with a majority of other similar departments around the nation and more adequately reflects the true nature of the department—the study of the science of human communication and the communicatively disordered population.

Like many programs in the college and throughout the university, CSD, which is housed in Dauer Hall, has experienced considerable growth in the past decade at both the undergraduate and graduate levels. Speech-language pathology and audiology practitioners are in great demand in our public schools, hospitals, private practices and industry throughout the state and the nation. UF students find this open job market appealing and the speech-language-hearing profession to be an exciting and challenging one. Presently, the on-campus program in CSD has over 420 undergraduate students enrolled in the major, and approaching 100 graduate majors seeking their master's and doctoral degrees.

Presently, the on-campus program in CSD has over 420 undergraduate students enrolled in the major, and approaching 100 graduate majors seeking their master's and doctoral degrees.

Along with the PhD, one of the more exciting degree programs instituted this past academic year is the Doctor of Audiology degree (AuD), which is a shared clinical degree by both CLAS and the College of Health Professions. The on-campus AuD program presently enrolls 15 new students each Fall, in a four-year program, and has well over 200 students enrolled in the distance learning program throughout the USA. The distance learning program is tailored to MA audiology practitioners who wish to upgrade their professional skills and to obtain the AuD, which will serve as the entry level degree into the audiology profession by the year 2007.

The 20 faculty members in the department conduct research in nearly all aspects of normal and disordered communication, including voice, phonetics, phonology, language, neurogenics, disfluency, hearing, and augmentative and alternative communication. The Institute for Advanced Study of the Communication Processes (IASCP), also housed in Dauer Hall, serves as the research arm of the department where various grants and contracts from NIH, NSF, DOE, the military and private agencies help support faculty/student research.

Finally, the department administers the UF Speech and Hearing Clinic, offering outpatient services to speech-language-hearing impaired individuals in the university and the greater Gainesville community. The clinic services more than 350 patients per year and provides one of several primary practicum sites for graduate students in both speech language pathology and audiology.✎

UNIVERSITY OF FLORIDA

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Dean: Will Harrison
Editor: Jane Gibson
Graphics: Jane Dominguez

<editor@clas.ufl.edu>
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