

EATING DISORDERS AND PERSONAL CONSTRUCTS:
THE EFFECTS OF ANTICIPATED WEIGHT GAIN ON WOMEN'S
PERSONAL, INTERPERSONAL, AND VOCATIONAL CONSTRUCT DOMAINS

By

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This dissertation is dedicated to my parents,
John and Karen,
whose lives are devoted to inspiring and supporting others,
especially my brother and me;
and to my husband, Stephan,
for providing his endless strength, humor, and encouragement
throughout our years together.

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Abstract of Dissertation Presented to the Graduate School
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This study sought to explore the relationship between disordered-eating and structural aspects of personal construct systems. The study was designed to test whether persons exhibiting disordered-eating would exhibit greater levels of construct integration but lower levels of differentiation, compared to persons not exhibiting disordered-eating. Additionally, it was hypothesized that the former group (High Eating-Disordered) would anticipate significantly greater degrees of change in relation to their personal, interpersonal, and vocational functioning should they suddenly gain 20% of their current weight compared to the latter group (Low Eating-Disordered). Participants (n=40) were selected from Introductory psychology classes and were assigned to either the High Eating-Disordered group (n=20) or Low Eating-Disordered group (n=20) depending on their prescreening scores on selected subscales of the Eating Disorders Inventory (i.e., *Drive for Thinness* subscale, *Bulimia* subscale, and *Body Dissatisfaction* subscale).

Participants completed a series of six pen and paper measures that included three repertory grids that varied the content of the constructs (i.e., a personal grid form, an interpersonal grid form, and a vocational grid form), a modified implications grid, and two forms that assessed the construct importance that the participants used in their evaluations of other persons (i.e., one form assessed women, another form assessed men) across personal, interpersonal, and vocational domains. Results failed to replicate past research findings that demonstrated disordered-eating persons as having more integrated yet less differentiated construct systems. However, as predicted, the High Eating-Disordered group anticipated greater degrees of change to occur across personal, interpersonal, and vocational domains of experience should they suddenly gain weight compared to the Low Eating-Disordered group. There was no main effect between the two groups in relation to construct importance when evaluating other persons across personal, interpersonal, and vocational domains. However, there was a main effect for construct domain with the interpersonal domain being the most important in the participants' evaluations of others (both men and women). These results were discussed in relation to previous literature findings and in a sociocultural context. Limitations to the study as well as recommendations for future research directions are also provided.

CHAPTER 1 INTRODUCTION

The term "Eating-Disordered" is no longer unfamiliar. Eating disorders are currently recognized by several fields of study, including psychology and psychiatry, as potentially life threatening sets of behavior patterns. They are believed to affect over 8 million women in the United States (Wolf, 1991). More specifically, it is estimated that approximately 2% of adult females in our country are suffering from either anorexia nervosa or bulimia nervosa (Fairburn & Beglin, 1990), while adolescents are reporting even greater prevalence rates for these two eating disorders (Lucas, Beard, O'Fallon, & Kurland, 1991; Powers, 1996)¹. Perhaps even more alarming is that disordered-eating exists on a continuum (Drewnowski, Yee, Kurth, & Krahn, 1994; Neimeyer & Khouzam, 1985; and for a review of related literature, see Levine, Smolak, & Striegel-Moore, 1996), suggesting a much higher prevalence rate still when "subclinical" versions of eating disorders are taken into consideration. In fact, there is a developing opinion that all women are susceptible to restrained eating (Orbach, 1986). Consequently, there are significant numbers of individuals, including clinicians, researchers, affected families, and victims, who are invested in identifying the factors involved in the etiology as well as the maintenance of eating disorders.

¹ Fombonne (1996) reviews the epidemiological data that suggest changes in diagnostic and referral practices account for much of the increase in the number of bulimia nervosa diagnoses; and see Heatherton, Nichols, Mahamedi, Faru, & Keel (1995) for additional explanations of varying prevalence rates.

The current project was designed to address these factors and to identify the generalizability of distinctive cognitive features associated with disordered eating. Specifically, the study tests the extent to which women are "implicatively bound" by the restricted nature of their food-related constructions, and the extent to which these constructions are reflected across a wide variety of personal, interpersonal, and vocational domains of experience.

Understanding Eating Disorders

Eating Disorders Defined

The fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994), defines disordered-eating as abnormal behaviors such as restricting one's food intake, engaging in purging behaviors (e.g., self-induced vomiting, or misuse of laxatives or diuretics), as well as binge-eating ("eating within a discrete period of time an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances"; also, sensing a "lack of control over eating during the episode," p. 549). More specifically, the current DSM classifies these eating disorders into three distinct categories: Anorexia Nervosa, Bulimia Nervosa, and Eating Disorder Not Otherwise Specified. Since the 1970s, researchers, clinicians, the media, and society have increased their attention to all eating disorders, yet have particularly focused on the former two, anorexia nervosa and bulimia nervosa.

Anorexia nervosa and bulimia nervosa share some defining criteria as described by the DSM but are clearly two distinct eating disorders. Specifically, both disorders involve the undue influence of "body weight or shape on self-evaluation" (APA, 1994, p. 545) as

well as a desire to prevent weight gain. However, while persons diagnosed with anorexia nervosa have a body weight that is 15% less than that expected for age and height, persons diagnosed with bulimia nervosa typically appear "normal" (i.e., not emaciated) in weight for their age and height. Individuals with the latter diagnosis also engage in out-of-control binge-eating behaviors. While these are not the only distinguishing features of these two disorders, they serve to illustrate the broadest differences between their defining criteria.

Societal Causes of Eating Disorders

Researchers and clinicians alike are sensitive to the role that Western society's ideals have in the development and maintenance of eating disorders. They view harsh, gender-rigid messages and proscriptives that define the ideal woman as thin as important contributing factors to the prevalence of eating disorders. They also observe that some women "hear and accept" these restrictive sociocultural messages more so than other women, but, argue that all women are susceptible to the dangers of the message (Anderson & DiDomenico, 1992; Brumberg, 1988; Bushnell, 1995; Solomon, 1996; Garner, Garfinkel, Schwartz, & Thompson, 1980; Keas & Beer, 1992; Orbach, 1978, 1982; Raphael & Lacey, 1992; Sanford & Donovan, 1984; Spillman & Everington, 1989; Stice, Schüpak-Neüberg, Shaw, & Stein, 1994; Waller et al., 1994; White, 1992; Wolf, 1991; Worrell & Remer, 1992).

Biological, Familial, and Cognitive Causes of Eating Disorders

Much progress has been made in regards to clarifying the defining criteria of anorexia nervosa and bulimia nervosa. As a result, one might conclude that the origins of these criteria are also known and strongly validated. Unfortunately, this is not true

(Brumberg, 1988; Wilson & Pike, 1993). Neither the psychological nor psychiatric (medical) communities have conclusively determined why some persons are at a greater risk of developing an eating disorder (or characteristics of an eating disorder) than other persons. The only consensus existing among mental health professionals is that eating disorders and eating disorder symptomatology occur largely in women and that eating disorders are likely best understood and explained by a multidimensional perspective (Button, 1993; Brownell & Fairburn, 1995; Garfinkel & Garner, 1982).

Appreciating the need for a multifaceted perspective regarding the etiology and maintenance of eating disorders, researchers and clinicians contribute to the eating disorder literature by designing research and clinical treatments that reflect their particular field's hypotheses. For example, biomedical researchers interested in disordered-eating might explore its relationship with nutritional and anatomical deficits (i.e., serotonin deficits), as well as hormonal imbalances, dysfunctions of the hypothalamus, and excess cortisol productions. They might also examine the relationships between the genetic and biological factors of eating disorders (Strober, 1995).

Family systems-oriented psychologists, however, view the family and problematic parent-child relationships (i.e., mother-daughter) as responsible for the daughter's eating problems (Bruch, 1973; Minuchin, Rosman, & Baker, 1978). Specifically, therapists espousing this theoretical orientation address the familial themes of control, enmeshment, perfectionism, and overprotection, as well as the family's conflict resolution styles. More recently, interest in the disordered-eating person's siblings and choice of significant others has arisen yet this research direction is still in its inaugural stages (Vandereycken, 1995).

Other investigators of eating disorders primarily view the differing cognitive styles (i.e., rigid thinking, overgeneralization, selective abstraction, all-or-none thinking) existing between women with disordered-eating behaviors and women with healthy eating behaviors as the critical variable that distinguishes between more susceptible and less susceptible women (Fairburn, 1981; Wilson & Pike, 1993). Treatment from this perspective attempts to modify the person's cognitive style (i.e., challenge the cognitive distortions; clarify and strengthen the person's identity) that positively affects their self-esteem and (often comorbid) depressive state (Weinreich, Doherty, & Harris, 1985). In all, the processes of research and treatment tend to mirror how a researcher or clinician conceptualizes the contributing and maintaining factors of eating disorders.

Personal Construct Theory

One expression of the cognitive approach to eating disorders can be found in Kelly's (1955) personal construct theory. The most fundamental of Kelly's assumptions was that humans are continually processing the world around them so as to generate and refine predictions about future events, feelings, and behaviors. Individuals vary in both the number of dimensions they use for making an evaluation or prediction (i.e., "differentiation"), as well as the degree to which there is organization or correlation among the dimensions (i.e., "integration"). Thus, the greater number of dimensions available for making predictions and evaluations, the more differentiated is the person, and the more tightly organized those dimensions are, the more integrated is the person.

The application of these structural dimensions can be extended to diverse areas of interest, including the field of eating disorders (Button, 1993). Specifically, a person with anorexia nervosa or bulimia nervosa would likely exhibit low levels of differentiation yet

high levels of integration. In other words, this low-differentiated/high-integrated eating-disordered individual has few dimensions in which to construe the world, but these dimensions are tightly organized. Thus, this person's highly integrated cognitive system greatly assists him or her in making decisions and predictions about the world.

When faced with the more complex and variable construing to be found in the wider and adult world . . . such limited construing as they have available is likely to be inadequate. It is perhaps not surprising that they constrict their world in search of greater predictability and control. (Button, 1993, p.100)

The most common method of assessment used in the application of personal construct theory is the Role Construct Repertory Test (Neimeyer, 1987). As part of the administration of the "reptest," an individual is asked to consider the wide variety of people in his or her life. For example, a person might be asked to write down the names of his or her mother, father, spouse, least liked person, most liked person, self at heaviest weight, self at lightest weight, self at ideal weight, etc. These names constitute the repertory grids' elements.

In addition to a set of personal elements, a set of "constructs" is also necessary for completing a repertory grid. Constructs seek to capture how a person construes a particular experience and they are presented in contrasting pairs to the person completing the repertory grid. For example, if we seek to explore how a restrictive eater construes interpersonal dimensions we might provide him or her with the following set of constructs: happy/sad, anxious/relaxed, spontaneous/deliberate, angry/calm, outgoing/introverted. The person would then be asked to rate each of his or her elements along each of the provided construct dimensions on a 5-point Likert-type scale.

Once the person has rated all elements across all pairs of constructs, then the retest is completed and it consists of a matrix of numbers. This matrix of numbers is then analyzed for levels of cognitive differentiation and integration (Landfield, 1977) which can be interpreted according to personal construct theory.

The application of personal construct theory to eating disorders was pioneered by Crisp and Fransella (1972). In their case-study approach, Crisp and Fransella examined the cognitive changes associated with the recovery process of two women suffering from anorexia nervosa. They did this by having the women complete a series of repertory grids on seven testing occasions. The researchers observed that significant changes occurred in the relatively rigid cognitive system of one of the women ("Miss M. H.", p. 395), as indicated by the change in correlations between two of her personal constructs. Specifically, at the beginning of treatment, when the woman was very emaciated (i.e., had a very low body weight), the constructs "mature" and "likely to become pregnant" were perceived as very related. Thus, Miss M. H. associated these two constructs as basically interchangeable. This strong association denotes the woman's cognitive system as being very integrated and therefore, very resistant to change. And, when a disordered-eating person's construct system is resistant to change, a poorer clinical prognosis is expected because the person is not receptive to alternative (i.e., more flexible or loose) ways of construing her world (Button, 1983).

Later, however, as Miss M. H.'s recovery progressed (i.e., weight increased), the relationship between these constructs diminished, which is a positive treatment indication. In other words, her construct system had become permeable to other possibilities of

construing her world. Miss M. H.'s cognitive system was no longer poorly differentiated and highly integrated and her style of construing had become more flexible.

Crisp and Fransella's other patient, "Miss A.W." (p. 395) also exhibited some unique cognitive features after having been administered a series of 7 retests at different testing times. They found that until her treatment was complete, Miss A.W.'s preoccupation with weight greatly influenced her self-view. Once her weight became less meaningful to her, Miss A.W. experienced significant disorder in other areas of her life, including interpersonal relationships. She no longer exhibited a highly integrated cognitive system which resulted in her needing to adapt to a less predictable albeit a more healthy physical and mental state of being. As Crisp and Fransella conclude,

The use of repertory grids in the study of these patients has allowed exploration and quantification of some aspects for these patients' construct systems, including the ways in which these were organized and ways in which they changed during the course of treatment. (p.405)

A researcher and clinician who has replicated and extended upon the pioneering work of Crisp and Fransella (1972) is Eric Button. In his Eating Disorders: Personal Construct Therapy and Change (1993), Button states that "a common theme that runs through the lives of people afflicted with an eating disorder . . . is that they have . . . one interpretation of the world . . . this focuses on the importance of weight" (p. 32). Thus, Button, fine-tuning the research method initiated by Crisp and Fransella (1972), is one of many researchers whose work has found that individuals with eating disorders tend to have highly integrated but poorly differentiated cognitive systems (Button, 1983; Coish, 1990; Crisp & Fransella, 1972; Heesacker & Neimeyer, 1990; Mottram, 1985; Neimeyer & Khouzam, 1985). Again, the implication for an individual exhibiting this type of

restrictive cognitive system is that the person may be resistant to treatment insofar as treatment may require radical reorganization and elaboration of the individual's current set of constructions.

Current Study

The present study sought to extend this line of research concerning the relationship between disordered-eating and structural aspects of the personal construct system. Specifically, it explored the universality of the cognitive/structural differences associated with eating disorders across different domains of experience. In particular, this study addressed the generalizability of these structural features across personal, interpersonal, and vocational domains. To date, research has largely concentrated on the structural features concerning weight-related constructs (i.e., as reflected by the frequent use of eating and appearance constructs). However, obtaining insight regarding the extent to which disordered-eating may interfere with other areas of functioning (e.g., interpersonal and vocational) may be warranted as we seek a more thorough understanding and respect for the repercussions of eating disorders:

I think there is a good case for broadening the context of enquiry (sic). Up to now, personal construct exploration of people with eating disorders has mainly centred (sic) on the construing of people or eating situations. . . . I think there is a good case for more exploration of the construing of relationships in eating disorders. (Button, 1993, p. 210)

The purpose of this study is to determine the extent to which these structural features present themselves across different domains of experience. In other words, this study tests the generalizability of these effects across personal, interpersonal, and vocational domains. The hope is that we can either narrow the range of significance of these structural features (i.e., determine that they are evident only in interpersonal

construing), or document the extent to which they are present across a broad range of other realms of construction.

In addition, this study examined the relative importance that weight-related personal constructs have on the cognitive systems of disordered and nondisordered eaters. It was hypothesized that the disordered-eating women would exhibit "implicatively bound" cognitive systems; i.e., they would anticipate significantly greater changes than the nondisordered-eating women in their personal, interpersonal, and vocational domains of functioning if they were to suddenly experience a change in their personal weight.

The following chapter will review the literature in support of this study. In particular, it will examine the cognitive features and sociocultural factors associated with disordered-eating, as well as the studies that have applied personal construct theory to the exploration of eating disorders. The chapter then concludes with a set of hypotheses that will be examined through the methods outlined in the subsequent chapter (Chapter 3).

CHAPTER 2 REVIEW OF THE LITERATURE

Following an introduction to the historical development of eating disorders, this chapter reviews sociocultural influences on disordered-eating and then concludes with a review of personal construct contributions to this literature. An understanding of the historical development, sociocultural contributions, and personal construct research literature will set the stage for the specific hypotheses that conclude this chapter.

Historical Origins of Eating Disorders

Anorexia nervosa was likely first recorded around 1689 (Silverman, 1995) when a physician's notes on two patients were found to provide the first descriptions of this particular eating disorder. Similarly, the presentation of bulimia nervosa symptoms have been reported as early as ancient times (Habermas, 1989; Parry-Jones & Parry-Jones, 1995).¹

Contemporary attention to eating disorders is great. It can be measured by the reporting of eating disorders' prevalence and incidence and is highlighted by the growing number of professionally-led disordered-eating psychotherapy groups, the creation of "Eating Disorders' Coordinator" positions on college campuses, and the establishment of the "Academy for Eating Disorders."² The development of specialty journals devoted

¹ A review by Ziolkowski (1996) offers excellent material for learning more about the origins of these two eating disorders.

² Established in 1993, this academy combats eating disorders primarily through education, the defining and promoting of preventative interventions, and the identifying and rewarding of outstanding and achievement or service to the study of eating disorders.

solely to eating disorders (e.g., the International Journal of Eating Disorders, Eating Disorders Review, the British Review of Bulimia and Anorexia Nervosa, and Eating Disorders: The Journal of Treatment and Prevention) also attests to the increasing popularity of eating disorders as a subject of interest and professional study.

Some observe (Beumont, 1995) that the disorders characterized as eating disorders would be more accurately described as dieting disorders, primarily due to the high fatality rates particularly associated with anorexia nervosa which is approximately 5% (Hsu, 1980; Neümarker, 1997). Others bluntly note that "dieting" is a very valid name given that "die" is its root word (K. Kratina, personal communication, April 28, 1995). Relatedly, and many years ago, Hilde Bruch (1978), often considered the founding researcher of anorexia nervosa, observed that the term "anorexia" is misleading because its translation is "poor appetite." Bruch contended that its victims do not suffer from lack of an appetite, rather, they are "ravenous." In all, it is clear that anorexia nervosa and bulimia nervosa are disorders related to dangerous and extreme attempts to restrict eating.

Researchers and clinicians studying and treating individuals with mental disorders, including eating disorders, use the Diagnostic and Statistical Manual of Mental Disorders-IV (American Psychiatric Association, 1994) as a guide to accurately defining the disorder in question. While the DSM-IV does not provide any treatment information, it is the guiding manual used in procuring a diagnosis. The DSM has endured many revisions since its inception in 1952 and only gradually has begun to differentiate and define the criteria required for specific eating disorders.

In regards to eating disorders, the criteria have been revised at least three times. These revisions reflect the continued advances in criterion-specification for eating disorders. Thus, disordered-eating originated as an "Other" diagnosis (APA, 1968, p.80),

was then known as a "Feeding Disturbance" (APA, 1968, p.80), and later, a person with disordered-eating was diagnosed as having either "Anorexia Nervosa" or "Bulimia" because of "differing clinical pictures, courses, and treatment implications" (APA, 1980, p.383). Later still, bulimia was renamed, "Bulimia Nervosa" (APA, 1987).³

In addition to the global name changes that have been made to the diagnostic categories associated with eating disorders, specific changes in the criteria for anorexia nervosa and bulimia nervosa have also occurred. First, a person currently diagnosed with anorexia nervosa should weigh 15% below his or her normal body weight (APA, 1987, 1994), a change from the 25% criterion previously necessary for diagnosis (DSM-III; APA, 1980). Second, a current diagnosis of bulimia nervosa (DSM-IV) mandates an individual as having shape and weight concerns.⁴ Lastly, various subcategories or classifications exist for anorexia nervosa and bulimia nervosa (e.g., "Restricting" or "Binge-Eating/Purging" type). In all, these criterion specifications, in addition to the name changes for eating disorders, reflect the increased attention and research that these disorders have demanded and continue to receive.

Sociocultural Factors Associated with Eating Disorders

This section seeks to examine the impact that sociocultural influences have on a woman's personal, interpersonal, and vocational functioning as they may relate to

³ And, the most recent edition of the DSM (DSM-IV; APA, 1994) also differs from prior editions: Disorders previously included within the Eating Disorders of Infancy, and Atypical Eating Disorder categories) are now identified as "Feeding and Eating Disorders of Infancy or Early Childhood."

⁴ This was not a requirement in the DSM-III's description of necessary criteria (APA, 1980). Thus, a diagnosis of bulimia nervosa is more restrictive and is differentiated from "binge eating" (a behavior, not a disorder, that can occur independent of weight concern).

disordered-eating. First, however, it is important to highlight that there are many researchers concerned about the media's role in the development of disordered-eating and pursuit of thinness, as reflected by the growing number of studies and reviews on the subject (Kilbourne, 1994; Levine & Smolak, 1996; Raphael & Lacey, 1992; Spillman & Everington, 1989; Stice et al., 1994; Waller et al., 1994; White, 1992; Wolf, 1991). They argue that it is necessary to study the media and its influence on the development of eating disorders among young women by observing that television viewing, popular magazines, and marketing techniques in general have a tremendous power to influence the emotional and physical well-being of the young. The potential health risks of the young, who are widely and frequently exposed to the media, have been observed and argued by many.⁵

Personal Functioning

Recognizing the general effects the media can have on individuals, we will now discuss how sociocultural factors can influence a woman's physical or personal sense of self. (By personal sense of self, we mean the way in which a woman construes her looks or appearance to others and any other overt characteristics of self). As highlighted earlier, there are a growing number of approaches by which a woman can recreate her bodily self so as to minimize, hide, even reverse or undo the natural body aging process.

The ability to reconstruct oneself, through cosmetic surgery for example, used to be seen as something only wealthy women could afford. Thus, the pursuit of thinness

⁵ Recently, in fact, state legislatures have contended that tobacco companies have knowingly influenced youth to purchase their health-adversive products. One of these companies profited greatly because of the marketing appeal that a cartoon camel has had on adolescents. This company has (reluctantly) conceded as part of a landmark settlement agreement to stop marketing the cartoon animal. See also Pierce, J. P., Gilpin, E., Burns, D. M., Whalen, E., Rosbrook, B., Shopland, D., & Johnson, M. (1991). Does tobacco advertising target young people to start smoking? Evidence from California. Journal of the American Medical Association, 266, 3154-3158.

through dieting or restricting or bingeing and purging allows women of all socioeconomic backgrounds to achieve this desired and socially-approved physical goal.

In fact, some researchers have suggested that a relationship between a culture's financial resources and thinness as a desired shape for women not only exists but contributes to the etiology and maintenance of eating disorders. For example, M. Alteby (personal communication, July 23, 1997) contends that a woman can never be too thin in a society where food is abundant. She further elaborates that because individuals typically show their wealth and status through their body,⁶ a thin woman may be indirectly voicing the position that while she can afford to purchase food and has the availability of food, she chooses to restrict her food intake ("I'm so good and so confident, that I can be thin"). Thus, the thin ideal is not a physical state only afforded and accessed by the wealthy.

And, a woman is not alone in her striving for thinness. Importantly, the larger sociocultural context broadly supports and sanctions her pursuit of the "obtainable" body image ideal. For example, Freedman (1986) notes that even though models of art in past centuries were deemed as representations of the ideal, desired female shape, it was recognized that those physiques were unattainable. Now, however, modern-day media "blurs the boundaries between romanticism (i.e., obtaining the ideal body) and realism" (p. 43).

A well-known and frequently cited study by Garner and his colleagues (Garner, Garfinkel, Schwartz, & Thompson, 1980) underscored the misleading messages produced

⁶ For example, having tanned skin in modern times is often an indicator of a Caucasian's financial ability to vacation; and yet this contrasts with other times when having fair skin was a barometer of wealth and status because it indicated that the person did not have to engage in any outdoor labor.

by the media regarding the likelihood of obtaining the ideal image. They reviewed the shapes and sizes of Playboy centerfolds and Miss America pageant contestants for a twenty year period. These researchers found that these two visible groups of women had been getting thinner over the years, a finding particularly alarming as the results of another study indicated that the average woman in America was becoming heavier (Society of Actuaries and Life Insurance Medical Directors, 1980) during those same years.

Garner et al. (1980) also discovered that during the same period (1960-1980) popular women's magazines increased their number of articles on dieting. Given that excessive dieting is often a precursor to the development of an eating disorder (Hsu, 1989), the results of the Garner et al. study (1980) have often been cited in the eating disorders literature as indicative of the problematic sociocultural messages targeting young women.

The depth of this problem is further underscored by the quest for perfectionism as an ideal and obtainable state.⁷ Women are continually barraged by advertising in which youth and thinness are seen as obligatory aspirations in their lives. Thus, the cosmetic, fashion industries, and more recently medical communities, take advantage of women's "normative discontent" (Rodin, Silberstein, & Striegel-Moore, 1985) by promoting the idea that women can and need to recreate themselves (Wolf, 1991). These groups reinforce the belief that a woman is incomplete and unfeminine (both of which are descriptions created and reinforced by particular political and social groups that prey on a vulnerable woman's sense of identity) unless she has the "right" look (Mahowald, 1995;

⁷ See Wolf's (1991) first chapter, specifically pp. 16-17, that describes the substantial amount of money that women provide to the cosmetics and other-related industries in their quest for beauty.

Timko, Striegel-Moore, Silberstein, & Rodin, 1987).⁸ Women learn that how they look can be manipulated and should be manipulated.

In light of the sociocultural pressures regarding physical appearance, it may be understandable that women are also seeking elective cosmetic surgery in record numbers as they seek the perfect shape, size, and image. Women endure numerous risky procedures in order to more closely resemble the appearance of an ideal woman. Thus, while some women may restrict their pursuit of physical idealism to the wearing of (colored) contacts, the highlighting, perming, straightening, weaving, or use of hair extensions, and bleaching of teeth (services available on one end of the "makeover" continuum), others, however, may choose to endure dangerous cosmetic surgeries.⁹ These latter more costly and dangerous procedures are becoming more acceptable, more familiar, and more accessible than in any years past (Solomon, 1996).

Ironically, young girls seek the opposite. They yearn to look older than their years by manipulating their appearance with makeup and dress and are rewarded for their attempts. For example, last year one young girl in particular received much posthumous notoriety as the media presented numerous photos and videos of the young girl performing during state and regional beauty pageants. The girl was photographed and seen in a

⁸ And, this look is all encompassing: from the hairstyle (including cut and color), to the scent (including perfumes, powders, and lotions), to the cosmetics (including foundation, eyeliner, eyeshadow, eyebrow pencil, eyelash curler, mascara, blush, powder, lipliner, and lipstick), to the clothing (including undergarments and hose), and, finally, to the accessories (including shoes, handbag, jewelry, and briefcase).

⁹ Specifically, this latter group of women can choose to have their noses reshaped (a painful procedure in which the physician must sometimes first break the nose), faces lifted, eyes resculpted, lips enlarged (with collagen injections), chin and cheekbones resurfaced, thighs liposuctioned, tummies tucked, intestines stapled, ribs removed, breasts siliconed, buttocks tightened, or their bodies laser-smoothed.

videotape with color processed hair, professional makeup coverage, and was adorned with provocative clothing, the combination of which contributed to the projection of a persona much older than her actual 6 years of age. Eventually, debate concerning the appropriateness of the deceased girl's parents decision to "age" their daughter arose and initiated (short-lived) concerns about the societal demands and messages that target young girls and their appearance.

Interpersonal Functioning

Feminist scholars and others observe that the phenomena of being discontent with how old one looks extends to women of all ages; women are seeking to either look older or younger. They believe this condition contributes greatly to the negative self-image and self-esteem that many women have which in turn has been associated with the development of eating disorders (Downs, 1997; Orbach, 1978, 1982; Rodin et al., 1985; Sanford & Donovan, 1984; Stice et al., 1994; Striegel-Moore, 1993, 1995; Wolf, 1991).¹⁰ Consequently, many question why society (e.g., media) would perpetuate these unhealthy proscriptions via advertising as it contributes to the dissatisfaction that women have with their bodies, which in turn is a core (if not cardinal) feature of eating disorders.¹¹

¹⁰ Mary Pipher's "Reviving Ophelia: Saving the Selves of Adolescent Girls" (1994) provides an excellent description and commentary about the difficulties and potential dangers associated with the social development of young women.

¹¹ The construction of the "Sociocultural Attitudes Towards Appearance Questionnaire" (SATAQ) by Heinberg, Thompson, and Stormer (1995) reflects the need for useful instruments for those individuals researching or working with individuals presenting with eating disorders, eating disorder symptomatology, and/or body image concern or preoccupation. Its 14 items are rated on a Likert-type scale which asks respondents to identify whether they (1) Completely Disagree, (2) fall in-between categories (1) and (3), (3) Neither Agree nor Disagree, (4) fall in-between categories (3) and (5), or (5) Completely Agree with the statement. The 14 items are as follows: (1) Women who appear in TV shows and movies project the type of appearance that I see as my goal, (2) I believe that clothes look better on thin models, (3) Music videos that show

Thus, societal messages not only can dictate a woman's personal area of functioning, but they can also prescribe her interpersonal relationship style. For example, women are taught to be responsible for developing and establishing social relationships. Young girls "are socialized to be more interpersonally oriented than men" (Striegel-Moore & Marcus, 1995, p. 447; see also Rodin et al., 1985). Consequently, a girl acquires skills that are deemed necessary for sustaining relationships yet also may serve to devalue her self-worth, self-esteem, and sense of individuality (Bruch, 1978; Mahowald, 1995).

Some writers conceptualize anorexia and bulimia nervosa as problems of identity (Mahowald, 1995; Weinrich et al., 1985). One of these individuals, Mahowald (1995), has chosen to explore a subcomponent of identity, gender identity. In her writings, she delineates between gender identity and gender role by describing the former as "the private experience of gender role," and gender role as "the public expression of gender identity" (p. 292). Some women may vehemently pursue the ideal feminine gender role, a pursuit that can take the form of being excessively thin (e.g., anorexia nervosa). Should a woman develop anorexia nervosa in her quest for thinness, she will also develop amenorrhea. Some argue, including Mahowald, that the progression of amenorrhea can be interpreted as a woman's attempt to avoid fulfilling the demands of her perceived gender role. Thus, regardless the reason behind the development of anorexia nervosa, Mahowald contends

thin women make me wish that I were thin, (4) I do not wish to look like the models in the magazines, (5) I tend to compare my body to people in magazines and on TV, (6) In our society, fat people are not regarded as unattractive, (7) Photographs of thin women make me wish that I were thin, (8) Attractiveness is very important if you want to get ahead in our culture, (9) It's important for people to work hard on their figures/physiques if they want to succeed in today's culture, (10) Most people do not believe that the thinner you are, the better you look, (11) People think that the thinner you are, the better you look in clothes, (12) In today's society, it's not important to always look attractive, (13) I wish I looked like a swimsuit model, (14) I often read magazines like *Cosmopolitan*, *Vogue*, and *Glamour* and compare my appearance to the models.

that anorexia nervosa is an expression of identity, an identity that society seeks to (rigidly) define for a young woman.

One study in particular exposes the difficulty in which a woman can experience when seeking to develop and strengthen a healthy, feminine identity. In their classic 1970 study, Broverman and her colleagues (Broverman, Broverman, & Clarkson) sought to identify the distinguishing characteristics and behaviors perceived as healthy for men, for women, and more generally, as an "ideal standard of health" (p. 1). They found that the traits associated with ideal health in general were fairly similar to those traits associated with ideal health for men, yet contrasted with those characteristics and behaviors equated with ideal health for women.

The findings of a study by Basow and Kobrynowicz (1993) provides yet another example of how women are evaluated on wide range of dimensions. Specifically, these researchers sought to determine whether the size (small and large salad, small and large meatball hoagie) and gender connotation (with the salads being perceived as very feminine meals and the meatball hoagies perceived as very masculine meals in a pilot study) of a meal affects a woman's social appeal. The 113 college student participants (51 males, 62 females) viewed one of four videos that showed a woman eating either the small salad, large salad, small hoagie, or large hoagie. They were then asked to rate her social appeal as measured by a series of five questions on a 5-point Likert type scale developed by the authors. Results found that the woman eating the small, feminine meal (salad) was perceived as much more socially appealing than the same woman seen in the videotape eating the large, masculine (meatball hoagie) meal. The authors interpreted this finding as offering insight into why some women vary their eating behaviors depending on the presence of others. Furthermore, they believe that if these same women seek to also

control their weight they may be at a heightened risk for developing an eating disorder. In all, this study speaks to the social power that eating and size meal has on a woman's interpersonal functioning.

Other researchers have investigated the characteristics deemed desirable in women in personal ads. For example, in a study by Andersen, Woodward, Spalder, and Koss (1993) 481 personal ads were analyzed "to determine self-report characteristics of males and females seeking companionship as well as the desired height, weight, and shape characteristics of the person being sought" (p. 111). They found that the female searchers were more likely to describe themselves as thinner than average in weight, and either smaller or taller than average in height. Male searchers also sought women different from the norm. Their ads called for women who were "5 years younger, thin, fit, petite, or tall" (p. 111). These descriptive findings reflect the continued sociocultural message that desirable women are thin and fit. And, this message is known by women as indicated by the characteristics the women in the personal ads used to "market" themselves to others in the hopes of obtaining interpersonal happiness.

Some authors have observed that specific personality traits are often exhibited by individuals with an eating disorder. For example, Button (1996) has recently completed a prospective study that examines the role of self-esteem in the etiology of an eating disorder. He measured the self-esteem in 594 girls at age 11-12 and again later when the girls were 15-16 years old. Button found that those girls who showed low self-esteem at the time of the first testing were significantly at greater risk of developing more severe symptoms of an eating disorder four years later.

Other characteristics that have been associated with individuals with eating disorders include hesitancy, insecurity, anger, stubbornness, awkwardness, withdrawnness,

low self-esteem, overly-compliant and polite behavior, as well as hard-working and high-achieving abilities (Bruch, 1973; Button, 1996; Crisp and Fransella, 1972; Downs, 1997). Katzman and Wolchik (1984) compared the personality and behavioral characteristics of bulimics with controls. Their results indicated that bulimics were more depressed, experienced poorer body image, reported higher self-expectations, a higher need for approval, and greater restraint than participants who did not engage in binge eating. And, individuals with anorexia nervosa have been described as chameleon-like in their social interactions as they are facile in their ability to adapt their personalities to complement the situation or persons present (Bruch, 1988). Bruch (1978) also notes that women afflicted with anorexia nervosa lack assertiveness and have difficulty making decisions, yet there has been some evidence contrary to Bruch's observation (Mizes, 1988).

The work of somatypes, first introduced by W. H. Sheldon (1940) has frequently been used in relation to a wide variety of areas including personality, potential for self-actualization, temperament, as well as eating disorders. Sheldon's theory classifies human physiques into three categories: endomorphy, mesomorphy, and ectomorphy. The first two categories, endomorphy and mesomorphy, are both described as "compactness of the body" (Hartl, Monnelly, and Elderkin, 1982, p. 5). Endomorphs, however, tend to be individuals who produce surplus fat and store it throughout their body, thus they become round in shape. Mesomorphs, on the other hand, have an athletic body image as reflected by their tightly compacted bones, muscles, and tissues which provides them with strongly developed arms and legs. The other somatype, ectomorphy, is described as a physique that is elongated; their limbs are often stretched out, and subsequently they are viewed as thin individuals (Hartl et al., 1982).

For the past several years, the media has portrayed the thin body or what Sheldon (1940) defines as the ectomorph physique, as the ideal female figure (Sanford & Donovan, 1985; Wolf, 1991). Spillman and Everington (1989) explored the characteristics assigned to the somatotypes and found that individuals associate "strength, happiness, and dominance" (p. 887) to the mesomorph physique, "social aggression, laziness, and unattractiveness" (p. 887) to the endomorph build, and "nervous(ness), submissive(ness), and socially withdrawn(ness)" (p. 887) to the ectomorphy physique.

In a similar study (Keas & Beer, 1992) participants were asked to identify which somatotype (endomorph, mesomorph, or ectomorph) would best represent a series of 30 statements, some of which were: "The woman who is to be most wanted as a friend," "The woman who would be the most aggressive," "The woman who would assume leadership" (p. 225). Participants chose the ectomorphy (thin shape) somatotype most often for the following statements (all of which begin with "The woman who"): smokes 3 packs of cigarettes a day; eats the least often; would be most likely to have a nervous breakdown; would make a poor mother; would be the least aggressive; would endure pain the least; eats the least" (p. 225).

In light of the results of these two studies (Keas & Beer, 1992; Spillman & Everington, 1989) one may be more likely to accept the argument that sociocultural messages have enormous influence on young women and their vulnerability to eating disorders. These powerful and pervasive messages that target young women to be thin serves as one likely explanation as to why women would seek to alter their body build to that of an ectomorph, despite the association of that body shape with otherwise negative descriptors.

In all, there is significant quantitative and qualitative research that supports the belief that sociocultural factors influence a woman's interpersonal traits and behaviors. This assumption, coupled with the research findings that suggest these same factors also negatively affect a woman's personal functioning (e.g., leads to a drive for thinness and overall quest for ideal body image), introduces the next section that explores how sociocultural factors influence a woman's vocational functioning.

Vocational Functioning

Possessing a drive for thinness (which affects one's personal functioning) and being dissatisfied with one's body (which interferes with one's interpersonal functioning) are but two of many sociocultural factors that are believed to contribute to the prevalence of eating disorders. Researchers are also cognizant of how the changing roles demanded of women in this society may also contribute to the phenomena of the growing prevalence of eating disorders.

Specifically, as women continue to progress through this modern era, they have similarly experienced many shifts in vocational roles. Worrell and Remer (1992) recognize these changes and observe that shifts need to be explored in the contexts they have developed. First, more women than ever before are in the workplace and the demands in the workplace can negatively affect all aspects of a woman's functioning (personal, interpersonal, and vocational). For example, there have been growing reports of sexual harassment being an experience that many women confront at work. Should a woman be sexually harassed, she may be reluctant to confront her harasser fearing escalation of harassment or even employment loss. However, should she choose to remain in the problematic work environment she may experience depression, anxiety, helplessness, low self-esteem, and anger as a result, and possibly exhibit diminished work capability. If a

woman does not possess adequate coping strategies or have access to a strong support system it is likely that the aforementioned list of symptoms will be channeled in less effective coping styles. For example, the powerless woman may seek control in her life through her eating behaviors.

Second, while much has improved regarding employment discrimination in relation to the hiring of women, it continues to exist and consequently affects a woman's interpersonal and vocational functioning. Specifically, a woman may experience employment discrimination should she seek employment in an environment in which her body-build does not "match" the setting. For example, in a review of sex stereotype research findings, Ruble and his colleagues observed that people perceive suitable jobs for women as those that require "gentleness, understanding, and warmth" (Ruble, Cohen, & Ruble, 1984, p. 342).

This review may have inspired Keas and Beer (1992) to design a survey that incorporated the application of Sheldon's (1940) theory of somatotypes with stereotypes held in general regarding the gender suitability of a job. They found the following jobs to be perceived as most suitable for an ectomorph (thin build) somatotype: stenographer, private secretary, dental assistant, telephone operator, florist, piano tuner, beautician, waitress, shoe salesperson, office secretary, bookkeeper, file clerk, private secretary, typist, cashier, and artist. Thus, body-build stereotypes were found to exist among the group of participants. The mindful reader observes that the occupations deemed most appropriate for an ectomorph body shape are also traditionally female occupations.

In fact, in a review of sociocultural factors associated with the risk of developing eating disorders, White (1992) identified dancing, modeling, and gymnastics as professions with the greatest incidence of disordered-eating. These careers are breeding grounds for

the development of anorexia nervosa or bulimia nervosa because of their emphasis on ideal body image and shape. Thus, the young girls that enter these professions soon learn to pursue thinness, monitor their body shape, and may diet as a result of the demands for maintaining that "perfect" body shape. And, again, dieting is often a precursor to the development of eating disorders (Hsu, 1989).

Cognitive Features Associated with Eating Disorders

This review now turns from addressing the main sociocultural factors associated with eating disorders, to an examination of the cognitive features of eating disorders. One of the main (dysfunctional) cognitive features associated with individuals diagnosed with either anorexia nervosa or bulimia nervosa is a "disturbance in perception of body shape and weight" (APA, 1994, p.539). Two other factors also appear to be forerunners in contributing to, as well as maintaining, these eating disorders (White, 1992): pursuing thinness and perfectionism. The primary difference between clinical and subclinical groups is the greater extent to which the former group is willing to sacrifice components of oneself (e.g., mental and physical health) in order to be "successful" in maintaining a specified body weight or size. In fact, Butow, Beumont, and Touyz (1993) found that in comparison to nonrestrained eaters, anorexic patients were likely to evaluate their self-worth almost entirely in terms of self-control.

The first of these cognitive characteristics has generated significant attention, research, and debate in the past several years (Hsu & Sobkiewicz, 1991; Williamson, Cubic, & Gleaves, 1993). While the concept "body image disturbance" has been espoused by many as a cardinal feature of anorexia nervosa and bulimia nervosa (APA, 1994; Bruch, 1962), some argue that it is incorrectly being interchanged with "body size

overestimation" and "body disparagement" (Hsu & Sobkiewicz, 1991; Williamson et al., 1993).

For example, Hsu and Sobkiewicz (1991) reviewed 19 studies that explored "body image" of individuals with anorexia nervosa or bulimia nervosa. They argue that these studies explored "body image disturbance" by focusing on the perceptions and attitudes or emotions that one has of his or her physical self. Perception distortion was usually measured by techniques that included image marking, analogue scales, optical distortions, and silhouette-card sorting, whereas attitudes toward one's body were typically measured through the use of questionnaires (e.g., Eating Disorder Inventory, Garner, Olmsted, & Polivy, 1983).

Hsu and Sobkiewicz (1991) found that while some anorectics and bulimics did overestimate their body width (i.e., exhibited body perception distortion), this finding did not extend to all or even most anorectics or all or most bulimics. And, in regards to attitudes and affect towards body, "many bulimics and some anorectics (were) more dissatisfied with their bodies . . . (yet), not all patients show(ed) such dissatisfaction" (p. 24). Thus, these authors argue that body dimension estimation cannot measure body image¹² and therefore, argue that Bruch (1973) initiated the erroneous leap in linking fear of fatness and pursuit of thinness with distorted body image.

Regardless, it is agreed that individuals with disordered-eating are hindered in their ability to accurately gauge their body size and exhibit dysfunctional cognitions in relation

¹² Readers might be interested in Hsu and Sobkiewicz's (1991) literature review on variables that appear to influence one's body size estimation. For example, they found that "sex . . . age . . . actual size of subject . . . self-esteem . . . masculinity and femininity . . . whether the subject estimated according to what they thought or how they feel" to influence a person's body size estimation.

to the meaning of body shape and weight, and meal size and frequency (Fairburn, 1981; Garner & Bemis, 1982; Mizes & Christiano, 1995).

Another cognitive factor associated with eating disorders, valuing thinness, has been endorsed by society periodically throughout history. In a 1996 documentary, Solomon outlined the historical changes and patterns of ideal female body images from 1400 BC until present day. Its descriptions of the changing ideal female shape underscores the waxing and waning of valuing thinness: Specifically, the documentary reported that the ideal female shape in 1400BC was influenced by a 5'2", 110 pound Egyptian queen. Later, in 500 BC, a more muscular version of the ideal female shape was introduced and reportedly resembled the Roman goddesses who typically possessed a 5'9", 150 pound frame. These ideal muscular physiques were replaced in the 1300s by more voluptuous ones and were characterized by 5'8" and 180 pound women. In the seventeenth and eighteenth centuries, the true shape of women was unknown because women's bodies were mostly camouflaged by layers of lace and skirts. However, women embraced the thin appeal to a large degree as reflected by their enduring steel corsets in order to procure a fashionable 18 inch waist.¹³ In the early part of the twentieth century (e.g., 1914), dieting was the norm as women continued to seek a thin ideal. In the 1930s, however, the ideal female shape was dichotomous in nature as both the petite and more mature shape was accepted. Twenty years later, the ideal female shape was no longer petite and Marilyn Monroe's full figured shape represented the ideal. In the late 1950s, thinness was again the desired shape, yet by the 1960s, it was replaced by an even scrawnier physique as reflected by the mass appeal and success of Twiggy, a 5'6", 97

¹³ And, these corsets were drawn so tight that bones might break and internal organs might be injured.

pound British supermodel. Currently, thinness continues to be pursued by those seeking to possess the ideal female shape.

While individuals diagnosed with anorexia nervosa have a pursuit of thinness and fear of fatness, some researchers have argued that their true fear is of being normal weight. Specifically, Crisp (1967) initially observed (and Hsu & Sobkiewicz, 1991 concurred) that fear of fatness is not a psychopathological fear, as it is normal in our society for individuals to fear fatness, but that it is abnormal to fear normal weight.

Because there is either a fear of fatness or an exaggerated concern or influence of body shape and weight on self-evaluation by eating-disordered individuals, these same persons typically seek to alter their body size and shape. This can be particularly destructive when considered in relation to the third feature associated with eating disorders, a quest for perfectionism.

More specifically, the trait of perfectionism is a complementary behavior to the valuing of thinness and dieting as it assists the individual in engaging, developing, and ultimately strengthening the rigid thinking and behaviors necessary for achieving ultra thinness. An exchange between an eating disorders researcher and clinician (Button, 1993) and a woman who had recovered from anorexia nervosa illustrates the strength and dangers that perfectionism can bring to this eating disorder:

Button: What helped you to be more able to handle these things (social situation)

Woman: Confidence in myself . . . basically now I like myself . . . the perfection is not there anymore.

Button: Why do you think perfection was so important to you?

Woman: It was this failure thing . . . there are only two sides to an anorectic--you are either perfect or a failure. My personality was very black and white. People either loved me or hated me. There was nothing in between those--that is how I viewed my life (Button, 1993, pp. 114-115).

Thus, anorexia nervosa (or bulimia nervosa) can easily develop when a woman has accepted thinness as an ideal, begins to restrain her eating, and uses her skills of perfectionism in assisting her in her goal of thinness, for example.

Personal Construct Literature as Applied to Eating Disorders

Since distorted self-perceptions play a significant role in the development of eating disorders it would be advantageous to examine how an individual perceives himself or herself, as well as others. Several psychological interventions could be used to obtain this information: clinical interviews, surveys, projective tests and other personality tests; but one instrument in particular, the repertory grid test, appears to be very favorable for eliciting this desired knowledge (Mottram, 1985). This instrument, developed by George Kelly (1955), has been applied to a variety of fields, in both clinical and educational settings (see Neimeyer, 1988; and, Neimeyer & Neimeyer, 1987).

The repertory grid can be used to obtain differentiation and integration scores for an individual. Differentiation is defined as the number of different dimensions of judgement an individual uses when making a decision (Bodden, 1970), whereas integration is explained as the level of organization the cognitive system can incorporate in the decision-making process (Cochran, 1977). The repertory grid's objective yet personal approach has significant benefits when seeking to apply it to the sensitive and complex issue of eating disorders (see Mizes and Christiano, 1995, for a review of questionnaires, procedures, and methods "used in the assessment of eating disorder cognitions," p.95).

Fransella and Crisp (1970) and Crisp and Fransella (1972) were the first to apply the use of a repertory grid to the area of eating disorders and did so in a case study context. More specifically, Crisp and Fransella (1972) administered a series (seven testing occasions) of repertory grids to two anorexic women during their course of treatment at a

hospital. The two grids were constructed with differing elements, and sometimes with different constructs. Crisp and Fransella named one grid a "people" grid, the other a "fashion model" grid. The former grid included elements of a variety of people including the patient at specific principal weights (e.g., her weight before puberty). Its constructs were both elicited and imposed (provided) in nature. The latter grid was comprised of 10 elements that were 10 pictures of women from a fashion magazine and all of its constructs were imposed (e.g., helpful and kind, mature, irritable).

Their results suggested that those suffering from this particular eating disorder are not likely to improve until their weight is no longer a significant determining factor to their sense of self. During the recovery process significant changes became evident among the correlations of constructs. For example, one of the women initially construed the construct "mature" as very related to the construct "likely to become pregnant." Later, at the end of treatment, the same woman exhibited negative correlations between these constructs. Crisp and Fransella interpreted this change as reflecting the woman's growing sense of identity and her ability to discriminate more broadly among constructs: "She appears to have swung from one pole of a single limited way of construing the world to the other pole" (p. 405).

Button (1983) elaborated on Crisp and Fransella's approach and used a repertory grid technique both before and after treatment with a subject pool of 20 inpatient anorexics. Using a repertory grid consisting of 20 elements (comprised of the names of 10 important people in the patient's life and 10 provided elements such as "Me," "Me if I Was Overweight," and "Me as I Would Ideally Like to Be") and 20 constructs, he found that, overall, these women construed themselves in relation to their weight more heavily prior to treatment than after treatment. However, these same women finished treatment

without any alternative self-construction. Their post-treatment view of self was ambiguous, and subsequently, they were more likely to relapse.

In 1984, Hutton sought to draw upon Crisp and Fransella's (1972) and Button's (1983) research aimed at applying repertory grid methodology to the study of eating disorders. She administered and then analyzed the cognitive measures associated with 4 groups of participants: anorexics, bulimics, recovered anorexics, and a control group. Hutton observed that the former two groups (those representing disordered-eating symptomatology) exhibited a "tendency to attribute different personality traits to themselves at different body weights" (p. 353). This work supports the current's study's goal that seeks to document the nature and extent to which perceived weight influences personal, interpersonal, and vocational domains of function.

An often-cited study by Neimeyer and Khouzam (1985) provides additional evidence regarding the utility of the repertory grid technique as applied to the area of eating disorders. They examined the cognitive processes of high and low "restrained eaters" by using repertory grids to obtain cognitive complexity scores (i.e., differentiation scores). Neimeyer and Khouzan then compared the complexity scores of both these groups and found that high restrainers exhibited less complex systems in a variety of eating situations compared to the low restrainers. In other words, the high restrainers possessed fewer dimensions (i.e., were less differentiated) which limited their ability to flexibly engage in interpersonal situations: "More restrained eaters see themselves as having fewer alternatives available in relation to eating and . . . therapy may be aimed, in part at expanding their repertoire of self-constructions" (p. 368).

Other personal construct research that underscores the applicability of personal construct theory to eating disorders can be found in Button's 1993 work. In this

publication, Button provides an instructive narrative regarding the interplay of these two fields of study. He describes how eating-disordered individuals typically have one broad interpretation of the world: they focus on weight. Button further notes that they are similar to noneating-disordered people in that they will envision particular events in relation to domains of interpersonal interactions and vocation, yet they might "also have particularly important anticipations with regard to weight, food and eating" (p.34). His description of this phenomena is important:

faced with an invitation to go out to a party, this is interpreted less as an opportunity for fun, meeting someone, letting one's hair down, getting drunk, exploring ideas, making love, etc., than as a matter of weight/eating: 'I'm too fat' . . . 'I'd have to eat' (p.32).

Thus, Button uses personal construct theory to assist him in conceptualizing eating-disordered individuals. He views these individuals as those who use food, weight and eating behaviors as a way of predicting their intrapersonal and interpersonal worlds. Each person is unique in their various interpretations of self and others, and, a personal construct orientation respects this individualism.

Given the role that sociocultural and personal construct theory factors have in the understanding of eating disorders, the current study sought to extend previous work in this area in two ways. In particular, we wanted to test the (1) generalizability of cognitive/structural features across personal, interpersonal, and vocational domains; and, (2) the implications that perceived weight gain may have on personal, interpersonal, and vocational areas of functioning (suggesting the centrality or importance of weight in various domains of the individual's experience).

Purpose and Hypotheses of the Study

The studies discussed in this chapter suggest the likelihood that the cognitive features associated with an eating disorder extend beyond the domain of eating behaviors, per se. In other words, these effects are likely to extend across numerous domains, including overt physical characteristics, interpersonal functioning, and vocational pursuits. Thus, this study explored these potential widespread effects and used previous work in this area (personal construct theory as applied to eating disorders) as its foundation (Button, 1983, 1993, 1996; Crisp & Fransella, 1972; Fransella & Crisp, 1970; Neimeyer & Khouzam, 1985). In so doing, it examined self as well as other-construing differences that might exist between restrained eaters and non-restrained eaters. This study compared the cognitive complexity scores (differentiation and integration) of High and Low eating-disordered individuals, as determined by high and low scoring on the Eating Disorders Inventory (Garner et al., 1983).

Two main hypotheses were central to the study. First, we hypothesized that women exhibiting greater eating-disordered characteristics would be more integrated and less differentiated than women exhibiting fewer eating-disordered characteristics, and that this finding would extend across all three domains of experience (personal, interpersonal, and vocational). The former part of this hypothesis was supported by previous personal construct and eating disorders research findings, and the latter part was an attempt to generalize those findings.

We also hypothesized that the group characterized by more eating disorder symptomatology would anticipate greater changes across personal, interpersonal, and vocational domains if confronted with sudden weight gain (20% of their current weight). This second hypothesis was based on previous work that revealed eating-disordered

women possess more integrated cognitive systems than noneating-disordered women. In other words, a significant change in a disordered-eating woman's tightly construed construct system (e.g., weight gain) introduces many implications for other constructs in the system (e.g., personal, interpersonal, and vocational functioning).

Given these two main hypotheses, we also predicted significant correlations between levels of Eating Disorders and measures of cognitive differentiation (negative correlation) and integration (positive correlation). Additionally, EDI scores were expected to be correlated with the degree of change implied by weight gain, with higher EDI scores being positively correlated with the greater degree of implied changes in personal, interpersonal, and vocational domains of experience.

In order to assess further the importance of these constructs in relation to a woman's personal, interpersonal, and vocational functioning, we also wanted to assess the importance of weight-related constructs in the systems of eating-disordered women.

Given that women exhibiting disordered-eating perceive themselves as needing to strive for perfection or "success" in many areas of their lives (Bruch 1978; Sanford & Donovan, 1984; Wolf, 1991), this "superwoman" expectation of self may extend to others as well.¹⁴ In fact, Beebe and his colleagues (1996) investigated the extent to which this superwoman phenomenon may exist as related to weight by comparing whether "women who focus on their own bodies place a similar focus on body shape when evaluating others" (p. 415). They found that when presented with picture slides of women in various situations, high scorers on the Eating Attitudes Test (Garner & Garfinkel, 1979) tended to

¹⁴See Hayes' (1986) "The Superwoman Myth" in which this so-called myth is still endorsed by many women who have high expectations for their professional and personal lives.

focus on the weight-related and body shape features of women in the pictures. While this finding did not reach statistical significance, results were in this direction.

Thus, in light of the research studies that have revealed the extent to which disordered-eating women may focus on others' body shapes as well as their own, the authors of this study anticipated that the High Eating-Disordered group's construct importance for evaluating other women would be in the order of personal, interpersonal, and vocational domains of experience. The direction of this hypothesis was also influenced by the sociocultural recognition that women are socialized to sharpen their social and interpersonal skills, while maintaining a "perfect" personal physical image (Bruch, 1978; Hayes, 1986; Wolf, 1991).

Relatedly, results of a study by Broverman and her colleagues (1970) indicated that interpersonal constructs are prominent to a women's perceived sense of well-being. Interpersonal characteristics that these researchers found to be typically associated with healthy women included items such as "very talkative . . . very tactful . . . very gentle . . . very aware of feelings of others . . . very quiet" (p. 3).

And, while there has been some inquiry as to how women unduly concerned with weight and body shape regard others' physical selves, there has been little interest or attention regarding how much these women might consider weight-related constructs as central to their evaluations of men. In other words, while preliminary research is tending to suggest that women who evaluate the many parts of themselves in relation to weight may also hold other women to a "weight-comparison" stick, research has not explored whether or not this comparison also extends to their appraisal of men.

Although speculative, we expected women to place greater importance on constructs concerning vocations when construing men, followed by interpersonal, and

personal constructions. This expectation was based on results of research such as that conducted by Broverman et al., (1970). Specifically, they found that healthy male attributes were typically associated with power and autonomy, both of which are traits most often obtained via a man's occupation.

In summary, a series of predictions were made regarding the two groups of Eating-Disordered women (High and Low) across the three domains of experience (personal, interpersonal, and vocational). Specifically, main effects for EDI score were predicted along structural measures of differentiation and integration, construct implications, and construct importance; Individuals scoring high on the EDI (High Eating-Disordered) were expected to exhibit significantly higher levels of integration, implications, construct importance, and lower levels of differentiation compared to individuals scoring low on the EDI (Low Eating-Disordered). These hypotheses were tested within the context of a quasi-experimental research design, as detailed in the following chapter (Chapter 3).

CHAPTER 3 METHODOLOGY

The primary purpose of this study was to describe and explore the cognitive features and differences between females who differ in their eating and body shape attitudes, feelings, and behaviors. In particular, this research sought to determine the extent to which these differences may generalize across domains of personal construction (personal, interpersonal, and vocational domains).

Participants

Participants consisted of 40 female students enrolled in undergraduate Introductory Psychology classes at a large southeastern university. These students were selected from a larger sample (n=671) of undergraduates based on their extreme scores on subscales of the Eating Disorders Inventory (Garner et al., 1983; and see Pre-Screening below). Students voluntarily participated in the study with the understanding that its intent was to investigate decision-making in relation to appearance, personality, and vocation. Students were able to partially fulfill course requirements by participating in the study. The mean age of the group was 18 years with a range of 17 to 21 years.

Instruments and Procedure

Prescreening

In order to secure samples of high and low eating disordered women, three subscales of the EDI were administered to a total of 671 undergraduate students as part of a large pretesting session. Ensuring participation of both high and low scorers on the selected EDI subscales was necessary for posttesting (see below). Participants (n=671)

were arranged according to their preadministration testing scores on the Drive for Thinness subscale, Bulimia subscale, and Body Dissatisfaction subscale, from the highest to lowest scores (See Table 3-1 for relevant means and standard deviations). Specifically, a score for each participant for each of the three subscales was obtained. Only those participants (n=182) who scored highest (top 33 percentile; n=98) or lowest (bottom 33 percentile; n=84) on all three of the selected EDI subscales were selected for *potential* inclusion in the study (Garner et al., 1983).¹

¹ Specifically, for each of these three subscales, participants were asked to respond to a series of related statements with either an "Always," "Usually," "Often," "Sometimes," "Rarely," or "Never" answer. (See Appendix A). This 6-point response system is generally scored by weighing the responses from 0 to 3, with a score of 0 being assigned to those 3 responses farthest away in directions from the symptomatic direction, whereas a score of 1, 2, or 3 is assigned to those responses in the symptomatic direction.

The basis for this 0-3 scoring system as opposed to a 1-6 scoring system is grounded in a theoretical discussion (see Garner & Olmsted, 1991). It is believed by some that evidence of symptomatology exists only for those responses weighted 1-3. All responses that might have otherwise received a 4-6 rating if using a 1-6 scoring system, are instead all weighted a 0, as they are assumed to be nonsymptomatic, and hence should not contribute to the total subscale score that reflects psychopathology.

Another scoring system, however, is supported by Schoemaker, Strien, and Staak (1994). They recognized that the EDI is becoming more frequently and widely used as a screening instrument for nonclinical populations and subsequently, questioned the integrity of the psychometric properties of the transformed scoring system (transforming the 6 point responses into 4 point responses) when studying a nonclinical population. These researchers found that a nontransformed scoring system (using a 1-6 scoring system and not a 1-3 system) yields higher validity scores which also reflects increased sensitivity of the instrument. Other researchers have used untransformed subscale responses and argue that in so doing they obtain "a full range of scores" and that the EDI becomes more sensitive to differences between participants (Thompson, Berg, & Shatford, 1987, p. 230). Thus, without transforming the point-response items, some researchers believe that the EDI "would not differentiate the subject responding 'sometimes' from another who responded 'never'" (Thompson et al., 1987, p. 230).

In this study, an untransformed (0-5) scoring system was implemented, for both theoretical as well as empirical reasons. First, researchers sought to respect the delineation of symptom-evidence responses from nonsymptom-evidence responses (which is congruent with the 0-3, transformed scoring system) by selecting only those participants who scored either 0-1 on all three subscales to be included as part of the most extreme symptomatic group. Similarly, we wanted only those participants who scored either a 4 or

Table 3-1
Potential Participants' Prescreening Means (and Standard Deviations) Organized by Percentiles

EDI Subscale	Bottom 33% (n=84)	Middle 33% (n=489)	Top 33% (n=98)
Drive for Thinness	.61 (.41)	2.11 (1.14)	4.08 (.53)
Bulimia	.29 (.15)	.79 (.48)	1.78 (.73)
Body Dissatisfaction	1.10 (.58)	2.67 (1.03)	4.23 (.55)

These prospective participants (n=182) were then called by a research assistant who started calling those participants who scored in the extreme (i.e., highest and lowest scorers). This assistant informed these prospective participants of a study they might wish to participate in as part of their Introductory Psychology research requirement. Calling continued in stepwise progression until 40 volunteers (20 participants who scored in the top third percentile or "high" EDI scorers, and 20 participants who scored in the bottom third percentile or "low" EDI scorers) were obtained for the study. (See Table 4-2, Results, for relevant means and standard deviations).

Eating Disorders Inventory

The original Eating Disorder Inventory (Garner et al., 1983) is a widely used (Rosen, Silberg, & Gross, 1988), 64-item self-report index that is designed to provide descriptive information relevant to psychological functioning and eating disorders. Its eight subscales (*Drive for Thinness, Bulimia, Body Dissatisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, Interoceptive Awareness, and Maturity Fears*)

5 on all three subscales to be included as part of the least extreme symptomatic group. However, due to sample size problems, we instead conducted a tertile split on all three subscales. We then identified those participants scoring highest (top 33% on each of the three subscales) and those participants scoring lowest (bottom 33% on each of the three subscales). Thus, those exhibiting the most extreme and least extreme responses were identified as potential testing participants.

"have been used to select or define criterion groups in studies of body satisfaction/dissatisfaction, weight preoccupation, and perfectionism" (Garner & Olmsted, 1991, p. 5). Additionally, the EDI has been used with nonclinical populations using transformed and untransformed responses (see Schoemaker et al., 1994, for a discussion).

The first three of the EDI's subscales, Drive for Thinness, Bulimia, and Body Dissatisfaction, are recognized as those EDI subscales that assess attitudes, feelings, and behaviors related to eating and body shape. As other researchers have done (see Heatherton et al., 1995), we determined that these three subscales were most applicable to our prescreening needs. The first of these, the Drive for Thinness subscale (7 items, e.g., "I am terrified of gaining weight," "I am preoccupied with the desire to be thinner"), is designed to measure a person's undue concern with weight (including fear of weight gain and regard for dieting). High scores on the Drive for Thinness subscale reflect excessive attention to dieting and weight as related to an unrelenting desire for thinness.

Relatedly, the Body Dissatisfaction subscale (9 items, e.g., "I think that my stomach is too big," "I think my hips are too big") seeks to identify individuals who are displeased with their body shape or size, whereas the Bulimia subscale assesses the "tendencies to think about and engage in bouts of uncontrollable overeating (bingeing)" (Garner, 1991, p. 5). Thus, high scores on the Body Dissatisfaction subscale reflect a greater unhappiness with one's physique, and high scores on the Bulimia subscale (7 items, e.g., "I have gone on eating binges where I felt that I could not stop," "I eat moderately in front of others and stuff myself when they're gone") identify individuals likely to binge which may be followed by self-induced purging.

Clinicians and researchers alike believe that the five remaining subscales (Perfectionism, Ineffectiveness, Interpersonal Distrust, Interoceptive Awareness, and

Maturity Fears) assess more general psychological traits that are clinically relevant to eating disorders. We chose to also include the first of these, the Perfectionism subscale, in our testing administration because of its critical role in the development and maintenance of eating disorders (Bruch, 1978). Also, it is recognized as important to the assessment of eating disorders (Button, 1993; Cooper, 1995; Heatherton et al., 1995; Hewitt, Flett, & Ediger, 1995; Slade, 1982; Srinivasagam et al., 1995; Terry-Short, Owens, Slade, & Dewey, 1995; Thompson et al., 1987; White, 1992) and hence its inclusion in the Eating Disorders Inventory (Garner et al., 1983). Items on this scale (6 items, e.g., "I feel that I must do things perfectly or not do them at all," "I have extremely high goals") measure the extent to which one believes "that only the highest standards of personal performance are acceptable" (p. 6).

The EDI generally possesses favorable psychometric values, with an average item-total scale correlation of .63 (Garner et al., 1983), an internal consistency for the subscales reported as Cronbach alphas all above .80 (Garner et al., 1983), and evidence for construct validity as demonstrated by "congruence between clinicians' ratings and patients' subscale scores" (p. 28). Additionally, evidence of convergent and discriminant validities is indicated by the high correlation of the Drive for Thinness subscale with the Eating Attitudes Test (Garner & Garfinkel, 1979), $r = .88$, $p < 0.001$, as well as the significant correlations of both the Bulimia and Body Dissatisfaction subscales with "restraint" (Herman & Polivy, 1975), $r = .44$, $p < 0.001$ and $r = .42$, $p < 0.001$, respectively.

Informed Consent

Research assistants verbally informed all participants about the study (see Appendix B). Specifically, they were told that they would be asked to complete 6 pen and paper forms, that their responses were anonymous, and that they should not write their

name or any identifying information on the forms so as to protect their identity. Participants did not have to answer any question they did not wish to answer and could choose not to participate or could end their participation at any time. They were instructed about the expected length of time needed to complete the study and were asked if they had any questions. They were provided with the names and telephone numbers of the researchers should they have any questions about the study. Finally, they were reminded that the study was confidential and were asked not to discuss it with anyone. All participants chose to continue to participate in the study.

Repertory Grids

All participants received three different Grid Forms in randomized order: a Personal Grid Form (see Appendix C), an Interpersonal Grid Form (see Appendix D), and a Vocational Grid Form (see Appendix E). In each case, the administration of the repertory grid consisted of two stages. In the first stage, participants were provided with a list of 10 elements (role titles), "for which the (participants) ha(d) to supply the names of people for each role title" (Button, 1993, p. 51). These elements included Yourself, Spouse or Significant Other, A Same-Sex Friend, An Opposite-Sex Friend, A Parent, A Person You Dislike, An Overweight Person, Someone in Authority, A Successful Person, A Favorite Professor. The selection of these 10 role titles was guided by other research that implemented use of repertory grid procedures with eating disordered women as the population of interest (Butow et al., 1993; Clark, Hershgold, & Rigdon, 1984; and, see Button, 1993 for a discussion on element selection).

In the second stage of the repertory grid administration, the participants were asked to rate each of the 10 persons (as identified and supplied by the participants in the previous step) along three sets of 10 constructs: one set of 10 personal constructs, one set

of 10 interpersonal constructs, and one set of 10 vocational constructs in randomized order. For example, on the Personal Grid Form participants were asked to rate each of the 10 people on primarily physical attribute constructs that included Underweight/Overweight, Attractive/Unattractive, Firm/Flabby, Feminine/Masculine, Tall/Short, Graceful/Awkward, Photogenic/Not Photogenic, Well-groomed/Sloppy, Well-Proportioned/Ill-Proportioned, Good Complexion/Poor Complexion. The majority of these constructs were generated by the author because they reflect the physical attributes commonly regarded as important factors in the favorability of a personal image. However, some of these constructs have also been included in other studies (Butow et al., 1993; Mottram, 1985).

Similarly, on the Interpersonal Grid Form participants were asked to rate each of the 10 people on the following constructs: Stubborn/Not Stubborn, Competitive/Cooperative, Confident/Insecure, Friendly/Hostile, Authentic/Fake, Angry/Not Angry, Energetic/Not Energetic, Structured/Spontaneous, Optimistic/Pessimistic, Intelligent/Not Intelligent. This set of constructs was also created by the author who sought to include constructs that could be characteristics of an individual's personality. However, some of these elements have been found in other personal construct research as applied to eating disorders (Butow et al., 1993). Hence, they are also important traits that characterize a person's interpersonal style.

Lastly, all participants completed the Vocational Grid Form. They were asked to rate one of their parent's vocations on the construct "High vs. Low Salary" on a 6-point Likert-type scale. They then continued to rate each of the 10 people on the remaining bipolar constructs, including Much Education/Little Education, High Prestige/Low Prestige, Influences People/Doesn't Influence People, Creative/Not Creative, Helps

People/Doesn't Help People, Much in Demand/Seldom in Demand, Interesting Work/Dull Work, Works with Thoughts/Works with Hands, Offers Much Security/Offers Little Security. These constructs were derived from Bodden's (1970) Cognitive Differentiation Grid, the single most commonly used repertory grid in the study of career counseling and vocational psychology.

Two structural measures, differentiation and integration, were then derived from each of these three grid from types for each participant using a computer program by Landfield (1977). Differentiation refers to the number of different dimensions an individual uses when making decisions, whereas integration refers to the degree of correlation among these dimensions (Kelly, 1955). The reliabilities associated with these two measures have been reported as generally high across various adaptations of the retest, with a one-week test-retest reliability for integration reported as $r = .75$; and a one-week test-retest reliability for differentiation scores as ranging from $r = .73$ (Russ-Eisenschenk & Neimeyer, 1996) to $r = .89$ (Feixas, Moliner, Montes, Mari, & Neimeyer, 1993).

After having completed the three grids (Personal, Interpersonal, and Vocational) in randomized order, participants were asked to complete a fourth grid, a modified Implications Grid (see Appendix F). The Implications Grid (Hinkle, 1965) is based on Kelly's (1955) assumption that personal construct systems are hierarchically organized, with some constructs occupying relatively important, central, or superordinate positions within the system. The implications grid provides a direct measure of this hierarchical organization by asking the participants to identify the degree of anticipated changes in their personal construct system associated with a specific change in themselves. For example, a participant might be asked to imagine changing from being an "outgoing"

person to a relatively "shy" person. They would then be asked, "What other constructs would you imagine that you would change along if you were to change from being outgoing to relatively shy?"

In this study, a modified version of the implications grid was used. Specifically, participants were asked to imagine that they had experienced a 20% increase in their body weight (i.e., a 150-pound participant was told to imagine that she now weighs 180 pounds). In order to ensure that they performed this task correctly, they were then asked to write down both their current weight and newly imagined increased weight. To assist participants in determining their new weight, a conversion chart was included on the same page as the implications grid they were to work on next (see bottom of Appendix F). Research assistants were careful to assure participants of the confidentiality of their responses in this, and other phases of the study.

Participants were then given the three sets of 10 constructs already used in the personal, interpersonal, and vocational grids in random order and asked to indicate, given a 20% increase in their weight, "How much would you expect to change along each of these dimensions?" Participants were instructed to respond to this question by placing a checkmark next to "No Change," "Little Change," "Moderate Change," or "A Lot of Change" for each of the thirty constructs.

Three dependent measures for each participant were calculated, reflecting (1) the degree of anticipated changes in personal constructs (personal implications), (2) the degree of interpersonal changes (interpersonal implications), and (3) the degree of vocational changes (vocational implications).

And finally, in order to explore the relative importance of personal, interpersonal, and vocational constructions for judging other people, we asked High and Low Eating-

Disordered groups to rate the importance of each of the three. Specifically, participants were asked to place a checkmark next to each of the 30 constructs (10 personal constructs, 10 interpersonal constructs, and 10 vocational constructs) indicating whether they viewed it as being "Not Important," "A Little Important," "Moderately Important," or, "Very Important" when they judge individuals of their own sex (see Appendix G) and when they judge individuals of the opposite sex (see Appendix H). Mean ratings of importance were used to reflect the relative construct importance of personal, interpersonal, and vocational constructs in the groups' construct systems.

CHAPTER 4 RESULTS

Descriptive

Participants were placed in one of two groups (see Methodology) based on their pretest scores on three subscales of the Eating Disorders Inventory (Garner et al., 1983). Participants scoring lowest ($n=20$) during pretesting on the Drive for Thinness, Body Dissatisfaction, and Bulimia subscales had a mean age of 18.35 ($SD=.745$; range=18-21), weight of 124.95 pounds ($SD=16.9$; range=95-165 lbs.), and were primarily Caucasian (70%), followed by Hispanic (10%), Other (10%), Black (5%), and Asian (5%). For clarity purposes, these low-scoring participants were identified as "Low Eating-Disordered." It is important to note, however, that this label is used descriptively, not diagnostically, and reflects a group of participants who evidence few characteristics associated with eating disorders, such as drive for thinness ($M=.59$, $SD=.43$), body dissatisfaction ($M=.98$, $SD=.51$), and bulimic features ($M=.29$, $SD=.15$), as measured by the three subscales of the EDI.

Similarly, participants scoring highest ($n=20$) during pretesting on the three EDI subscales had a mean age of 18.55 ($SD=28.95$; range=17-21), weight of 139.45 lbs. ($SD=28.95$; range=112-250), and were primarily Caucasian (65%), followed by Other (25%), Hispanic (5%), and Asian (5%). These participants, identified as "High Eating-Disordered," should not be interpreted as participants who have been clinically diagnosed as having an eating disorder. Rather, these high scoring individuals are those reporting

more eating disorder characteristics than the Low Eating-Disordered participants, along measures of Drive for Thinness (M=3.04, SD=.52), Body Dissatisfaction (M=4.29, SD=.59), and Bulimia (M=1.76, SD=.89) subscales of the EDI. (See Table 4-1 for relevant means and standard deviations).

Table 4-1
Actual Participants' Prescreening Means (and Standard Deviations) on Selected EDI Subscales and Organized by High and Low Scores

EDI Subscale	Low Scorers (n=20)	High Scorers (n=20)
Drive for Thinness	.57 (.42)	3.04 (.52)
Bulimia	.29 (.15)	1.76 (.89)
Body Dissatisfaction	.80 (.50)	4.29 (.59)

Note that it is difficult to compare these scores with those found in clinical and subclinical studies due to our use of the 0-5, nontransformed scoring system described in the methodology chapter. Given our belief that our nontransformed scoring system provides a more sensitive (i.e., extreme) sample than what might be found using a transformed (i.e., 0-3) scoring system (see discussion of this in Chapter 3), we believe our Low Eating Disorder group is comparable to healthy women used in other studies (Schoemaker et al., 1994), as well as when compared to the women used in the development of the EDI (Garner et al., 1983). However, results of a clinical study that did not transform the Bulimia subscale scores suggests that our high scorers on the Bulimia subscale reflects a "bulimic-like" (Thompson et al., 1987, p. 223) group. Thus, while it appears our two groups defined as High or Low Eating-Disordered are clearly

distinguishable from each other, the former represents a more mildly subclinical population than what is typically found in clinical studies that use the EDI.

Analyses

A series of one-way and two-way ANOVAs were conducted as preliminary tests to confirm significant differences between the two groups along the measured variables of interest (Drive for Thinness, Body Dissatisfaction, and Bulimia). These manipulation checks were followed by a series of ANOVAs and correlations designed to test the hypotheses of the study.

Manipulation Checks

Pretest EDI scores were used to select high and low EDI scoring participants and these pretest scores determined their assignment to Low or High Eating-Disordered groups. Selected EDI subscales were administered a second time, at the beginning of the experimental session itself, in order to confirm the reliable classification of the participants into high or low eating disorder groups. All of the EDI subscales administered during pretesting were significantly correlated with the same EDI subscales administered during the experimental session¹. Manipulation checks were then performed by testing the group differences between High and Low Eating-Disordered groups along measures of Drive for Thinness, Body Dissatisfaction, Bulimia, and Perfectionism.

¹ Specifically, and as predicted, the correlations between the subscales' preadministration scores and experimental session scores were $r = .82$, $p < .0001$ for the Drive for Thinness subscale, $r = .84$, $p < .0001$ for the Body Dissatisfaction subscale, and $r = .45$, $p < .01$ for the Bulimia subscale.

Drive for thinness. As expected, an analysis of the scores for this subscale found a significant difference between the two groups. Specifically, High Eating-Disordered participants reported a significantly higher mean ($M=3.55$, $SD=.79$) on the Drive for Thinness subscale compared to Low Eating-Disordered participants ($M=.74$, $SD=.54$; $F(1,38)=171.88$, $p<.0001$). This confirms the validity of participants' classification along the Drive for Thinness subscale of the EDI.

Body dissatisfaction. Mean scores revealed a significant difference, $F(1,38)=102.69$, $p<.0001$, between the two groups of women; High Eating-Disordered participants reported a mean of 3.84 during testing ($SD=.88$), whereas Low Eating Disordered participants reported a mean of 1.29 ($SD=.70$). These (expected) findings support the validity of the groupings in relation to the Body Dissatisfaction subscale of the EDI.

Bulimia. The Bulimia subscale indicated significantly different means for the two groups of participants. Specifically, High Eating-Disordered women demonstrated a Bulimia subscale mean of 1.86 ($SD=.95$), whereas Low Eating-Disordered women reported a significantly lower mean of .41 ($SD=.16$), $F(1,38)=43.66$, $p<.0001$. Thus, as predicted, the group composed of individuals highly concerned with weight and body shape was significantly more likely to be engaging in bulimic-type behaviors than were individuals in the low eating disorders group.

Perfectionism. The Perfectionism subscale, the final EDI subscale tested, is unlike the aforementioned EDI subscales because it was not included in pretesting (due to external restrictions regarding number of questions allotted to each researcher for

pretesting). It was included in the testing administration along with the Drive for Thinness, Body Dissatisfaction, and Bulimia subscales, however, because of its role in the eating disorders literature (see Methodology).

In this study the two groups of women tended to score differently along the measure of perfectionism, but this tendency failed to reach statistical significance, $F(1,38)=2.98, p<.09$. High Eating-Disordered participants reported a mean of 3.28 ($SD=.87$) for the Perfectionism subscale whereas Low Eating-Disordered participants had a Perfectionism subscale mean of 2.72 ($SD=1.14$).

In general, therefore, these manipulation checks supported and clarified the nature of the two groups. Compared to the Low Eating Disordered group, the High Eating-Disordered group showed significantly higher drive for thinness, were more dissatisfied with their bodies, and engaged in more bulimic-type behaviors, and tended toward greater perfectionism as measured by the EDI's corresponding subscale scores. See Table 4-2 for relevant means and standard deviations.

Table 4-2
High and Low Eating-Disordered Mean Scores (and Standard Deviations) on Selected EDI Subscales

EDI Subscale	Low Scorers (n=20)	High Scorers (n=20)	p
Drive for Thinness	.74 (.54)	3.55 (.79)	.0001
Body Dissatisfaction	1.29 (.70)	3.84 (.88)	.0001
Bulimia	.41 (.16)	1.86 (.95)	.0001
Perfectionism	2.72 (1.14)	3.28 (.87)	.09

Primary Analyses

Following the analyses concerning the effectiveness of the experimental manipulations a series of ANOVA's were conducted to test the primary analyses of the study. These analyses included testing for predicted differences between High and Low Eating-Disordered groups along measures of cognitive differentiation and integration, as well as measures of weight-related implications and construct importance.

Cognitive differentiation. To test for predicted differences in cognitive differentiation, Functionally Independent Construct (FIC) scores were first calculated for the three repertory grids (personal, interpersonal, and vocational; see Appendices C-E; see Table 4-3) and these FIC scores were used in the 2 (Groups) by 3 (Construct Domain) mixed factorial ANOVA. Contrary to predictions, results indicated no significant main effect between the two groups, $F(1,38)=.29, p<.59$.

Table 4-3

Means (and Standard Deviations) for Group and Construct Domain Variables for Cognitive Differentiation Scores

Eating Disorder	Constructs		
	Personal	Interpersonal	Vocational
Low	10.20 (4.63)	9.95 (3.83)	7.20 (3.65)
High	11.10 (4.31)	8.10 (4.06)	6.60 (3.43)

A significant main effect for Construct Domain was revealed, however, $F(2,76)=13.69, p<.0001$. While no predictions were made for direction, the direction of the effect indicated that constructs in the Personal Domain showed the highest levels of

construct differentiation ($M=10.65$), followed by constructs in the Interpersonal ($M=9.03$) and Vocational ($M=6.9$) Domains, respectively.

No significant interaction was found between levels of Group and Construct Domain, $F(2,76)=1.84$, $p<.17$. (See Table 4-4).

Table 4-4
ANOVA for Group and Construct Domain Variables for Cognitive Differentiation Scores

Source	df	SS	MS	F	p
Eating Disorder	1	8.01	8.01	.29	.59
Construct Type	2	282.92	141.46	13.69	.0001
Eating Disorder X Construct Type	2	37.92	37.92	1.84	.17

Integration scores. This second set of structural scores was also analyzed using a 2 (Group) X 3 (Construct Domain) mixed factorial design. Contrary to predictions, results of the ANOVA indicated no significant main effect between the two groups, $F(1,38)=.38$, $p<.54$.

A significant main effect for Construct Domain was revealed $F(2,76)=12.62$, $p<.0001$. Although no predictions were made for direction, the direction of the effect indicated that the Vocational Domain showed the highest level of cognitive integration ($M=1372.85$), followed by constructs in the Interpersonal Domain ($M=1032.28$), and Personal Domain ($M=948.75$), respectively.

No significant interaction was found between levels of Group and Construct Domain, $F(2,76)=2.16$, $p<.12$. See Table 4-5 for relevant means.

Table 4-5
Means (and Standard Deviations) and ANOVA for Group and Construct Domain Variables for Cognitive Integration Scores

Eating Disorder	Constructs				
	Personal	Interpersonal	Vocational		
Low	911.55 (320.13)	1167.30 (283.25)	1362.30 (655.70)		
High	986.95 (357.77)	897.25 (261.15)	1383.40 (602.70)		

Source	df	SS	MS	F	p
Eating Disorder	1	100298.68	100398.68	.38	.54
Construct Type	2	4030952.55	2015476.28	12.62	.0001
Eating Disorder X Construct Type	2	690175.05	345087.52	2.16	.12

Implications of body weight change. The dependent variables (Implications of Body Weight Change within Personal, Interpersonal, and Vocational domains) measured here refer to the pen and paper form located in Appendix F. Participants were asked to assume that their current weight had suddenly increased by 20%, and then asked to rate (0=No Change, 1=Little Change, 2=Moderate Change, 3=A Lot of Change) how much they would expect to change along each of 30 dimensions (10 personal dimensions, 10 interpersonal dimensions, and 10 vocational dimensions) given their new weight.

Three measures were calculated for each participant, reflecting the degree of anticipated change across the personal dimensions (e.g., cleanliness), along interpersonal dimensions (e.g., competitiveness), and along vocational dimensions (e.g., education).

A 2 (Groups) by 3 (Construct Domain) mixed factorial ANOVA was applied to the measure of perceived implications for change (following a 20% increase in body

weight). The first factor was a between subjects factor and referred to level of eating disorder (High or Low), whereas the second factor was a within subjects factor reflecting the domain of the construct dimensions (personal, interpersonal, and vocational). Results revealed a significant main effect between the two groups, $F(1,38)=6.41$, $p<.02$ (See Table 4-6). As expected, the High Eating-Disordered Group demonstrated significantly higher anticipated change ($M=13.2$), in comparison to the Low Eating-Disordered Group ($M=9.25$).

Table 4-6
Means (and Standard Deviations) and ANOVA for Group and Construct Domain Variables for Anticipated Weight Changes

Eating Disorder	Constructs		
	Personal	Interpersonal	Vocational
Low	13.85 (4.88)	8.70 (5.59)	5.20 (4.19)
High	17.30 (4.31)	13.10 (5.85)	9.20 (6.64)

Note: Range = 0-30.

Source	df	SS	MS	F	p
Eating Disorder	1	468.08	468.08	6.41	.02
Construct Type	2	1409.15	704.58	120.16	.0001
Eating Disorder X Construct Type	2	4.55	2.28	.39	.68

A significant main effect was also found for Construct Domain, $F(2,76)=120.16$, $p<.0001$. Although no predictions were made for direction, the direction of the difference revealed that the greatest levels of expected change occurred along Personal constructs ($M=15.58$), followed by constructs in the Interpersonal ($M=10.9$) and Vocational ($M=7.2$) domains, respectively.

However, no significant interaction between Groups and Construct Domain was indicated, $F(2,76)=.39$, $p<.68$. Means and standard deviations also appear in Table 4-6.

Weighted evaluations for women. The 2 (Groups) by 3 (Construct Domain) mixed factorial ANOVA was applied to the measure of weighted evaluations for women. This measure reflected the relative construct importance of personal, interpersonal, and vocational constructs in the groups' construct systems. Contrary to predictions, no significant effect between the two groups, $F(1,38)=2.03$, $p<.16$, was indicated by the results, and relevant means are depicted in Table 4-7.

Table 4-7
Mean Ratings of Construct Importance (and Standard Deviations) by Group and Construct Domain for Evaluations for Women

Eating Disorder	Constructs			F	p
	Personal	Interpersonal	Vocational		
Low	9.65 (6.98)	19.10 (4.49)	10.25 (5.38)		
High	12.10 (6.69)	20.32 (4.07)	13.60 (6.98)		

Source	df	SS	MS	F	p
Eating Disorder	1	163.97	163.97	2.03	.16
Construct Type	2	1806.86	903.43	70.91	.0001
Eating Disorder X Construct Type	2	24.09	12.04	.95	.39

A significant main effect for Construct Domain was revealed, however, $F(2,76)=70.91$, $p<.0001$. Contrary to predictions, participants rated the Interpersonal Domain as being the most important construct domain when making judgments about other women ($M=19.71$), followed by the Vocational Domain ($M=11.97$), and Personal Domain ($M=10.88$).

No significant interaction was found between levels of Group and Construct Domain, $F(2,76)=.95$, $p<.39$.

Weighted evaluations for men. The 2 (Groups) by 3 (Construct Domain) mixed factorial ANOVA was also applied to the measure of weighted evaluations for men. Although no predictions were made, results indicated no significant effect between the two groups, $F(1,38)=3.03$, $p<.09$, and relevant means are depicted in Table 4-8.

Table 4-8
Mean Ratings of Construct Importance (and Standard Deviations) by Group and Construct Domain for Evaluations for Men

Eating Disorder	Constructs		
	Personal	Interpersonal	Vocational
Low	13.95 (6.97)	21.05 (3.72)	13.32 (6.88)
High	16.85 (5.54)	22.15 (4.03)	17.60 (5.47)

Source	df	SS	MS	F	p
Eating Disorder	1	206.23	206.23	3.03	.09
Construct Type	2	1002.82	501.41	38.52	.0001
Eating Disorder X Construct Type	2	54.62	27.31	2.10	.13

As expected, a significant main effect for Construct Domain was found, yet not in the predicted direction, $F(2,76)=38.52$, $p<.0001$. Participants rated the Interpersonal Domain as being the most important construct domain when making judgments about men ($M=21.68$), followed by the Personal Domain ($M=15.48$), and Vocational Domain ($M=15.46$).

No significant interaction between the levels of Groups and Construct Domain was revealed, $F(2,76)= 2.10$, $p<.13$.

Correlations Between EDI Subscales and Differentiation Scores

To explore further the possible relationship between levels of disordered-eating and levels of cognitive differentiation, a series of correlations was computed between the EDI subscales and cognitive differentiation scores. Contrary to predictions, all correlations failed to reach statistical significance, and these correlations are depicted in Table 4-9.

Table 4-9
Correlations for EDI Subscales and Personal, Interpersonal, and Vocational Differentiation Scores

EDI Subscale	Constructs		
	Personal	Interpersonal	Vocational
Drive for Thinness	.19	-.16	-.09
Bulimia	.01	-.16	-.08
Body Dissatisfaction	.05	-.18	-.09
Perfectionism	-.12	.07	-.12

Note: n = 40. None of the tabled correlations reached levels of statistical significance.

Correlations Between EDI Subscales and Integration Scores

A series of correlations was conducted between the EDI subscales and cognitive integration scores. In contrast with the insignificant correlational findings as related to differentiation scores, and as predicted, a number of significant relationships appeared between these subscales and integration scores.

First, the Drive for Thinness subscale, Body Dissatisfaction subscale, and Bulimia subscale were all significantly related to the integration scores derived from the interpersonal constructs. Second, both the Perfectionism subscale and Bulimia subscale

were significantly correlated with the integration scores for the personal grid types. See Table 4-10 for details concerning these correlations and their levels of significance.

Table 4-10
Correlations for EDI Subscales and Personal, Interpersonal, and Vocational Integration Scores

EDI Subscale	Constructs		
	Personal	Interpersonal	Vocational
Drive for Thinness	.05	-.39b	.05
Bulimia	.33a	-.32a	.09
Body Dissatisfaction	.19	-.40b	.08
Perfectionism	.41b	.05	.29

Note: n = 40

a = Statistically significant at $p \leq .05$.

b = Statistically significant at $p \leq .01$.

Correlations Between EDI Subscales and Construct Implications Scores

A series of correlations was conducted to identify any possible significant relationships existing between EDI subscales and construct implication scores. As expected, a number of such relationships materialized. Specifically, the Drive for Thinness subscale was significantly correlated across all types of implications (i.e., personal, interpersonal, and vocational implications) as were the Body Dissatisfaction and Bulimia subscales. The Perfectionism subscale failed to demonstrate any statistically significant relationship with any of the implications domain types. Table 4-11 depicts the specific correlations and their significance levels.

Table 4-11
Correlations for EDI Subscales and Personal, Interpersonal, and Vocational Implication Scores

EDI Subscale	Constructs		
	Personal	Interpersonal	Vocational
Drive for Thinness	.42b	.51b	.42b
Bulimia	.43b	.34a	.41b
Body Dissatisfaction	.45b	.50b	.43b
Perfectionism	.23	.11	.19

Note: n = 40

a = Statistically significant at $p \leq .05$.

b = Statistically significant at $p \leq .01$.

Correlations Between Participants' Actual Weights and Differentiation Scores

Correlations were conducted between participants' actual weights and their differentiation scores across all three grid types (i.e., personal, interpersonal, and vocational).² Although no predictions were made, results indicated that no significant relationship existed between the participants' actual weights and their differentiation scores across the different grid types, and Table 4-12 documents these findings.

Table 4-12
Correlations for Participants' Actual Weights and Personal, Interpersonal, and Vocational Differentiation Scores

	Constructs		
	Personal	Interpersonal	Vocational
Participants' Actual Weights	-.10	-.09	-.07

Note: n = 40. None of the tabled correlations reached levels of statistical significance.

² Note that the High and Low Eating-Disordered groups did not differ significantly in their actual reported weights ($t = -.31$, $df=38$, $p=ns$).

Correlations Between Participants' Actual Weights and Integration Scores

Likewise, correlations were also conducted between participants' actual weights and their integration scores. Although no predictions were made, and in contrast to correlations between actual weight and differentiation scores, there was one significant relationship existing between participants' actual weights and integration scores.

Specifically, as highlighted in Table 4-13, a significant relationship was found between participants' actual weights and their integration scores on the personal grid form.

Table 4-13
Correlations for Participants' Actual Weights and Personal, Interpersonal, and Vocational Integration Scores

	Constructs		
	Personal	Interpersonal	Vocational
Participants' Actual Weights	.33*	-.09	.16

Note: n = 40

* Statistically significant at $p \leq .05$.

Correlations Between Participants' Actual Weights and Implications Scores

Lastly, a series of correlations was conducted between participants' actual weights and their implication scores across the three grid types. Again, while no predictions were made, several significant relationships were found to exist. In fact, participants' actual weights were significantly correlated with all three grid types, including personal, interpersonal, and vocational. See Table 4-14 for the specific correlations and their level of statistical significance.

Table 4-14
Correlations for Participants' Actual Weights and Personal, Interpersonal, and Vocational Implications Scores

	Constructs		
	Personal	Interpersonal	Vocational
Participants' Actual Weights	.42*	.46*	.67*

Note: n = 40

* Statistically significant at $p \leq .01$.

CHAPTER 5 DISCUSSION

Overview

This chapter discusses the relevant findings of this study in relation to the literature reviewed and hypotheses provided in chapter two. The first section reiterates the study's predictions concerning structural scores (differentiation and integration), implication scores, and construct importance ratings, and then considers their relationships with the results. The latter part of this chapter addresses the study's limitations, and also provides potential directions for future research in the area of personal construct theory as applied to eating disorders.

Differentiation

Drawing upon previous findings, the author of this current study anticipated that the High Eating-Disordered group would demonstrate significantly lower levels of cognitive differentiation compared to the Low Eating-Disordered group, and that this would generalize across all grid types (i.e., personal, interpersonal, and vocational). Contrary to these predictions, no main effect between the two groups was found for this variable.

Relatedly, a significant negative correlation was expected to exist between EDI scores (Garner et al., 1983) and measures of differentiation, but no such relationship was found.

Differences did occur in the extent to which women differentiated among the three construct domains, however. While the direction of the main effect was not predicted, a

discussion of this finding deserves attention. The direction of this effect indicated that personal constructs generated the greatest levels of differentiation, followed by interpersonal and by vocational constructs, respectively. In other words, both groups (High and Low Eating-Disordered) possessed more dimensions in which to evaluate their personal (i.e., physical) selves than their interpersonal, or vocational selves.

Given the extent to which sociocultural messages emphasize the importance of a woman's appearance, the direction of this construct effect for differentiation is not surprising. In short, women have been acculturated to attend to, and distinguish among, multiple features of their personal appearance (e.g., size, weight, body shape, physical attractiveness, etc.), and this difference in the levels of differentiation may be a reflection of this attention.

Integration

The results of this study failed to confirm the hypotheses related to the second dependent variable of interest, integration. Again, drawing upon previous literature in this area, it was believed that the results would replicate a particular research trend that has linked eating-disordered persons with more highly integrated cognitive systems than noneating-disordered persons.

For the most part, this study's predictions were not substantiated. No main effect between the two groups for integration scores was found; thus, one is unable to assert that the High Eating-Disordered group significantly differed from the Low Eating-Disordered group in the tightness or degree of organization exhibited in their cognitive system.

However, a significant relationship between two of the EDI subscales (Perfectionism and Bulimia) and integration scores for the personal grid forms did exist, but in the opposite of the predicted direction. In other words, significant negative

relationships were found between the Drive for Thinness, Body Dissatisfaction, and Bulimia subscales and the integration scores derived from interpersonal constructs.

These findings are puzzling. We might question whether the choice of interpersonal constructs used effected this outcome, or whether the High and Low Eating-Disordered groups can be compared with the disordered-eating women and healthy women samples used in other studies. Regardless, a reasonable interpretation for these mixed findings is difficult to provide.

Another unexpected yet significant finding related to integration deserves attention. A significant positive correlation between participants' actual weights and their personal integration scores was found. Thus, as the actual weight of the participant increased, so did the integration score for that participant ($n=20$). This finding, while intriguing, may only muddy our already confusing findings as related to integration scores. It appears to offer some indirect support to the well-documented finding that eating-disordered women typically possess highly integrative cognitive systems but it is limited in that it is correlational in nature and was only evident in the personal construct domain.

As with measures of cognitive differentiation, there was a main effect for Construct Domain along the measure of integration. The direction of this finding indicated that both groups (High and Low Eating-Disordered) exhibited the greatest level of integration, or organization, within their vocational construct domain, followed by their interpersonal construct domain, and lastly, within their personal construct domain.

One explanation for why both groups experienced a greater degree of organization or interrelatedness among constructs in the vocational domain may be due in part to the expanding scope of their identities. In other words, young women of today are more likely to pursue a "vocational" identity in addition to their interpersonal and personal

identities. Thus, the energy that women may be expending in order to develop and maintain a vocational or professional identity may be contributing to their greater ability to predict and make decisions in relation to their vocational functioning.

This explanation may further be supported when we recall that our sample consisted solely of college students. Thus, our participants, by nature of their selection, are invested in determining and then pursuing a major field of interest that will ultimately lead to a specific occupation. Thus, the participants in our sample may be intent on forging a professional identity.

Another sample selection demographic that might assist us in our interpretation of this construct domain directional finding is that the average age of our participants was eighteen. Many, if not most, individuals at this developmental age are experiencing intrapersonal and interpersonal distress. In other words, persons at this stage of development are likely seeking a better sense of self-understanding. They are searching for greater interpersonal (i.e., relationships with peers, significant others, family members) and intrapersonal (i.e., self) awareness. In all, this is the time for examining and revising interpersonal and personal identities, which may be reflected by the directional finding (i.e., vocational constructs exhibiting the greatest degree of integration, followed by constructs in the interpersonal construct domain, and lastly, by constructs in the personal domain) of this variable of interest.

Implications

It was hypothesized that the High Eating-Disordered group would be significantly more likely to anticipate substantial self-change should their body weight increase compared to the Low Eating-Disordered group. This main effect between the two groups was substantiated by the results, as was a main effect for construct type. Thus, the High

Eating-Disordered group reported that if their weight suddenly increased by 20%, they would experience a significant degree of change to occur in their physical sense of self (e.g., attractiveness, complexion, cleanliness), in their interpersonal characteristics (e.g., friendliness, confidence, optimism), and in their vocational (e.g., prestige, work satisfaction, job security) domains of function, respectively.

Relatedly, it was expected that the EDI subscales would be correlated with the degree of change implied by weight. More specifically, higher EDI scores were predicted to be positively correlated with the degree of implied changes in personal, interpersonal, and vocational domains of experience. Several significant relationships resulted. In fact, all but one of the EDI subscales (Perfectionism) was significantly correlated across all types of implications (i.e., personal, interpersonal, and vocational). In other words, high scores on the Drive for Thinness subscale, the Bulimia subscale, and the Body Dissatisfaction subscale were shown to be positively related to the degree of change anticipated for personal, interpersonal, and vocational construct domains should the person suddenly experience weight gain.

While this finding is not causal it is consistent with the notion that eating-disordered individuals are "implicatively bound" by their constructions of experience. In other words, weight change carries higher levels of anticipated change across a variety of domains for them (High Eating-Disordered group), implying substantial levels of threat associated with significant body weight change.

The main effects for group and for construct type findings were anticipated, as were the significantly positive correlations existing between EDI subscales and degree of anticipated changes in a person's personal, interpersonal, and vocational domain of experience should they suddenly gain weight. These significant findings were expected

because of the nature of disordered-eating as well as the sociocultural influences on a woman's personal, interpersonal, and vocational sense of functioning (see chapter two). These findings may be interpreted such that women overly concerned with weight and body shape define not only their personal, but interpersonal and vocational selves as greatly influenced by their current weight. Thus, should they experience an increase in weight, they are also likely to experience a significant degree of change in other domains of function as well.

The last significant finding to be discussed in relation to this "implications" variable is correlational in nature. After calculating the correlations for participants' actual weights and personal, interpersonal, and vocational implications scores, significant positive correlations were found across all three construct domains. In other words, as participants' weights increased, they anticipated greater degrees of change in their personal sense of self (i.e., personal construct system), interpersonal sense of self (i.e., interpersonal construct system), and vocational sense of self (i.e., vocational construct system).

One interpretation of this finding is socioculturally based. It may be that women of all sizes are cognizant of the weight and body-shape demands placed on them. In fact, in light of our correlational finding, it may be that those who are farthest away from the perceived ideal weight (i.e., current self weight differs greatly from ideal self weight) are more sensitive to the effects that weight may have on a woman's personal, interpersonal, and vocational areas of function. Thus, the greater their weight already, the more likely they are to also perceive the potential degree of change in many areas of experience should their weight increase.

Construct Importance Ratings

Two predictions were made regarding this dependent variable. First, it was predicted that the High Eating-Disordered group would demonstrate significantly greater levels of construct importance when evaluating other women compared to the Low Eating-Disordered group. In other words, it was believed that the former group (because of their perceived more sensitivity to the number of domains in which a woman can be judged) would regard personal, interpersonal, and vocational constructs as more meaningful to their evaluation of other women than would the latter group. It was predicted that the direction of this finding would be in the order of personal, interpersonal, and vocational, reflecting the degree to which the High Eating-Disordered group was expected to identify these constructs as critical domains when appraising other women.

Second, it was hypothesized that both groups (High and Low Eating-Disordered) would evaluate men in the order of their vocational, interpersonal, and personal construct domains of being as measured by the groups' construct importance ratings of these same domains.

The results of this study were mixed in their support of its hypotheses. First, while higher means were associated with the Higher Eating-Disordered group for all three domains (i.e., personal, interpersonal, and vocational), they failed to be significantly higher than the Low Eating-Disordered group's mean scores. So, contrary to predictions, no main effect between the two groups was found for evaluating other women. In other words, High and Low Eating-Disordered groups did not significantly differ in how they regard the importance of personal, interpersonal, and vocational domains of experience when evaluating women.

There was a main effect for Construct Domain, yet the direction was different than expected. Specifically, results indicated that both groups rated the interpersonal domain as being the most critical in their evaluation of other women, followed by the vocational domain, and lastly, by the personal domain. This finding could be explained by women's acculturation to developing and maintaining interpersonal relationships.

However, another interpretation for this finding may lie in examining the opposite end of the directional finding, the significance of the personal domain being evaluated as the least important construct domain in their evaluation of other women. Thus, it may be that women seek to combat the personal (i.e., importance of appearance) demands that women are subject to by failing to hold other women to them. In other words, it may be that the groups of women seek to replace the current physically and emotionally taxing societal messages that target women with more healthy ones; to view interpersonal functioning as the most important domain in which to be evaluated, vocational functioning as the second most important domain, and lastly, personal (i.e., physical sense of self) characteristics as the last area in which to evaluate women.

In regard to the second hypothesis, and as predicted, no main effect was found between the two groups in how they view the three construct types used when evaluating men. [Note that the High Eating-Disordered group tended to demonstrate higher construct importance means across all three construct types (i.e., personal, interpersonal, and vocational), yet these higher scores failed to reach significance levels when compared to the Low Eating-Disordered group's scores]. Thus, the groups did not significantly differ in their weighted construct evaluations of men.

Also, while a main effect for Construct Domain was found as predicted, the direction of this main effect was contrary to expectations. We anticipated that both

groups (High and Low Eating-Disordered) would regard vocational constructs as most important in their evaluations of men, interpersonal the second most critical area, and personal constructs the least important domain when judging men. Instead, results indicated that the groups considered the order of construct importance when evaluating men to be: (1) interpersonal, (2) personal, and (3) vocational.

An interpretation for this finding may be similar to the one offered above regarding the main effect for construct domain when women evaluate other women. Specifically, it may be that women want both men and women to be primarily evaluated by others on interpersonal constructs. This speaks to a possible desire that acceptance of another should be based more on a person's core personality characteristics, and less on their personal (i.e., physical) and vocational selves.

Furthermore, if we recall the high levels of differentiation that both groups exhibited on the personal grid form it may be more clear as to why all participants regarded interpersonal constructs as being the most important construct domain when judging another: The higher differentiation scores for the personal grid type likely reflects both groups' recognition that there are a multitude of dimensions in which a personal self is judged (e.g., gracefulness, weight, height). And, our construct importance findings could be interpreted as an indication that the High and Low Eating-Disordered groups prefer judgments about men and women to be based on interpersonal factors (e.g., friendliness, confidence, intelligence) foremost, and on vocational factors or personal (i.e., physical) factors second.

Limitations of the Study

The results of this study need to be interpreted within the contexts of its limitations. There are several limitations to this study. First, our sample size was small

(n=40). Thus, future work in this area may benefit from a larger sample size which allows analyses to be performed with greater statistical power.

Second, the participants were primarily Caucasian and college-aged thereby limiting the generalizability of our results to other populations. Relatedly, due to prescreening constraints and time concerns for the testing administration, only a few of the eight EDI original subscales (Garner et al., 1983) were used to determine "High" and "Low Eating-Disordered" groups. Thus, while the three subscales used for prescreening purposes (Body Dissatisfaction, Drive for Thinness, and Bulimia) and the four subscales used in the testing administrations (Body Dissatisfaction, Drive for Thinness, Bulimia, and Perfectionism) have been used for screening purposes in other studies, it must be recognized that the factors involved in eating disorders and its symptomatology are multifaceted. If we had included the other EDI subscales (Interoceptive Awareness, Interpersonal Distrust, Ineffectiveness, Maturity Fears) in both the screening as well as administrative testings we might have had a more clearly identifiable (i.e., clinical, subclinical, or moderately subclinical) sample.

Thus, it is important to remember that the group of women identified as "High Eating-Disordered" were individuals exhibiting symptomatology representative of disordered-eating, not participants necessarily deserving a clinical diagnosis of an eating disorder. Consequently, we can only assume that they have some attitudes and behaviors similar to someone with an eating disorder. We do not know the severity of their eating behavior disturbance. And, while the cognitive structure literature as applied to eating disorders suggests that eating-disordered individuals are more likely to exhibit lower levels of differentiation and greater levels of integration or a "tightness" in their decision-making cognitive style (Butow, Beumont, & Touyz, 1993; Button, 1983; Coish, 1990; Heesacker

& Neimeyer, 1990; Neimeyer & Khouzam, 1985), this finding may not hold true for individuals such as those included in our study. In fact, another study using subclinical populations also failed to replicate past cognitive structure findings as related to eating disorders (Munden, 1982).

Another reason we are limited in our ability to characterize the two groups according to eating disorders terminology is because of the scoring method we used for our EDI subscales. Unlike many previous studies, we did not transform the participant's responses due in part to theoretical reasons (see chapter 3, methodology). Thus, while we believe we made the instrument more sensitive in distinguishing between more and less problematic eating behaviors and body shape attitude responses, we are unable to compare the nature of the groups because there are not enough studies that do not transform their EDI subscale scores in which to do so.

Another limitation of this study is that the dependent variables were restricted to pen and paper measures. Thus, future research may seek to expand upon this measure format by including other types of measures, including forms of behavioral assessment.

We also believe that our grid size (a 10 by 10 element grid) may not have been powerful enough to detect potentially significant cognitive score differences between the two groups. This may particularly be true because the differences were in the predicted direction, yet failed to reach significantly different levels. We believe a 12 X 12 grid may be more beneficial for future related studies.

Lastly, another potential limitation of this study may be that the repertory grid element choice as well as construct choice for the three domains of interest (i.e., personal, interpersonal, and vocational) may have contributed to our failure to replicate past cognitive structural score literature findings in relation to personal construct theory as

applied to eating disorders research. While some of the elements and constructs used in this present study had been used in other related areas of research, many were not due much in part to the study's originality. Thus, it would be beneficial to more carefully determine which elements and constructs should be used in light of the areas of concern (e.g., personal, interpersonal, and vocational domains of function).

Future Directions

While this study sought to replicate some previous findings concerning eating disorders and personal construct theory, it also sought to determine the extent to which disordered-eating may interfere with other areas of functioning (i.e., personal, interpersonal, and vocational). Future research may choose to clarify the results of our study and may do so by altering our study's design.

For example, longitudinal research in this area may provide the most useful examination of the implications that perceived and actual weight gain have on a person's personal, interpersonal, and vocational sense of experience. This type of research design would allow one to explore whether or not structural scores change over time (i.e., the extent of their durability), and whether or not they continue to be related to a participant's actual weight.

Also, one might choose to include men in the testing sample. While it is difficult to obtain a sufficient number of men who exhibit disordered-eating for research such as this, the findings of such a study (in which the structural and implication scores for men and women were compared) would yield much information. Specifically, one might learn more of the relationships between gender role endorsement, disordered-eating, and cognitive structural scores should such measures be included in a research design.

In all, there are several potential directions for future research in this area which reflects the need for further exploration of the cognitive structures associated with clinical, subclinical, and moderately subclinical eating-disordered populations. It is our hope that this current study provides some impetus for additional work that applies personal construct theory to the area of eating disorders.

Conclusion

The results of this study provided partial support for the primary hypothesis that the cognitions associated with higher eating-disordered women differ from those of women who exhibit fewer eating-disordered characteristics. Specifically, and consistent with predictions, the group of women identified as "High Eating-Disordered" anticipated that they would experience greater degrees of change in relation to their personal, interpersonal, and vocational style if they were to gain twenty percent of their current weight, compared to the "Low Eating-Disordered" group. However, contrary to predictions, the greatest number of anticipated changes for both High and Low Eating-Disordered groups was associated with personal constructs, followed by interpersonal and vocational constructs, respectively.

In addition, contrary to our expectations, the High Eating-Disordered group did not produce significantly higher integration scores for the three grid types than the Low Eating-Disordered group, nor did the Low Eating-Disordered group yield significantly higher differentiation scores. These predictions were based on previous work documenting these findings within the interpersonal domain of construing.

Other significant main effects were found in this study, including construct type for all five dependent variables, including: differentiation, integration, implications, weighted

evaluations (i.e., construct importance) for women, and weighted evaluations (i.e., construct importance) for men.

First, the differentiation and implication variables demonstrated highest means for constructs in the Personal Domain, followed by constructs in the Interpersonal Domain, and lastly, by the Vocational Domain. The highest integration scores were also associated with constructs in the Personal Domain, however, constructs in the Vocational Domain reported higher means than constructs in the Interpersonal Domain for this variable.

Lastly, the main effect for Construct Domain for construct importance when evaluating other women was in the direction of highest means being associated with constructs in the Interpersonal Domain, followed by the Vocational Domain, and Personal Domain. Similarly, our construct importance dependent variable when evaluating men reported highest means for constructs in the Interpersonal Domain, followed by the Personal Domain, and Vocational Domain.

In summary, this study sought to contribute to the personal construct literature as applied to eating disorders as it anticipated finding significant differences between the two groups of interest in terms of their cognitive structure. Currently, it appears that this research is the first of its kind in that it explores the extent to which women who are overly concerned about their weight, body size and shape are more likely to anticipate substantial global changes should their body weight increase, and it uniquely examines how these anticipations compare to those of women less concerned with their physical selves and eating habits. It remains for future research to replicate the "domino effect" of anticipated change across various domains of experience, and to continue to further explore its relationships with disordered-eating.

APPENDIX A
SELECTED EATING DISORDERS INVENTORY (EDI) SUBSCALES

This is a scale that measures a variety of attitudes, feelings, and behaviors. Some of the items relate to food and eating. Others ask you about yourself. **THERE ARE NO RIGHT OR WRONG ANSWERS, SO TRY VERY HARD TO BE COMPLETELY HONEST IN YOUR ANSWERS. RESULTS ARE COMPLETELY CONFIDENTIAL.** Read each questions and place an (x) under the column that applies best for you. Please answer each question very carefully. Thank you.

	Always	Usually	Often	Sometimes	Rarely	Never
1. I eat sweets and carbohydrates without feeling nervous.						
2. I eat when I am upset.						
3. Only outstanding performance is good enough in my family.						
4. I stuff myself with food.						
5. I think about dieting.						
6. I think that my stomach is too big.						
7. As a child, I tried very hard to avoid disappointing my parents and teachers.						
8. I feel extremely guilty after overeating.						
9. I am terrified of gaining weight.						
10. I think that my thighs are too large.						
11. I hate being less than best at things.						
12. I exaggerate or magnify the importance of weight.						
13. I think that my stomach is just the right size.						
14. I have gone on eating binges where I have felt that I could not stop.						
15. I am preoccupied with the desire to be thinner.						
16. I feel satisfied with the shape of my body.						
17. I think about bingeing (overeating).						
18. My parents have expected excellence of me.						
19. I like the shape of my buttocks.						
20. I think my hips are too big.						

	Always	Usually	Often	Sometimes	Rarely	Never
21. I eat moderately in front of others and stuff myself when they're gone.						
22. I feel that I must do things perfectly or not do them at all.						
23. I think that my thighs are just the right size.						
24. If I gain a pound, I worry that I will keep gaining.						
25. I think my buttocks are too large.						
26. I have had the thought of trying to vomit in order to lose weight.						
27. I think that my hips are just the right size.						
28. I have extremely high goals.						
29. I eat or drink in secrecy.						

APPENDIX B INFORMED CONSENT

You will be participating in a study that is designed to look at the relationship between cognitive structure and other behaviors (including occupation, appearance, and interpersonal). You will be asked to complete seven pen and paper forms. One is a scale which asks you questions about a variety of attitudes, feelings, and behaviors. Three other forms ask you to independently rate various people you know on the basis of bipolar vocational dimensions (e.g., high vs. low salary), appearance-oriented dimensions (e.g., attractive vs. unattractive) and interpersonal dimensions (e.g. introverted vs. extroverted). Lastly, three other forms will ask you to evaluate the relative importance of these various dimensions in making judgments about yourself and others.

Your responses are anonymous and you are asked not to put your name or other identifying information on any of the forms to protect your privacy. You do not have to answer any questions you do not wish to answer and you may decline to participate in or to withdraw from the research at anytime. Participation will take approximately 50 minutes and you will receive 2 experimental participation credits for compensation of your time. Are there any questions? If you want to know more about the research study or if you have questions later, you may call Lori Russ-Eisenschenk, M.S. at 336-8153, or Dr. Greg Neimeyer, 392-0264, in the Psychology Department. You are reminded that this is a confidential study and are asked not to discuss the study with anyone. Do you still wish to participate? If so, let us begin the study.

APPENDIX C
REPERTORY GRID--PERSONAL CONSTRUCTS

Yourself	Spouse or Significant Other	A Same-sex Friend	An Opposite-sex Friend	A Parent	A Person You Dislike	An Overweight Person	Someone in Authority	A Successful Person	A Favorite Professor	POSITIVE SIDE			NEGATIVE SIDE		
										+3	+2	+1	0	-1	-2
										Underweight					Overweight
										Attractive					Unattractive
										Firm					Flabby
										Feminine					Masculine
										Tall					Short
										Graceful					Awkward
										Photogenic					Not Photogenic
										Well-Groomed					Sloppy
										Well-Proportioned					Ill-Proportioned
										Good Complexion					Poor Complexion

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APPENDIX D
REPERTORY GRID--INTERPERSONAL CONSTRUCTS

Yourself	Spouse or Significant Other	A Same-sex Friend	An Opposite-sex Friend	A Parent	A Person You Dislike	An Overweight Person	Someone in Authority	A Successful Person	A Favorite Professor	POSITIVE SIDE			NEGATIVE SIDE		
										+3	+2	+1	0	-1	-2
										Stubborn					Not Stubborn
										Competitive					Cooperative
										Confident					Insecure
										Friendly					Hostile
										Authentic					Fake
										Angry					Not Angry
										Energetic					Not Energetic
										Structured					Spontaneous
										Optimistic					Pessimistic
										Intelligent					Not Intelligent

APPENDIX E
REPERTORY GRID--VOCATIONAL CONSTRUCTS

Yourselves	Spouse or Significant Other	A Same-sex Friend	An Opposite-sex Friend	A Parent	A Person You Dislike	An Overweight Person	Someone in Authority	A Successful Person	A Favorite Professor									
										POSITIVE SIDE			NEGATIVE SIDE					
										+3	+2	+1	0	-1	-2	-3		
										Much Education			Little Education					
										High Income			Low Income					
										High Prestige			Low Prestige					
										Influences People			Doesn't Influence People					
										Creative			Not Creative					
										Helps People			Doesn't Help People					
										Much in Demand			Seldom in Demand					
										Interesting Work			Dull Work					
										Works with Thoughts			Works with Hands					
										Offers Much Security			Offers Little Security					

APPENDIX F
MODIFIED CONSTRUCT IMPLICATIONS GRID

How much do you currently weigh? ____. Imagine that you were suddenly to weigh 20% more than that. In other words, you woke up to find yourself weighing __ pounds. Look at the chart below to find out how much you would weigh and fill in that number. Then consider each of the adjective descriptions. If you were to weigh __ pounds, how much would you expect to change along each of these dimensions? Indicate your best assessment by placing a checkmark next to each adjective indicating how much you would expect to change.

You can use this chart to determine what your imaginary weight would be:
Current weight (Imaginary Weight = Current Weight + 20% More Weight)
For example, if current weight is 85 lbs., then your imaginary weight is 102 lbs.

85 lbs. = 102	120 lbs. = 144	155 lbs. = 186	190 lbs. = 228	225 lbs. = 255
90 = 108	125 = 150	160 = 192	195 = 228	230 = 276
95 = 114	130 = 156	165 = 198	200 = 240	235 = 282
100 = 120	135 = 162	170 = 204	205 = 246	240 = 288
105 = 126	140 = 168	175 = 210	210 = 252	245 = 294
110 = 132	145 = 174	180 = 216	215 = 258	250 = 300
115 = 138	150 = 180	185 = 222	220 = 264	255 = 306

	No Change	Little Change	Moderate Change	A Lot of Change
Education Level				
Weight Acceptance				
Stubbornness				
Income				
Attractiveness				
Competitiveness				
Prestige				
Physical Fitness				
Confidence				
Influence				
Gender Role				
Friendliness				
Creativity				
Height				

	No Change	Little Change	Moderate Change	A Lot of Change
Authenticity				
Helpfulness				
Gracefulness				
Energy Level				
Job Security				
Photogenic				
Temperament				
Work Satisfaction				
Cleanliness				
Organization				
Occupation				
Body-Proportion				
Optimism				
Perform Work with Hands				
Complexion				
Intelligence				

APPENDIX G
CONSTRUCT IMPORTANCE FOR EVALUATING WOMEN

You will now be asked to rate the following dimensions. Specifically, we want you to consider how important each of the descriptions are when YOU judge individuals of your OWN SEX. Indicate your best assessment by placing a checkmark next to each adjective indicating whether you view it as being not important, a little important, moderately important, or every important.

	Not Important	A Little Important	Moderately Important	Very Important
Education Level				
Weight Acceptance				
Stubbornness				
Income				
Attractiveness				
Competitiveness				
Prestige				
Physical Fitness				
Confidence				
Influence				
Gender Role				
Friendliness				
Creativity				
Height				
Authenticity				
Helpfulness				
Gracefulness				
Energy Level				
Job Security				
Photogenic				
Temperament				
Work Satisfaction				
Cleanliness				
Organization				
Occupation				
Body-Proportion				
Optimism				
Perform Work with Hands				
Complexion				
Intelligence				

APPENDIX H
CONSTRUCT IMPORTANCE FOR EVALUATING MEN

You will now be asked to rate the following dimensions. Specially, we want you to consider how important each of the descriptions are when YOU judge individuals of THE OPPOSITE SEX. Indicate your best assessment by placing a checkmark next to each adjective indicating when you view it as being not important, a little important, moderately important, or very important.

	Not Important	A Little Important	Moderately Important	Very Important
Education Level				
Weight Acceptance				
Stubbornness				
Income				
Attractiveness				
Competitiveness				
Prestige				
Physical Fitness				
Confidence				
Influence				
Gender Role				
Friendliness				
Creativity				
Height				
Authenticity				
Helpfulness				
Gracefulness				
Energy Level				
Job Security				
Photogenic				
Temperament				
Work Satisfaction				
Cleanliness				
Organization				
Occupation				
Body-Proportion				
Optimism				
Perform Work with Hands				
Complexion				
Intelligence				

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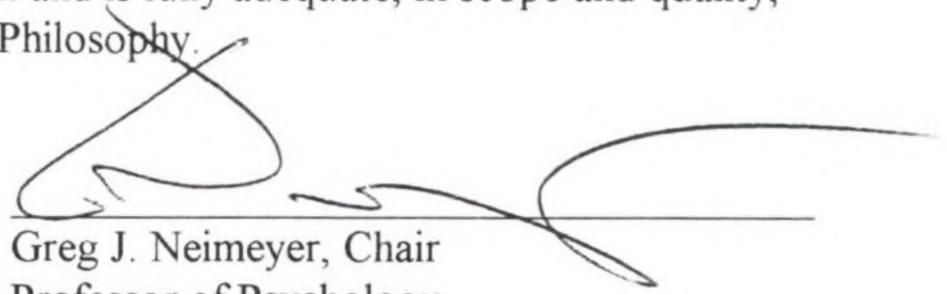
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BIOGRAPHICAL SKETCH

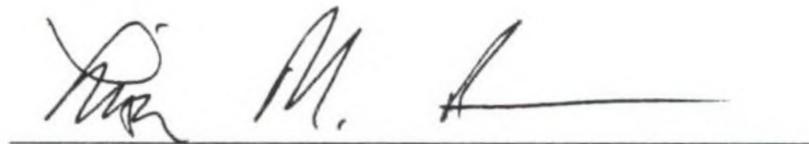
Lori Russ-Eisenschenk was born in Key West, Florida, and lived there with her parents, John and Karen Russ, and older brother, Kirk, until she graduated from high school in 1988. She then began her college education as a student in the University of Central Florida's honors program. After receiving her Associate of Arts degree from UCF in 1990, she transferred to the University of Florida where she majored in psychology. In 1992, Lori received her degree, began her doctoral program in counseling psychology at the University of Florida, and married Stephan Eisenschenk. She received her master's degree in 1995 and completed her internship at the University of South Florida Counseling Center for Human Development in 1997.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Greg J. Neimeyer, Chair
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



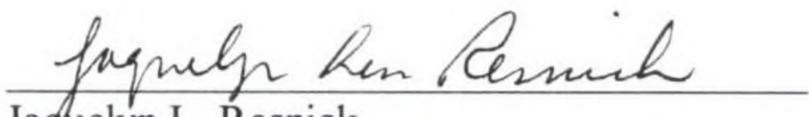
Lisa Brown
Assistant Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



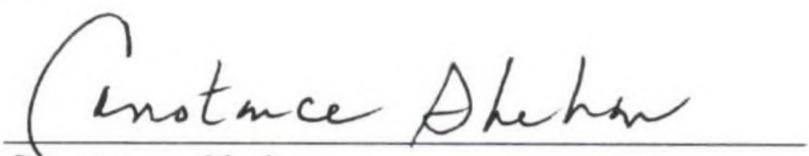
Dorothy D. Nevill
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Jacquelyn L. Resnick
Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



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