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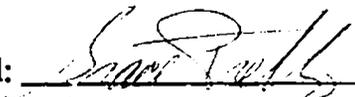
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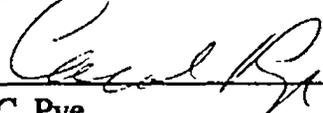
**AN EMPIRICAL EXPLORATION OF ORBACH'S THEORY OF COMPULSIVE
EATING AMONG UNIVERSITY
FEMALES**

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Ann Marie Keating

A thesis submitted
in partial fulfillment
of the requirements for the degree of
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Abstract

An Empirical Exploration of Orbach's Theory
of Compulsive Eating Among Female University Students

Ann Marie Keating

September 17, 1991

This study explores Orbach's (1978) theory of compulsive eating. Orbach argues from a feminist perspective that the female experience in modern society contributes to, and/or perpetuates obesity, and maintains that there is a relationship between the unique socialization women undergo and the specific attributions associated with various body forms.

A series of vignettes and semantic differentials were developed to evaluate Orbach's theoretical concept. A phenomenological approach was adopted in an attempt to circumvent preconceived notions towards obese individuals, and the Bem Sex Role Inventory (Bem, 1981) was administered as a measure of subjects' sex-role typing. Participants also indicated their present, historical, and ideal body image.

In vignette situations, participants attributed experiences and characteristics to the obese form in consonance with issues of safety from sexual violence and harassment, respect, competition and hostility between women, boundaries, and comfort with sexuality as described by Orbach. Multivariate analysis of variance indicated that type of vignette, type of word pair, and type of body form all significantly affected participants' perceptions of an obese, normal, and thin figure. A larger historical body and high body dissatisfaction correlated with favorable perception of the thin figure.

Findings are discussed in light of recent issues in feminist theory and current sex-role research.

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North American society is caught in an unusual paradox with respect to cultural perceptions of the human body. In an age of unprecedented worship of thinness, our society is experiencing obesity with greater prevalence than perhaps any other society (Bootzin & Acocella, 1988). The other end of the spectrum is represented by Anorexia Nervosa, which has a prevalence of 1% for women between 12 and 18 years - a disturbing statistic when paired with mortality rates of between 5% and 18% (American Psychiatric Association, 1987).

The Canadian Guideline for Healthy Weights (Minister of Supply and Services, 1988) described weight in terms of the Body Mass Index (BMI), which is defined as weight (kilograms) divided by height (metres) squared, (wt/ht^2), and applied this standard to statistics in the Canada Fitness Survey (Health and Welfare Canada, 1981). The stringent application of this standard revealed that only 50% of adult Canadians between 20 and 69 years of age are at a "good weight" (BMI between 20 and 25) for health (Minister of Supply and Services, 1988).

With respect to perceptions of overweight, women experience greater dissatisfaction with their body weight than men (Mintz & Betz, 1986). According to The Health Promotion Survey (Health and Welfare Canada, 1985) one out of every two adult Canadians wanted to change their weight. By comparison, 70% of women at a "good weight" wanted to lose weight, as did 23% of women with a BMI less than 20 (these women are already in a weight category that may be associated with health problems because of underweight). Indeed, most women experience profound distress concerning their weight at some point in their lives, whether or not they are statistically obese (Willmuth, 1986).

Recent studies indicate that attention to weight-related issues begins before adulthood. Gross (1985) discovered that although approximately twenty-one percent

(21.1%) of adolescent American females were statistically overweight, 63% were trying to lose weight. In a similar Canadian study, Leichner, Arnett, Rallo, Srikameswaren & Vulcano (1986) revealed that 5% of males and 22% of females between the ages of 12 and 20 held significant concerns and attitudes regarding eating. Approximately thirty-four percent (34.2%) of these participants were more than five pounds above median weight, suggesting that these opinions are not associated specifically with anorexia nervosa and/or bulimia.

At the center of these concerns related to perceptions of overweight is the issue of body image. Body image may be defined as "the subjective image one has of one's own body, specifically with respect to evaluative judgments about how one is perceived by others and how well one is adjusted to these perceptions" (Reber, 1985, p. 99). The body image construct has both perceptual and attitudinal (cognitive, affective, and behavioural) components (Cash & Brown, 1987). The attitudes associated with this "internal picture" of the body have been implicated in the development and maintenance of obesity, anorexia and bulimia (Canadian Dietetic Association, 1987).

Psychological theories suggest various etiologies of overeating and not eating. This project will focus on the theory of eating problems as described by Orbach (1978), who places the relationship between dysfunctional eating and body image issues in a feminist context. The purpose of the study is to determine whether women do perceive fat and thin women to have the characteristics and experiences proposed by Orbach.

Orbach's Theory

Orbach (1978) examines gender differences in weight-related issues from the perspective that the female experience in modern society contributes to and/or perpetuates obesity. Like other feminist theorists, Orbach maintains there is a relationship between the unique socialization women undergo and the specific attributions associated with

emotional states influencing eating behavior.

Certain components of women's role in contemporary society encourage women to be predisposed toward obesity (Martinelli & Havassy, 1981). Among these factors is the anticipation that women will always respond as nurturant, socially astute, nonassertive individuals (Macoby & Jacklin, 1974), particularly within the role definitions of daughter, wife and mother. Due to a traditional link between women and food-related activities (i.e., meal planning, grocery shopping), these expectations may be transferred into the realm of eating behaviour, resulting in excessive engagement with food (Beach & Martin, 1985). Further, these traditional attributes contradict the vocational attributes that require women to be competitive, active and assertive, attributes associated with thinness (Bell, Kirkpatrick & Rinn, 1986; Orbach, 1978). As a result of these contradictions, women experience role confusion that predisposes them to compulsive eating behaviour (Orbach, 1978).

Equally influential is the complex relationship between women and their bodies. Feminist theorists interpret media representation of "Woman as Body" as reflecting the current norms of a society in which women's bodies are still the primary source of their power. However, the reminders are multitudinous that women's bodies are also the ultimate source of their powerlessness. From the legal and medical control of women's sexual and reproductive choices to the commonplace violence of rape and domestic abuse, patriarchal society usurps women of corporeal ownership. Even those aspects of female self-worth equated with physical attractiveness are culturally derived and extrinsically determined (Greenspan, 1983). A paradoxical icon of both power and vulnerability, the female body becomes a psychological battleground, and weight fluctuations the symbol of war.

Orbach's (1978) treatment of obesity examines the cognitive, affective and behavioral implications of the above issues for an individual woman. Her position replaces both the "blame-the-victim" approach and the traditional adjustment model by regarding

obesity as an attempt to challenge sex stereotyping and the culturally defined pressure to be thin. Included in the goals of Orbach's therapy is recognition that the effects of chronic dieting include lowered self-esteem, self-hatred and acceptance of failure. The emphasis is not on restriction of food intake, but rather on examining the psychological needs fulfilled and/or rewards obtained by the maintenance of obesity. Orbach relates these needs and rewards to attributes associated with an obese versus thin body form.

Compulsive Eating

Orbach (1982) uses the term "compulsive eating" to refer to eating without recognition of physical cues signaling hunger or satiety. Since it is her contention that compulsive eating and compulsive dieting are two aspects of an addiction to food, Orbach suggests that the issues behind obesity parallel those underlying bulimia and anorexia. Therefore, although her theory is described in terms of compulsive eating, the therapeutic applications extend through the spectrum of weight-related concerns.

Orbach (1978) suggests that compulsive eating is etiologically linked to obesity because it is the behavioral expression of an unconscious desire to become obese. The psychological factors in compulsive eating and compulsive dieting are intimately related to self-concepts regarding body image i.e; Who will I be fat?/Who will I be thin? According to Orbach, being thin has some fearful consequences, and women may eat compulsively to avoid them.

The Fear of Being Thin

In her text *Fat is a feminist issue* (1978), Orbach describes use of fantasy exercises with compulsive eaters as a vehicle to access cognitions behind the affect most commonly associated with being thin: fear. This section will discuss each of the eight common responses she documents.

1) "They feel cold and ungiving" (p.71).

Orbach attributes the association between being thin and feeling emotionally cold to female identity formation around the notion of women as models of caring, giving behaviour. This unrealistic expectation is internalized, therefore it is difficult for a woman to accept that aspects of herself reject this "all-nurturing" woman. To be cold is to deny her sexual identity as a nurturer. Further, because women so rarely permit themselves to be emotionally distant, the affective state of feeling cold is foreign, and therefore disconcerting.

2) "They feel angular, almost too defined, and self-involved (p.71).

Experiencing the body as defined by one's own actions is discomforting for two reasons. First, it contradicts a woman's socialization in which her personality is extrinsically defined to fit the female stereotype. Orbach also notes that the self-definition of women is generally discouraged through lack of support, hostility and/or curiosity at such attempts.

Additionally, the self-involvement described above is experienced on several levels. Superficially, a woman may fear that her new, thin body will be perceived as evidence of vanity because she had to work so diligently at losing weight. The deeper concern is related to feelings of guilt that may have been alleviated by fatness, but are now exposed. The female identity is so pervasively focused on meeting the demands of others, that guilt frequently accompanies any action that addresses a woman's own needs.

3) "They feel admired to the point of having expectations laid on them. They feel they won't be able to keep people at bay especially those with a sexual interest" (p.71-72).

The admiration mentioned above refers to recognition for having achieved the

feminine body ideal of thinness. However, there are negative implications of this success. Orbach describes the fear of being reduced to "only a body" once the thin form is acquired, that is, being considered as only a sexual object and not a whole person. She relates this fear to the socialization of women to perceive their bodies as their primary assets, and reminds us that a woman's appearance determines her choice of intimate companions to a greater degree than that of her male counterpart.

Orbach also notes that the experience of thinness provokes suspicion that others will equate conforming physically to stereotyped ideals, with behavioral acquiescence to the same preconceived notions. The expectations her clients fear include those accompanying traditional societal definitions of female roles of daughter, lover, wife and mother. If obesity is a challenge to the limitations of these roles, it may be assumed that the experience of thinness re-exposes a woman to those same restrictive expectations.

- 4) "They do not know how to cope with their own sexual desires; they feel free to be sexual now but unsure of the implications"(p.72).

Orbach explains the link between thinness and problems related to sexuality by asserting that overweight women experience fat as a method of avoiding several difficult sexual issues. The first such issue is the dual nature of the desire to be sexual. Approaching a body form that is deemed attractive by societal standards is accompanied by the experience of being sexually desirable to others and the realization that one now has more control over her choice of partners. Superficially positive, this notion eventually evokes fear of the new-found sexuality. Orbach contends that women, generally, and overweight women in particular, have so little input in the determination of their sexuality that it is difficult to feel, let alone act on, what they want sexually. Therefore, a woman may actually feel less control over her sexual behavior, and fear that she will act in ways radically different from her current sexual behavior.

In her description of another sexual issue arising from thinness, Orbach addresses the notion of female sexuality as a commodity. Exploited to sell everything from rifles to rutabagas, the female body is perceived as the societal sex object of both men and women. When a woman who has recently lost weight compares herself to the omnipresent package of feminine sexuality, she may become confused if she does not fit the image. Orbach suggests that after acquiring this thin form, a woman may feel she can not be sexual without mimicking pervasive icons of sexual vitality.

5) "They feel they command too much power"(p.72).

The topic of female power is extensive and complex, for it exists at the core of gender inequality in contemporary culture. Orbach discusses three interrelated problems with a woman's experience of power.

One area of difficulty lies in our cultural images of powerful women. As Orbach articulates: "... (they) have either been equated with destruction, like Helen of Troy or Cleopatra, or they have been coupled with images of emasculated men, like Maggie of *Maggie and Jiggs* "(p. 77).

Orbach views the second problem as stemming from the socialization of female children into accessories of powerful others, usually male. Girls are discouraged from the ownership of power outside the mothering role, which is replete with contradictory messages. In this context, being thin tells a woman that she has exceeded her social position. She has transcended femininity to operate in the realm of male power, which is generally associated with competition and ruthlessness. The legacy of her female socialization includes equating powerful/effective behavior in a woman with selfishness, and acting for oneself is synonymous with depriving others.

Finally, a woman may perceive real or imagined negative consequences of being powerful. These potential threats include social isolation and expressions of jealousy and

betrayal from other women.

- 6) **"They do not know how to define the boundaries around themselves and feel invaded by others' attention because they will not know how to fend it off. They are worried about where they exist in this new admiration"(p.72).**

Orbach defines boundaries as "the amount of space one takes up in the world-where one begins and where one ends" (p.78). Again the source of the fears described above lies in the formation of the female identity around the caregiving role. Women are required to merge their emotions and concerns with those they are nurturing, and find fulfillment in adjusting to the needs of these individuals. They are actively discouraged from asserting autonomy in any dimension.

Within this role definition, Orbach asserts that fat functions as both a physical representation of the attempt to merge with others, and an insulating layer between the self and a world composed of others' infinite demands. If the excess weight expressed a woman's separateness and her space, a body devoid of this physical boundary may leave her feeling vulnerable to the invasion of others and their needs. By empowering her fat with the ability to keep others at a comfortable distance, a recently thin woman is usurped of control and has no power to protect herself from the penetration of her boundaries by others.

- 7) **"They feel uncomfortable amongst other women who throw competitive glances"(p.72).**

Set against the backdrop of capitalist culture, which encourages competition as a form of social relations, the ideal female body has become the standard against which women compare their abilities to impress a man. The goals of this oppressive interaction include lifetime affiliation with a man within the institution of marriage, the assurance of economic and political status through his accomplishments, and the legitimization of female

sexuality. Obviously, women find this distasteful at some level, and as Orbach asserts: "... avoid these painful competitive feelings by getting fat"(p. 80). Being thin re-exposes a woman to their own competitive urges and/or the hostility they imagine they provoke in other women.

- 8) "They are worried by the need to have everything worked out--to have their lives fit together. . . there are no longer any excuses for the difficulties they face in their lives. . . they must give up all the pain that their fat has expressed. . .they will have no room to feel blue..no one will see their neediness"(p.72).

Orbach believes that the image a woman has of herself as a thin person embodies all the characteristics she feels she lacks as an obese individual, i.e. competence, togetherness, confidence. As a result of these unrealistic expectations, the reality of thinness allows no margin for human imperfection. For many women, this margin contains the freedom to express emotions such as sadness and pain.

Again, Orbach suggests that the excess weight is empowered with the ability to assert what a woman finds difficult to express verbally. Fat becomes the reason for the incongruence between a woman's imperfect reality and the potentially blissful existence she confronts through media portrayal of the female experience. With its emphasis on dissuading women from assuming responsibility for their lives, the female socialization process primes them for the displacement of responsibility onto a layer of fat.

Orbach's theory is feminist psychoanalytic in perspective, and therefore encompasses several controversial issues at the core of feminist theoretical positions. Although Orbach (1978) implicates the mother-daughter relationship in the development of obesity, Caplan (1989) insists that "mother-blaming" is a limited explanation with little to offer women. Caplan (1989) describes the following feminist concepts as examples of mother-blaming: "... when they explain how mothers can't let go of their children, keep

their daughters too dependent on them, are never satisfied, profoundly disappoint us, and burden us with unbearable guilt (p. 6)." Caplan notes that such practice "promotes estrangement and anger rather than love and respect for our own and our mothers' autonomy (p. 64)." In addition, Caplan indicates that several issues are absent in the writings of Orbach (1978), including inquiry as to why fathers do not assume the nurturing role when mothers "fail" to do so, and any explanation of why a mother may not be nurturant or why she may want to warn her daughter against expectations of the world (or, more specifically, of men).

There is also disagreement over the relationship between obesity and sex. Although some theorists maintain that excess weight is a way for women to avoid the expression of their sexuality (Beach & Martin, 1985; Orbach, 1978), Brown (1985) regards this belief as fat-oppressive and maintains that fat represents issues of power. Brown cites Smith and Siegal (1983) who suggest that being overweight is the highest form of female covert power, and gives examples of the indirect power fat provides. These include the avoidance of sex with a hated partner, the rejection of the stereotypical role expectations of others without risking physical abuse or financial ramifications, and the ability to occupy space without the risks associated with forcibly taking it. Brown adds that fat may also function to protect others from the full impact of a woman's interpersonal power if she does have access to overt (conscious) forms of power. For example, a woman may have professional success but her inability to attain conventional beauty standards assures that others will not be intimidated by perceiving her to "have it all".

Finally, although most therapists agree that food is a form of self-nurturance, there are conflicting opinions over whether women benefit from using food to fulfill this function. Orbach (1978) asserts that eating is an inappropriate method of nurturing in certain conditions and settings, while Brown (1985) rejects this view on the assumption that it promotes guilt. Instead, Brown requests that therapists assist their clients in

acknowledging the power of food as an easily accessible and valuable form of nurturance.

Throughout her work, Orbach emphasizes the importance of recognizing that a concern about body size, as presented by the above themes in guided fantasy, is a preoccupation for women because these images fall within the limited boundaries of socially acceptable feminine behavior. Further, she draws attention to the similarity between the contradictory messages contained within the perceptions and experience of thinness, and the conflicting messages women receive from their social reality.

The culmination of these opposing messages and images is fear of being thin. Orbach's contention is that this fear prohibits women from terminating the addiction to food, halting its expression through compulsive eating and/or compulsive dieting, and achieving permanent weight loss.

Szekely (1988) criticizes Orbach's treatment of compulsive eating because it promotes the thin ideal. To this end, she states that in Orbach's workshops "the real self . . . was assumed to be contained in a thin body" (p. 80). Although Szekely acknowledges societal pressure to be thin, she disagrees with Orbach's belief that thin is normal.

Empirical Research

Current evaluation of feminist theory of obesity is limited to descriptive accounts of individual client experiences. To this end, Gilbert (1986) states the following: "Many women are helped by this approach, but the lack of formal evaluation has so far made it difficult to compare with other approaches or to make this kind of therapy more widely available in the field of health care"(p. 187). As there has been no empirical analysis of Orbach's theory to date, methodology for this project is derived from an overview of research in the area of weight and personal attributions, some of which lends support to Orbach's theory.

Body Form Attribution Research

Very few of the specific body form attributes described by Orbach (1978) have been measured. Bell, Kirkpatrick & Rinn (1986) compared the manner in which groups of obese, anorexic, and normal females labeled silhouettes of various body forms on various semantic differentials. They reported that overall, there were no significant differences between the manner in which obese, anorexic and normal weight subjects rated thin and normal figures. However, differences existed for perception of the obese figure such that it received the most favorable ratings from the obese group of subjects, and the least favorable rating from the anorexic group of subjects. Between obese, anorexic and normal weight subjects, anorexics were most critical in their judgement of all figures, and obese subjects were least judgemental.

Bell et al. (1986) also reported significant differences in ratings for the silhouette types on the following personality dimensions: happy/sad, active/passive, popular/unpopular, effective/ineffective, competent/ incompetent, smart/stupid, and cold/warm. Differences were not found for the pessimistic/optimistic, good/bad, and productive/unproductive dimensions. The normal figure was perceived as having the most desirable personality traits, followed by the obese figure and finally the thin figure. Specifically, the normal figure was rated higher on all personality dimensions except cold/warm; the obese subject group rated the obese figure to be warmer than the normal or thin figure.

Anorexics rated the thin figure to be the least positive on eight dimensions, but more popular and more competent than the obese figure. Obese subjects perceived the obese figure as least happy, least popular, least productive, least competent and least active, but as effective and as smart as the thin figure and more optimistic than the thin figure. Normal subjects rated the obese figure lowest in the following dimensions: happy, popular, competent, smart, active, effective, optimistic and good. However, they rated the thin

figure as least warm and least productive. Therefore, both anorexics and obese subjects judged silhouettes similar to their own more harshly. In comparison, normal subjects assigned higher ratings to the normal figure and low ratings to the obese silhouette (Bell et al., 1986).

The existence of negative stereotypes of obesity is well documented (Staffieri, 1967; Powers, 1980; Homant & Kennedy, 1982). Some studies indicate that overweight individuals themselves do not differ in their stereotyping of other obese people. They perceive obese individuals as warmer, friendlier, kind, less happy, less self-confident, more self-indulgent, less self-disciplined, lazier, less attractive, weak, unsuccessful, and uninfluential (Tiggemann & Rothblum, 1988; Chetwynd, Stewart & Powell, 1975; Madox, 1968).

Chetwynd, Stewart & Powell (1975) revealed that women view obese female physiques as more likely to be wives than men do. Although this finding appears to contradict Orbach, the authors explain these results by stating that subjects who either fulfill the role of wife, or aspire to do so, may lower the image of a wife to a more attainable level. Unfortunately, mean age of the subject population is not provided, therefore these results can not be extrapolated to the current investigation. However, Beck, Ward-Hull & Mclear (1976) demonstrated corroborating results in a female undergraduate population, and concluded that subjects ". . . may associate the more ample female body with a culturally stereotyped picture of woman as 'wife and mother' while the smaller (thinner) female body is associated with greater personal and career freedom" (p. 1209).

Closely related to Orbach's postulations are several studies exploring the relationship between sex-role stereotyping and perceptions of various body forms. Guy, Rankin & Norvell (1980) asked male and female undergraduates to assess various silhouettes representing an ectomorphic, mesomorphic and endomorphic body form, by using the Bem Sex Role Inventory (Bem, 1974). To define, " ...ectomorphic persons are

thin with large skin surfaces relative to weight..." (Reber,1985, p.225). Endomorphs"... are overweight, have poorly developed muscles and bones, and have low skin surface area relative to weight..." (Reber, 1985, p.240). Mesomorph persons"...are strong, well muscled and have moderate skin-surface-to-weight ratios..." (Reber,1985,p.437). Androgyny is "...the condition in which some male and some female characteristics are present in the same individual..." (Reber,1985, p.34). Their findings indicated that the female ectomorph is sex-typed feminine, while the female endomorph and mesomorph are sex-typed as androgynous. There were no significant differences when data was reanalyzed controlling for gender, race and body type of respondent.

In the adolescent population, perceptions of slim versus fat figures can be influenced by sex-role, ethnicity, perceived weight status, and self-concept (Worsely, 1981_{a,b}). The sex role findings (Worsely, 1981_b) lend support to Orbach's theory in their discovery that girls who evaluated their weights as "just right" aspired toward traditional sex roles more than those who judged themselves as underweight or overweight.

Also relevant to Orbach's theory is the relationship of masculine and feminine trait attributes to actual body form. Psychodynamic literature notes that female obesity may be maintained for additional reasons related to a denial of femininity and sex role confusion (Alexander,1950; Bruch,1957). Thus, the state of overweight is seen as having both functional and symbolic value (Lefley, 1971). Empirical evidence suggests that obese individuals display more femininity on objective measures including the Minnesota Multiphasic Personality Inventory (MMPI) Masculinity-Femininity (M-F) scale (Pomerantz, Greenberg, & Blackburn, 1977) and the Terman-Miles Masculinity-Femininity (M-F) scale (Lefley, 1971). Pomerantz et al. (1977) interpret the elevated femininity scores of obese women as evidence of less self-assertiveness, greater passivity, and body image dissatisfaction.

Additional evidence from Hawkins, Turell & Jackson (1983), who used the

Personal Attributes Questionnaire (Spence & Helmreich, 1978), demonstrated that body weight of subjects could be unrelated to the separate socially desirable traits of masculinity and femininity in an undergraduate population. However, they added that their findings did not ". . . preclude the presence of normal/obese differences in specific sex-role behaviors or in gender identification . . ." (p.716). The results of Hawkins et al. (1983) partially support the notion of an obese stereotype reflecting undesirable feminine attributes, and suggest the appropriateness of a psychosocial perspective on obesity, such as that proposed by Orbach.

Silverstein & Perdue (1988) further investigated the complex relations between eating problems, physical attractiveness and achievement concerns in female university students. Their results indicated that the desire for a noncurvaceous body has differential implications depending upon the accompanying eating behaviors. When this desire is associated with dieting and binging, it is correlated with an emphasis on female physical attractiveness, suggesting a need to compare to the current slim standard. However, the same desire for a noncurvaceous figure associated with purging and underweight, is accompanied by an emphasis on professional success and intelligence, respectively. This relationship suggests an attempt at avoiding the curvaceous figure stereotypically affiliated with a lower intelligence by both men and women. Implications of these results include the necessity of recognizing that the relationship between achievement concerns and eating problems is not exclusively mediated by attractiveness concerns (Silverstein et al., 1988). This lends further credence to a theory such as Orbach's, which discusses eating problems in terms of the many influences on women's perceptions of fat and thin body forms.

Finally, it should be noted that theoretical support for Orbach's theory may be found in its structural approximation to cognitive explanations of eating problems. The cognitive perspective examines negative thoughts and self-statements regarding the role of food in the lives of obese clients. This focus rests on the assumption that cognitive habits

influence eating behaviour through emotional states (guilt, anxiety and depression) that undermine the dieter's resolve (Brownell, 1983).

Kramer & Stalker (1989) outline a comprehensive approach to the treatment of obesity. This approach includes assessment of the decision to lose weight in the context of the clients' weight history and overall psychological profile, treatment (comprised of self-monitoring, stimulus control, alterations in eating behaviour and cognitive restructuring), nutrition, exercise, and relapse prevention. The necessity for a cognitive framework is summarized by the following: "Cognitive intervention is especially helpful in modifying long-held beliefs that may undermine the effectiveness and continued use of behavioural methods" (Kramer & Stalker, 1989, p.395). Collins, Rothblum & Wilson (1986) confirmed the benefits of cognitive therapeutic methods in improving weight maintenance.

Kramer & Stalker (1989) suggest techniques for reframing cognitive distortions such as overgeneralization and arbitrary inference. The goal of these techniques is to "...emphasize the development of self-fulfilling (ie., *wants* in Marlatt's approach) activities and the reduction of expected behaviours (*shoulds*)" (p.400). A feminist approach such as Orbach's (1978) places cognitive restructuring in a sociopolitical context to achieve similar goals.

Consequences of Eating Problems

Obesity

The role of obesity in somatic pathology is a subject of current controversy. Until recently, the opinion that excess weight places an inordinate strain on physical health has been unanimous. Obesity is indicated as a contributing factor in hypertension, ischemic heart disease, diabetes and arthritis, to name a few (Wintrobe, Thorn, Adams, Bennett,

Braunwald, Isselbacher & Petersdorf, 1970). Chernin (1981) cites an extensive study which challenges this widely held belief: "Dr. Andres. . . reports the results of a 14 year study of 1,233 people at Northwestern University, in which it was found that the lowest mortality of all his subjects occurred among those who were 24-38 percent overweight, as defined by statistical charts. Andres has reviewed 40 studies. . . the results all point in the same direction--the desirable weight if you want to live longer has been underestimated..."(p.31). Although specific causes of death are not stated, this study lends support to the contention that we have been promoting an underestimation of the ideal weight for health.

Wooley and Wooley (1979), contend that the issue here is not the absence of risk associated with obesity, for many researchers have documented the increase in risk factors for health in populations in excess of 30 to 40 percent overweight. However, it is the extrapolation from correlations to imply a causal relationship between obesity and certain diseases that requires examination. For example, both obesity and some disease processes may result from a third factor. This factor may be one associated with obesity, such as the frequent vacillations in weight characteristic of chronic dieting. Alternatively, the factor may be psychological in origin, and result from the attitude of the self or others toward the obese individual (Wooley & Wooley, 1979).

The Costs of Being Fat

Stigmatization involves the disgrace and rejection of people with a condition that is viewed as either a physical deformity or a behavioral abnormality (Powers, 1980). Documentation of the social consequences of obesity is extensive and convergent upon one unequivocal conclusion: stigmatization of the obese is one form of discrimination that is still acceptable to practice. Allon (1973) describes the stigma in four areas, each of which assigns a different meaning to obesity: 1) in religion, as a sin; 2) in medicine, as a disease;

3) in crime, as a misdemeanor or felony, and 4) in aesthetics, as ugliness.

Negative perceptions of obesity commence in childhood. Studies involving the exposure of children to line drawings of children of various body shapes, or photographs of obese, thin or deformed children indicate that children consistently rate pictures of obese children as less liked than children of normal or thin weight (Lerner & Gellert, 1969). In addition, silhouettes of obese children evoke labels such as 'cheats', 'sloppy', 'naughty', 'stupid', and 'dirty' (Staffieri, 1967).

This prejudice against obese children extends into adult life and transcends racial, gender and educational boundaries. Madox (1968) selected groups of adult males and females, black and white, with and without post-secondary education and combined them with a lower status medical clinic outpatient population in a study investigating attitudes toward obese children. All groups rated the obese child as the least likable, including the obese subjects themselves. In addition, although intelligence and obesity are not correlated, nonobese male students perform significantly higher in school than obese male students (Rimm & White, 1979). These same authors conclude that "...the greatest disadvantage of obesity in childhood is the likelihood of growing up to be an obese adult." (p. 120)

In the early adult years, an obese person may face discrimination when applying for admission to college (Canning & Mayer, 1966), or for various forms of employment. Positions in public service and the media are particularly biased against obese people, i.e., there are very few obese female flight attendants or overweight television journalists. Additionally, prejudice against overweight individuals has been demonstrated in the hiring of typists, file clerks, receptionists and secretaries (Louderback, 1970). At the executive level, obese employees often earn less than their thin counterparts, and are less likely to acquire top promotions (Industry Week, 1974). Employers confess in confidence that they feel fat people are inefficient, will display higher rates of absenteeism, and can not tolerate the hard pace of work as well as thin employees (Louderback, 1970).

Physicians often harbor negative attitudes toward obese individuals. Powers (1980) cites a study in which the physicians polled were found to dislike obese patients and preferred not to treat them because the treatment was expected to fail. These practitioners believed the obese individual was "ugly" and "awkward", and the obesity was indicative of a lack of control. Powers maintains that such negative labels result from a combination of the prevailing cultural attitude that obese individuals are responsible for their plight and the "disease" concept of obesity. This perspective describes obesity as having one cause (insufficient control over eating behavior) and one treatment (enhanced control over eating behaviour) -- a position that hinders physicians in their ability to empathize with the broad spectrum of difficulties experienced by the obese patient.

In summary, the obese are viewed as less worthy of respect than other people. They are assumed to have brought the condition upon themselves through gluttony. Since overindulgence implies sinfulness, the obese may indeed be seen in as negative a light as forensic offenders (Homant & Kennedy, 1982). Further, the negative stereotypes of overweight individuals are shared by the obese themselves (Tiggemann and Rothblum, 1988; Madox, 1968).

The Female Experience

For women, the "crime" of obesity carries a more draconian sentence. A woman's body is still her most valued commodity in Western culture, for it represents her sexual viability in the male marketplace. The messages are numerous in the suggestion that the obese female body form is not sexually attractive, and therefore, undeserving of male partnership. The following negative stereotypes are more prevalent for obese women than for overweight men: self-indulgent, lazy, less self-disciplined and less attractive (Tiggemann & Rothblum, 1988). Louderback (1970) notes that some wedding dresses are not available beyond size 10; the implication is that larger women will never wed because

of their unattractiveness.

Al-Issa (1980) confirms the above assumption with the discovery that obese females are less likely to be popular and to date. Stake and Lauer (1987) found that relative to average-weight women, overweight women dated less frequently, were less likely to be currently dating, experienced more parental and peer criticism, and reported that their mates were less satisfied with their body dimensions. The same variables revealed few disparities between obese men and normal weight men, indicating that obesity holds less negative social consequences for men than for women.

This interpersonal alienation of obese women results in part from the differential application of the importance of attractiveness to men versus women. Rodin, Silberstein, and Striegel-Moore (1984) state the following: "... that the body might be more salient for defining attractiveness in women than in men. . .for if the body is more central to determining a woman's attractiveness, then a body type deemed unattractive will be proportionately more important (more damaging) in an overall view of the appearance of a woman than of a man" (p. 277).

In the realm of education and vocation, obese women experience more discrimination than obese men. In a sample of classes graduating from high school, 52% of nonobese women entered college while only 32% of obese females did. (The two groups did not differ on measures of intellectual ability and achievement or on percentage applying for admission). Among male high school graduates, 53% of nonobese and 50% of obese students went to college - a nonsignificant difference (Canning & Mayer, 1966). These authors suggest that since education is a pertinent variable in the determination of social class, discrimination against obese women at the level of college admission may play a role in their downward social mobility. Stunkard (1979) discovered that the strong inverse relationship between socioeconomic class and obesity is greater for women, and concludes that obesity hinders the upward mobility of women more than men.

These views are corroborated by a large scale study in Midtown Manhattan (Goldblatt, Moore & Stunkard, 1965). Compared to nonobese women, obese women were less likely to acquire a higher socioeconomic standing than their parents, and more likely to achieve a lower status. This relationship was not found among the obese and nonobese men studied. In addition, although the percentage of thin men did not vary significantly with social class, the percentage of thin women was related to class level (9%, 19% and 37% for low, middle and high socioeconomic class respectively). It would appear that the psychological prejudice toward obese women translates into social and economic terms.

Thinness

At the opposite end of obesity on the spectrum of "weight-related concerns" are the eating disorders, anorexia and bulimia. The increasing prevalence of these disorders in both adolescent and adult groups may be reflected in statistics indicating that 15% of Canadian women are in a weight category which "may be associated with health problems in some people" because of underweight (Minister of Supply and Services, 1988). Dineen (1987) estimates that one in twelve adolescent girls in Toronto suffers from an eating disorder.

Clinical descriptions of these disorders overlap with certain features of obesity, including a distortion of body image. It is estimated that 95% of Anorexia Nervosa occurs in females. Anorexia has a range in age of onset from prepuberty to the early thirties. Approximately one-third of people with Anorexia Nervosa are mildly overweight before the onset of the illness, and many are described as having been perfectionist, "model children" (American Psychiatric Association, 1987).

Related to Anorexia Nervosa is Bulimia Nervosa, which is characterized by ". . . recurrent episodes of binge eating (rapid consumption of a large amount of food in a discrete period of time); a feeling of lack of control over eating behaviour during the eating

binges; self-induced vomiting, use of laxatives or diuretics, strict dieting or fasting, or vigorous exercise in order to prevent weight gain; and persistent overconcern with body shape and weight." (American Psychiatric Association, 1987; p.67).

Preoccupation with weight in bulimics results in alternating cycles of bingeing and fasting, which translate into frequent weight fluctuations. In fact, bulimics often state that their life is focused on conflicts over eating. Bulimics may be underweight or overweight, although most are within a normal weight range. Some evidence suggests that obesity in adolescence increases the likelihood of developing Bulimia, and frequently the parents of bulimics are obese. Similar to Anorexia, the disorder commonly begins in adolescence and occurs with greater frequency in females (American Psychiatric Association, 1987).

Although a disturbance in body image is not a component of the DSM-III-R diagnosis of bulimia, it has been indicated in the etiology of the disorder (Striegel-Moore, Silberstein & Rodin, 1986). These authors attribute the increasing prevalence of bulimia nervosa partly to our society's preoccupation with physical attractiveness and slenderness coupled with the stigmatization of obesity.

Garner, Garfinkel, Schwartz and Thompson (1980) documented a shift toward a thin beauty ideal for women through their examination of 20 years of data on Playboy centerfolds, measurements of Miss America contest winners and quantity of diet articles in popular women's magazines. Striegel-Moore et al (1986) postulated that women at highest risk for bulimia nervosa are " those who have accepted and internalized most deeply the sociocultural mores about thinness and attractiveness" (p. 247). Clinical evidence suggests that bulimic women display greater acceptance of societal attitudes than non-bulimic women (Striegel-Moore, Silberstein, & Rodin, 1985), and therefore may experience greater body image disturbance through comparison of their own bodies to these unrealistic, internalized ideals.

It appears from the above discussion that eating problems are a source of

tremendous distress for women. Even the preoccupation with weight-related concerns has been labeled a chronic stressor in women (Attie & Brooks-Gunn, 1987). Despite these detrimental consequences, disordered eating behavior is highly resistant to change. In fact, general statistics on dieting indicate that only 6% of those individuals who successfully lose weight maintain their loss two years later (Beller, 1977). Cure rates for anorexia and bulimia fall within similarly dismal estimates (Brumberg, 1988).

The extensive health and emotional risks associated with eating problems, paired with evidence of the profound influence of societal attitudes, dictate a focus on further examination of the fundamental factors contributing to the origin and maintenance of such disorders, particularly those theories with a sociocultural bias, such as Orbach's. Given the refractory nature of weight-related problems, pertinent implications of etiological research include both prevention and intervention programs.

The present study attempted to validate Orbach's theory in a university undergraduate population. The goal was not to prove or disprove any of the points of controversy within feminist theory as represented by Orbach's postulations, but to examine the arguments within each of these previously mentioned positions.

This study adapted some of the methodologies described in attribution research, that is, the use of vignettes and semantic differentials (word pairs) illustrating the psychological attributes equated with a thin, normal and obese female silhouette. In an attempt to circumvent participants' stereotyped notions of obese females, a phenomenological approach was used. That is, for the word pair list, participants were asked to imagine themselves in each of three body forms, and to indicate the degree to which each attribute applies to them in that body form. For the vignette section, participants were asked to imagine themselves in each situation three times (once with each body form) and to determine the degree to which they experienced the associated attributes for that situation. All responses were recorded on a continuum from one to seven (Likert type scale).

HYPOTHESES

According to Orbach's theory, women will respond differently to attributions of themselves and assess outcomes of events differently depending on their body image. On the vignettes, it was predicted that participants will describe the obese figure in more favorable terms than the thin or normal figures. Specifically, it was hypothesized that mean ratings for the obese silhouette will be greater than mean scores for either the thin or normal figures, on all ten vignettes.

On the word pair list, it was predicted that female participants will describe the silhouettes in terms of the attributes suggested by Orbach, and in a manner similar to overall ratings of the figures as reported by Bell et al. (1986). Specifically, it was hypothesized that mean ratings will be highest for the obese figure (compared to the thin or normal figure) on the following word pairs: cold/warm, un giving/giving, defined/undefined, self-involved/other-involved, vain/humble and guilty/innocent.

It was predicted that mean scores will be highest for the thin silhouette on the following word pairs: weak/powerful, not together/together, incompetent/competent, not confident/confident, sad/happy, passive/active, unpopular/popular, ineffective/effective, stupid/smart.

For the three remaining word pairs (pessimistic/optimistic, bad/good and unproductive/productive), it is hypothesized that the mean of scores for the thin and obese silhouettes will not differ.

In addition, the Bem Sex Role Inventory was administered as a measure of participants' sex role typing. It was hypothesized that there will be a positive correlation between Bem Femininity score and scores on vignettes and word pairs for the obese body form. Conversely, it was predicted that there will be a negative correlation between Bem

Masculinity score and vignette and word pair scores for the obese body form.

It was hypothesized that body dissatisfaction score (the difference score of present versus desired body form), and historical body image score would correlate positively with vignette and word pair scores for the thin body form.

To summarize, it was hypothesized that participants would generally rate the obese form more favorably than either the thin or normal figures. Specifically, participants with a high Bem Femininity score would describe the obese figure in favorable terms, while participants with a high Bem Masculinity score would rate the obese figure in an unfavorable manner. Finally, participants with a high body dissatisfaction score or a history of being obese would rate the thin silhouette most positively.

METHOD

Participants

Three hundred and seven female students attending Saint Mary's University in Halifax, Nova Scotia, participated in the present study. Participants were enrolled in a variety of undergraduate psychology courses including Introductory Psychology, Statistics, Personality Psychology and Psychology of Aging.

In a pilot study, participants stated that they were more comfortable reporting age in terms of a category, rather than revealing their exact age. Approximately fifty-eight percent (57.7%) of respondents were in the 15-19 yr. age category and approximately thirty-three percent (33.2%) were in the 20-24 yr. age category. Approximately five percent (5.2%) of participants indicated that they were 35 yrs. or older. Over one half (51.1%) of the participants were enrolled in their first year of post-secondary education and approximately eighty-three percent (82.7%) were single (living without a partner). The majority (91.9%) of the sample was white, and over one half (53.1%) of participants were employed part-time. See Table A-1 for more extensive demographic data.

With respect to medical history, 26 participants indicated that they had experienced obesity as a result of the following: thyroid disorder (.3%), eating disorder (4.2%), medication (.7%), psychiatric illness (.7%), other reasons, such as family history of obesity, oral contraceptives, and food addiction (2.6%). See Table A-2 for a further description of responses regarding medical history.

Design

A survey research design using the following questionnaires was employed: a background questionnaire, two semantic differentials (10 vignettes and 18 word pairs)

designed for this study (Body Image Attribution Measure), and The Bem Sex Role Inventory (Bem, 1981).

Measures

Background Questionnaire

The background questionnaire included three items requesting the silhouette number approximating the participant's present body form, the silhouette number approximating the participant's desired body form, and the silhouette number the participant has been most often in the past (historical body image).

Additionally, the background questionnaire included five items requesting the following information: age, year of post-secondary education, marital status, ethnic background, and employment status. A copy of the background questionnaire may be found in Appendix B.

Body Image Attribution Measure

A semantic differential is an instrument of psychological measurement designed to evaluate the connotative meanings of certain words. Participants are asked to rate the meaning of each word along a number of polar dimensions (Reber, 1985).

The study employed two types of semantic differential: one used vignettes and opposing labels (related to the vignette) and the other used bipolar word (adjective) pairs that represent personality dimensions (see Appendix B). Both types were presented with silhouettes chosen to represent normal, obese and thin figures. The silhouettes are reproductions of original silhouettes devised by Bell, Kirkpatrick & Rinn (1986). The researcher obtained written permission from Dr. Kirkpatrick to reproduce and employ the aforementioned silhouettes (see Appendix C).

The ten vignettes and accompanying labels used in the first type of semantic

differential were derived from Orbach's (1978) theory. In addition, the first ten of 18 bipolar word pairs employed in the second type of semantic differential were derived from Orbach's theory. The remaining eight word pairs were from the Bell et al. (1986) study, which employed a total of ten word pairs (the remaining two word pairs in the Bell et al. study are the same as two adjective pairs derived from Orbach's theory).

A pilot study (n=10) of the survey revealed that participants understood the instructions and were able to perform the required tasks. However, upon further discussion with individual participants, it was apparent that several vignette situations had been interpreted very differently from the researchers intended scenarios. In an attempt to approximate Orbach's constructs, the wording of these vignettes was altered slightly to accommodate their comments. For example, the SATURDAY PARTY SINGLE vignette originally requested that participants rate the silhouettes on a scale in which one represented "feeling uncomfortable with your sexuality" and seven represented "feeling comfortable with your sexuality". The pilot revealed that participants interpreted this scenario in terms of obese stereotypes i.e., "I wouldn't feel comfortable naked with this man if I were fat". The intention was to explore Orbach's notion of fat as a method by which women hide from their sexuality. Therefore, the bipolar labels were changed to "feeling your sexuality is exposed" and "feeling your sexuality is not exposed".

Additionally, participants disclosed that the body form representative of thin was closer to the ideal body form. Therefore, the thin form was changed from figure three to figure two.

Surveys were compiled with the sequence of vignettes and silhouettes, as well as the polarity of adjectives (i.e. whether or not 1 on the scale represented the most desirable attribute) counterbalanced to control for an order effect. However, the polarity of adjectives was altered prior to statistical analysis to facilitate comprehension of results. Specifically, labels on every other vignette and word pair were reversed such that the least desirable

attribute was represented by the lowest score (1) and the highest score (7) represented the most desirable attribute.

Bem Sex Role Inventory

The Bem Sex Role Inventory (BSRI) (see sample questions, Appendix B) was developed to investigate the concept of psychological androgyny, which refers to the integration of masculine and feminine traits in an individual (Bem, 1981). The BSRI contains two features distinguishing it from other sex role scales. First, it treats masculinity and femininity as separate dimensions rather than as two ends of one dimension. This allows a respondent to score high on both dimensions (androgynous), low on both dimensions (undifferentiated), or high on one dimension and low on the other (either masculine or feminine). Second, items in the BSRI were allocated as feminine or masculine on the basis of culturally defined sex-typed social desirability, and not on the basis of gender differences in responses (Bem, 1981).

The BSRI contains 60 personality characteristics. Twenty of these traits are stereotypically masculine (e.g. assertive), twenty are stereotypically feminine (e.g. affectionate), and twenty are neutral items (e.g. happy). Participants are asked to indicate on a seven point scale the degree to which each of the 60 characteristics applies to themselves. The BSRI may be administered to large groups or individuals, and takes approximately 15 minutes to complete.

Bem (1981) suggests that participants be divided into four separate sex-role groups according to a median split of the sample. The sex-role groups are as follows: Feminine (high feminine, low masculine), Masculine (high masculine, low feminine), Androgynous (high feminine, high masculine), and Undifferentiated (low feminine, low masculine).

All BSRI response sheets were hand-scored according to manual instructions (Bem, 1981). First, Femininity and Masculinity scores (averages of the participant's

ratings of feminine and masculine adjectives, respectively) were calculated for each participant. Then the median of both Femininity and Masculinity scores was computed for the entire sample, and participants were classified into one of the above four groups according to the position of their scores with respect to the sample medians. In the aforementioned description of the four groups, high and low refer to above and below the sample median, respectively.

Bem (1981) comments that limitations of this classification method include borderline subjects whose scores are on the cutoff point. However, the median split is considered the most efficient method of classifying subjects for research purposes, particularly with large sample sizes.

Procedure

Participants from eight separate classes were tested. Initially, participants were recruited through sign-up sheets circulated with an accompanying letter to Introductory Psychology professors (see Appendix D). However, because response was limited, the majority of surveys were administered during class time (the professor had previously announced that female students would have an opportunity to participate in research). All participants received course credit for their participation.

All instructions were read by the researcher from a pre-typed sheet (see Appendix E). After the credentials of the researcher were identified, participants were told that the survey was self explanatory and informed of the need for honest responses. Additionally, participants were assured of the anonymous and confidential nature of the surveys, and were informed of their right to withdraw from the study and to access research results following analysis of data. Participants were encouraged to contact the researcher if they wished to discuss the survey or its administration. No such contacts occurred.

Finally, because the presentation of the individual questionnaires within the survey

was counterbalanced to control for an order effect, participants were advised to ignore the fact that other participants' surveys may appear different from their own.

RESULTS

Vignette and Word Pair Scores

As shown in Table 1, mean scores on vignettes were generally greater for the obese figure than for either the thin or normal figures. Specifically, eight out of ten (80%) vignettes agreed with this prediction, indicating that participants preferred to be in the obese body form in the majority of vignette situations. Only the "WOMEN'S ROLES" and "VOGUE" vignettes deviated from this pattern; the normal body form received the most favorable rating in these vignettes.

The mean ratings on word pair scores were highest for the obese figure on the following dimensions: cold/warm, defined/undefined, self-involved/other-involved and vain/humble. The highest score, seven, represents the most positive attribute. Therefore, participants labeled themselves to be warmer, less defined, more other-involved and humbler as an obese woman than as a thin or normal weight woman. Contrary to expectations, mean scores for ungiving/giving and guilty/innocent were not greatest for the obese figure (see Table 2).

Additionally, mean ratings of the thin figure were contrary to predictions; guilty/innocent was the only word pair for which the thin figure received the highest score. Comparatively, the normal figure was rated highest for thirteen out of eighteen (72.2%) of word pairs. As expected, mean ratings for bad/good did not differ greatly for the thin versus obese figure, however, means did differ for pessimistic/optimistic and unproductive/productive (see Table 2).

Multivariate analysis of variance was used to test for significant effects among scores on the ten vignettes and eighteen bipolar word pairs. In addition, averaged univariate F -ratio analyses were computed. These tests are appropriate for repeated measure designs because they compensate for learning and practice effects such that only robust effects are

Table 1

Comparisons of Vignette Mean Scores for Thin, Normal and Obese Figures

	Thin	<u>Means</u> Normal	Obese	Comparisons
<u>Vignette</u>				
Rape	2.11	2.06	3.83	O>T>N
Women's Roles	4.72	4.94	2.97	N>T>O
Public Speaking	4.49	3.76	4.99	O>T>N
Pool Competition	3.83	2.50	6.01	O>T>N
Friday Party with Lover	3.67	2.86	5.16	O>T>N
Sexist Male Co-Worker	3.41	2.51	5.14	O>T>N
Vogue	3.68	3.94	2.74	N>T>O
Roommate	4.13	4.20	4.31	O>N>T
Beach Hostility	4.14	3.49	5.37	O>T>N
Saturday Party Single	3.58	2.83	4.81	O>T>N

*T=Thin
 N=Normal
 O=Obese

Table 2

Comparisons of Word Pair Mean Scores for Thin, Normal, and Obese Figures

	Thin	<u>Means</u> Normal	Obese	Comparisons
Cold/Warm	4.23	5.20	5.33	O>N>T
Ungiving/Giving	4.60	4.95	4.94	N>O>T
Defined/Undefined	3.78	3.10	4.76	O>T>N
Self Involved/Other Involved	3.90	4.17	4.55	O>N>T
Vain/Humble	4.27	3.94	5.76	O>T>N
Weak/Powerful	3.28	4.87	3.54	N>O>T
Not Together/Together	4.39	5.15	3.45	N>T>O
Incompetent/Competent	4.74	5.60	4.36	N>T>O
Not Confident/Confident	4.09	5.22	2.63	N>T>O
Guilty/Innocent	4.76	4.62	4.24	T>N>O
Sad/Happy	4.49	5.51	3.24	N>T>O
Passive/Active	4.71	5.41	2.72	N>T>O
Unpopular/Popular	4.48	5.28	3.11	N>T>O
Ineffective/Effective	4.66	5.38	3.67	N>T>O
Pessimistic/ Optimistic	4.60	5.25	3.14	N>T>O
Stupid/Smart	5.11	5.29	4.64	N>T>O
Bad/Good	4.85	5.09	4.78	N>T>O
Unproductive/Productive	5.03	5.46	3.92	N>T>O

*T=Thin

N=Normal

O=Obese

indicated. Highly significant results for Box's test for homogeneity of dispersion matrices suggested that data violate the first symmetry condition. In addition, Mauchly's test of sphericity was significant, indicating that the second symmetry condition was violated. Therefore, univariate E-ratio analyses were evaluated using the Greenhouse-Geisser correction to degrees of freedom (SPSS Inc, 1988).

Multivariate analyses of main and interaction effects in the data from vignette scores produced significant ($p < .000$) E-ratios for Vignette $F(9,291)=114.63$, Pillais trace criterion=.77998; Body Form $F(2,298)=9.14$, Pillais=.05778; and Vignette x Body Form $F(18,282)=111.65$, Pillais=.87695. Averaged univariate tests of significance (see Table F-1) confirmed significant group differences for both within-subject factors and their interaction.

Addition of the between-subjects factor (sexrole) to multivariate analyses of the vignette scores produced one additional significant E-ratio: Sexrole x Body Form $F(6,540)=4.26$, Pillais=.09047, $p < .000$. A non-significant E-ratio was indicated for the effect of Sexrole $F(3,270)=1.83$, $p < .143$ (see Table F-2); Sexrole x Vignette $F(27,792)=1.41$, Pillais=.13715, $p < .084$; and Sexrole x Vignette x Body Form $F(54,765)=.99$, Pillais=.19683, $p < .488$. Averaged univariate tests of significance confirmed these results (see Table F-3).

Multivariate analyses of main and interaction effects in the data from word pair scores revealed highly significant ($p < .000$) E-ratios for Word Pair $F(17,270)=36.37$, Pillais=.69603; Body Form $F(2,285)=157.62$, Pillais=.52519; and Word Pair x Body Form $F(34,253)=31.51$, Pillais=.80898. The results of averaged univariate tests of significance (see Table F-4) emphasize significant differences for both the within subject factors and their interaction.

Multivariate analyses of word pair scores including the between-subjects factor (sexrole) produced one additional significant E-ratio: Sexrole $F(3,258)=3.89$, $p < .010$ (see

Table F-2). A non-significant η^2 -ratio was indicated for Sexrole x Word Pair $F(51,732)=1.20$, Pillais=.23148, $p<.165$; Sexrole x Body Form $F(6,516)=1.20$, Pillais=.02741, $p<.307$; and Sexrole x Word Pair x Body Form $F(102,681)=1.04$, Pillais=.40519, $p<.376$. Averaged univariate tests of significance confirmed the above (see Table F-5).

To summarize, with the use of Pillais trace criterion, the dependent variables were significantly affected by the within-subject factors of Vignette, Word Pair and Body Form (for both vignette and word pair scores). Therefore, participants assigned attributes to various body forms in a significantly different manner according to type of body form, the imagined situation, and the specific personality dimension. The interactions, Vignette x Body Form and Word Pair x Body Form, indicate that participants associated certain personality dimensions and vignette experiences with particular body types. The between-subjects factor, sexrole, significantly affected word pair scores independently and vignette scores by interacting with Body Form. This reveals that participants' sex-role typing significantly affected the association of certain personality dimensions with particular body types. However, for the vignettes, certain sex-role categories were associated with participants' assessment of vignette outcome for a particular body type (see Table 3).

Bem Sex Role Inventory (BSRI) Scores

The Bem Femininity (BF) mean (5.04), standard deviation (.53), and median (5.10) of the sample were similar to those of female subjects in Bem's original North American sample (Bem, 1978). However, the Bem Masculinity (BM) mean (4.50) and median (4.50) of the present sample are lower than those of the original Bem sample, and the BM standard deviation (.74) is greater for the present sample than for the original sample. In both samples, the BF median was higher than the BM median (see Table F-6).

Table 3
Summary of the Multivariate Analysis of Variance of Vignette and Word
Pair Scores

Vignette Scores	
Source	P
Vignette (A)	.000
Body Form (B)	.000
Sexrole (C)	.143
A x B	.000
A x C	.084
B x C	.000
A x B x C	.488

Word Pair Scores	
Source	P
Word Pair (A)	.000
Body Form (B)	.000
Sexrole (C)	.010
A x B	.000
A x C	.165
B x C	.307
A x B x C	.376

Results of the BSRI profile indicate that the present study contains an approximately equal number of androgynous (21.8%) and feminine (21.2%) participants. Masculine (sex-reversed) participants comprised 24.8% of the sample, and 23.5% of the participants were undifferentiated. The remaining 8.8% of participants were borderline (those whose BF and/or BM scores were exactly on the medians). Table F-7 contains a comparison of the present sample and the Bem (1978) normative sample with respect to these group percentages.

Pearson Product Moment Correlations were computed between Bem scores (BF and BM) and the dependent variables (ratings for all body forms on vignettes and word pairs). Although significant ($p < .05$) correlations were obtained for all three body forms across vignettes and word pairs, in general, stronger ($r > .20$) correlations were found for the normal body form.

There was a significant positive correlation between BF scores and ratings for the thin body form in the "FRIDAY PARTY WITH LOVER" ($r = .10$, $p < .036$) and "BEACH HOSTILITY" ($r = .10$, $p < .048$) vignettes (see Table F-8). Additionally, positive correlations were found for the normal body form on the "FRIDAY PARTY WITH LOVER" ($r = .11$, $p < .031$) vignette (see Table F-9) and for the obese body form on the "SATURDAY PARTY SINGLE" ($r = .12$, $p < .016$) vignette (see Table 4). There was a significant negative correlation between BF scores and "RAPE" ($r = -.12$, $p < .016$) vignette scores for the normal body form (see Table F-9).

Word pair scores that significantly correlated in a positive direction with BF scores comprised nine out of eighteen (50%) of word pairs for both the thin (see Table F-10) and normal (see Table F-11) body forms and three out of eighteen (16.7%) of word pairs for the obese body form (see Table 5). BF correlated significantly in a negative direction for one out of eighteen (5.6%) of word pairs for the obese body form (see Table 5).

There was a significant positive correlation between BM scores and ratings for the

Table 4

Pearson Product Moment Correlations for BSRI Masculinity and Femininity Scores with Vignettes for the Obese Body Form

VIGNETTE	Rape	Women's Roles	Public Speaking	
BSRI Femininity Score	-.06	.01	-.07	
BSRI Masculinity Score	-.18**	-.01	-.01	
VIGNETTE	Pool Competition	Friday Party With Lover	Sexist Male Co-worker	
BSRI Femininity Score	-.07	.04	.05	
BSRI Masculinity Score	.02	-.01	-.06	
VIGNETTE	Vogue	Roommate	Beach Hostility	Saturday Party Single
BSRI Femininity Score	-.01	-.01	-.08	.12*
BSRI Masculinity Score	.00	.10*	.04	-.02

* $p < .05$; ** $p < .01$

Table 5

Pearson Product Moment Correlations for the BSRI Masculinity and Femininity Scores with Word Pairs for the Obese Body Form

Score	BSRI Femininity Score	BSRI Masculinity
<u>WORD PAIR</u>		
Cold/Warm	.09	-.06
Ungiving/Giving	.10*	.01
Defined/Undefined	-.02	.04
Self Involved/Other Involved	-.10*	-.07
Vain/Humble	.03	.08
Weak/Powerful	-.06	-.11*
Not Together/Together	.07	.02
Incompetent/Competent	.12**	.00
Not Confident/Confident	-.01	.02
Guilty/Innocent	.09	-.09*
Sad/Happy	.03	.03
Passive/Active	.04	.08
Unpopular/Popular	.01	.02
Ineffective/Effective	.06	-.02
Pessimistic/ Optimistic	.02	.07
Stupid/Smart	.07	-.02
Bad/Good	.12*	.01
Unproductive/Productive	.06	.01

*p<.05 ; **p<.01

thin body form in the "POOL COMPETITION" ($r=.11, p<.025$) and "ROOMATE" ($r=.10, p<.040$) vignettes (see Table F-8). Additional significant positive correlations were found for the normal body form on the "FRIDAY PARTY WITH LOVER" ($r=.09, p<.049$) and "SATURDAY PARTY SINGLE" ($r=.10, p<.037$) vignettes (see Table F-9), and for the obese body form on the "ROOMATE" ($r=.10, p<.048$) vignette. BM correlated significantly in a negative direction with "RAPE" ($r=-.18, p<.001$) vignette scores for the obese body form (see Table 4).

Word pair scores that significantly correlated in a positive direction with BM comprised eight out of eighteen (44.4%) of word pairs for the normal body form (see Table F-11). BM correlated significantly in a negative direction for one out of eighteen (5.6%) of word pairs for both thin (see Table F-10) and normal (see Table F-11) body forms, and for two out of eighteen (11.1%) of word pairs for the obese body form (see Table 5).

The above computations were performed to test the hypothesis that BF and BM will correlate in a positive and negative direction (respectively) with measures of the dependent variable (vignette and word pair scores) for the obese body form. The analysis indicates that this hypothesis was only partially supported. Participants with a high BF score rated the obese figure most favorably on the "SATURDAY PARTY SINGLE" vignette, and on the following word pairs: ungiving/giving, incompetent/competent, and bad/good. Participants with a high BM score rated the obese figure least favorably on the "RAPE" vignette and on the weak/powerful and guilty/innocent word pairs. Therefore, this hypothesis was supported by two out of ten (20%) of vignettes and five out of eighteen (27.8%) of the word pairs.

Body Image

Real body image (BIREAL) is a measure of a participant's perception of her body

size. Ideal body image (BIIDEAL) is a measure of a participant's desired body size. Historical body image (BIHIS) is a measure of the body form the participant has occupied most frequently in the past. Body dissatisfaction score (BIDIS), the difference score of BIREAL - BIIDEAL, measures a subject's desire to occupy a larger or smaller body form. Means, medians, standard deviations and ranges for these measures are presented below.

Table 6

Descriptive Statistics for Measures of Body Image

	Mean	Median	S.D.	Range
BIREAL	4.54	5.00	1.16	5.00
BIIDEAL	3.91	4.00	.97	4.00
BIHIST	4.32	4.00	1.38	6.00
BIDIS	.63	1.00	1.14	7.00

Pearson Product Moment Correlations were performed on vignette scores and word pair scores for all three body forms with all four measures of body image. Generally, there were more significant ($p < .05$) and stronger ($r > .20$) correlations obtained for the thin body form (particularly with BIIDEAL) than for the normal (see Tables F-12, F-13) or obese body form. For the obese body form (see Table F-14), only one vignette score correlated significantly; the correlation occurred between BIREAL and "ROOMATE" vignette ($r = .11$, $p < .033$). On the word pair scores, there were no strong correlation coefficients ($r > .20$) for the obese body form, although several were significant (see Table F-15).

Results of the above analysis are equivocal and only partially support the hypothesis that BIHIST and BIDIS will correlate positively with measures of the dependent

variable (vignette and word pair scores) for the thin body form. Specifically, BIHIST correlates positively with seven out of ten (70%) of the vignette scores (see Table 7) and one out of eighteen (5.6%) of the word pair scores for the thin body form. However, BIHIST also correlates negatively with one out of ten (10%) of the vignette scores and ten out of eighteen (55.6%) of the word pair scores for the thin body form (see Table 8).

Similarly, although there was a significant positive correlation between BIDIS and eight out of eighteen (44.4%) of word pair scores for the thin body form, significant negative correlations exist between BIDIS and five out of eighteen (27.8%) of word pair scores (see Table 8) and between BIDIS and four out of ten (40%) of vignette scores for the thin body form (see Table 7).

Table 7

Pearson Product Moment Correlations for Body Image Real (BIREAL), Body Image Ideal (BIIDEAL), Historical Body Image (BIHIS), and Body Dissatisfaction (BIDIS) Scores with Vignettes for the Thin Body Form

	BIREAL	BIIDEAL	BIHIS	BIDIS
<u>VIGNETTES</u>				
Rape	.16**	.13**	.12*	.04
Women's Roles	-.02	-.13**	-.05	.09
Public Speaking	.13**	.19**	.14**	-.03
Pool Competition	.13**	.28**	.20**	-.12*
Friday Party with Lover	.12*	.27**	.14**	-.11*
Sexist Male Co-Worker	.12*	.26**	.14**	-.10*
Vogue	-.06	-.13**	-.10*	.04
Roommate	.04	.07	.02	-.02
Beach Hostility	.06	.27**	.17**	-.17**
Saturday Party Single	.11*	.18**	.15**	-.05

* $p < .05$; ** $p < .01$

Table 8

Pearson Product Moment Correlations for Body Image Real (BIREAL), Body Image Ideal (BIIDEAL), Historical Body Image (BIHIS), and Body Dissatisfaction (BIDIS) Scores with Word Pairs for the Thin Body Form

	BIREAL	BIIDEAL	BIHIS	BIDIS
WORD PAIR				
Cold/Warm	-.20**	-.08	-.20**	-.13**
Ungiving/Giving	-.18**	-.04	-.20**	-.15**
Defined/Undefined	.12*	.25**	.15**	-.09
Self Involved/Other Involved	-.01	.10*	-.01	-.09*
Vain/Humble	-.02	.27**	.07	-.24**
Weak/Powerful	.01	.22**	-.04	.20**
Not Together/Together	-.13**	-.24**	-.11*	.07
Incompetent/Competent	-.13**	-.26**	-.17**	.10*
Not Confident/Confident	-.10*	-.28**	-.15**	.14**
Guilty/Innocent	-.11*	-.01	-.01*	-.11*
Sad/Happy	-.13**	-.30**	-.14**	.13**
Passive/Active	-.08	-.29**	-.08	.17**
Unpopular/Popular	-.07	-.30**	-.08	.18**
Ineffective/Effective	-.06	-.26**	-.06	.17**
Pessimistic/ Optimistic	-.02	-.21**	-.06	.16**
Stupid/Smart	-.09	-.16**	-.11*	.06
Bad/Good	-.08	.00	-.10*	-.08
Unproductive/Productive	-.15**	-.24**	-.12*	.07

*p<.05 ; **p<.01

Therefore, participants with high body dissatisfaction rated the thin figure most favorably on the following word pairs: weak/powerful, incompetent/competent, not confident/confident, sad/happy, passive/active, unpopular/popular, ineffective/effective and pessimistic/optimistic.

Participants with a history of being obese rated the thin figure most favorably on the RAPE, PUBLIC SPEAKING, POOL COMPETITION, FRIDAY PARTY WITH LOVER, SEXIST MALE CO-WORKER, BEACH HOSTILITY and SATURDAY PARTY SINGLE vignettes, and the undefined/defined word pair. In conclusion, this hypothesis was supported by seven out of ten (70%) of vignettes and nine out of eighteen (50%) of word pairs.

BSRI and Body Image

Further Pearson Product Moment Correlations were computed to examine the relationship between Bem scores (BF and BM) and measures of body image (BIREAL, BIIDEAL, BIHS and BIDIS). BIDIS is the difference score of BIREAL - BIIDEAL, and is a measure of a participant's desire to occupy a smaller or larger body form. There was a significant correlation between BF and BIDIS ($r = -.11$, $p < .026$), indicating that participants with a high BF score were relatively satisfied with their present bodies.

Crosstabulations and chi-square tests of independence were calculated for measures of body image and sex role categories. The greatest number of androgynous (22=32.8%) and feminine (26=40.6%) participants had a BIREAL of 4. The largest portion of sex-reversed participants (28=36.8%) identified a BIREAL of 5, while the largest category of undifferentiated participants (23=31.9%) selected 3 as BIREAL. A chi-square test of independence showed a significant ($\chi^2 = 26.36$, $p < .034$) association between BIREAL and sex role category.

The greatest number of androgynous (21=31.8%) and undifferentiated (25=34.7%) participants selected a BIIDEAL of 4. The largest portion of feminine (26=40.0%) and sex-reversed (25=32.9%) participants identified a BIIDEAL of 5. Chi-square results were insignificant for this association.

Results of the crosstabulations for sex role category with BIHIST and BIDIS are illustrated in figure 1 and 2, respectively. Although chi-square results were insignificant for these two associations, certain patterns are of interest. The greatest number of both androgynous (19=28.8%) and sex-reversed(28=36.8%) participants identified a BIHIST of 5. The highest number of feminine (22=33.8%) participants reported a BIHIST of 4; the greatest number of undifferentiated (17=23.6%) participants identified a BIHIST of 3 (see Figure 1).

The largest number of androgynous (29=43.9%) participants indicated a BIDIS of 0. The greatest number of participants for the other three sex role categories reported a BIDIS of 1 (see Figure 2).

To summarize, undifferentiated and androgynous participants had smaller present body forms than feminine or sex-reversed participants. However, historically, undifferentiated and feminine participants were smaller than androgynous and sex-reversed. Additionally, androgynous and undifferentiated participants aspired to be smaller than feminine and sex-reversed participants, and more androgynous participants were satisfied with their present body than any other sex role categories (see Table 9).

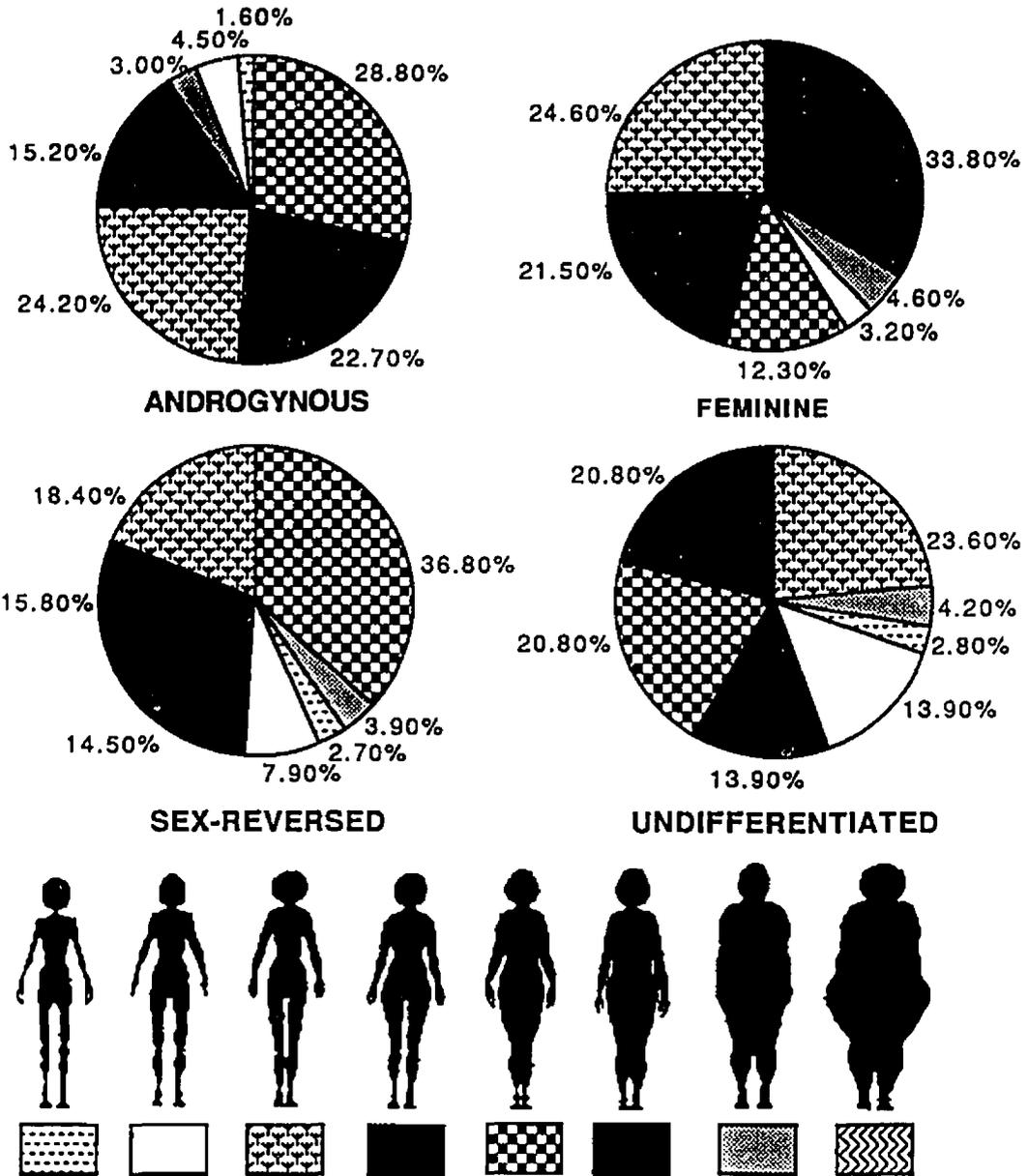


Figure 1 Figure 2 Figure 3 Figure 4 Figure 5 Figure 6 Figure 7 Figure 8

Figure 1: Percent distribution in eight categories of historical body image: for sex role category

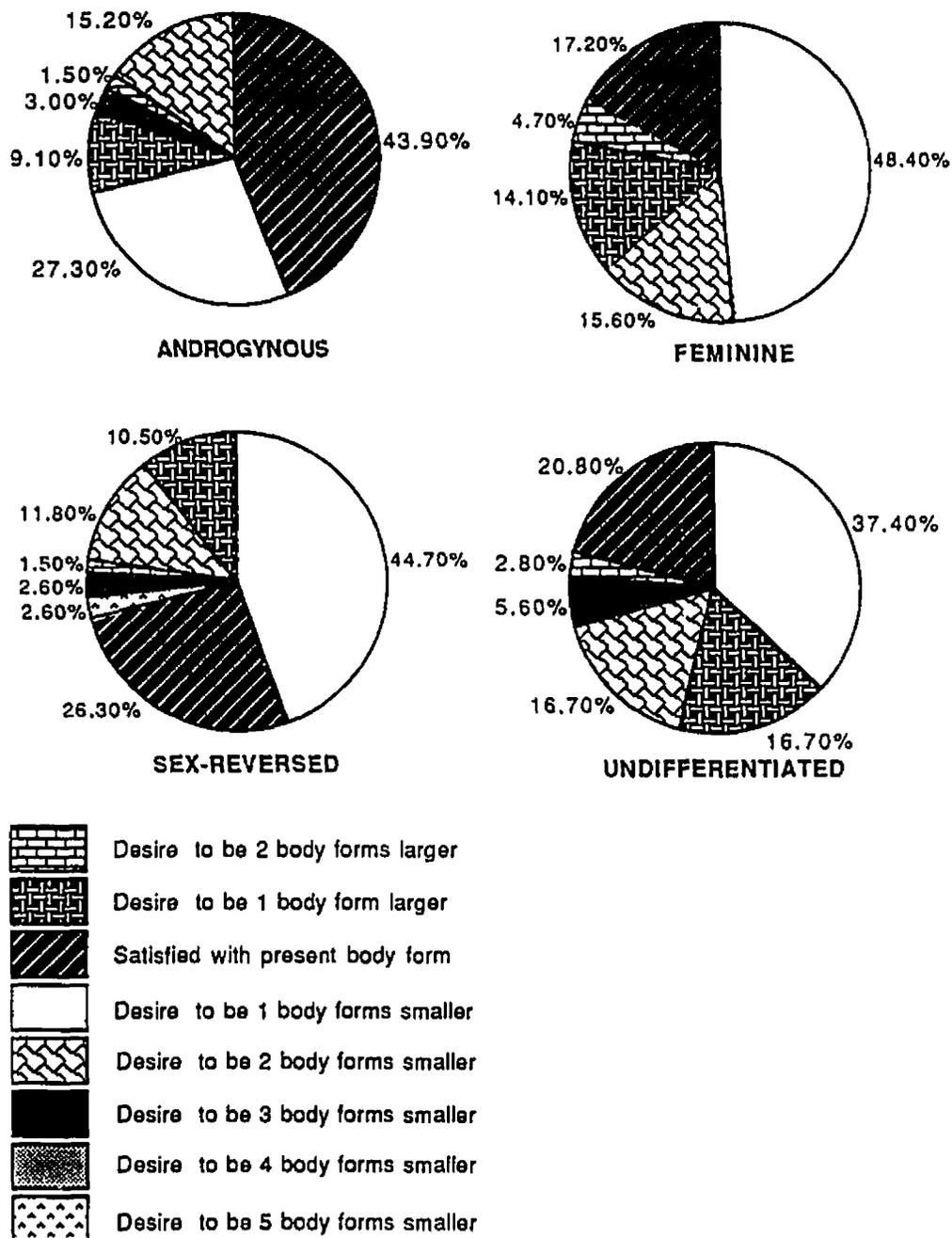


Figure 2: Percent distribution in eight categories of body dissatisfaction score for sex role category.

Table 9

Proportionate Comparison of Bem Sex-Role Categories for Measures of Body Image

Body Image Measure	Comparison
Real Body Image	U<A=F<M
Ideal Body Image	A=U<F=M
Historical Body Image	U<F<A=M
Body Image Dissatisfaction	A<U=M=F

*F= Feminine

M=Masculine

A=Androgynous

U=Undifferentiated

Qualitative Analysis

This section will describe responses to the question "What are your personal thoughts regarding the benefits versus compromises of being obese?" (This question was included in the background questionnaire section of the survey). A random selection of 182 out of 307 (59.1%) surveys were examined, and participants' written responses were grouped into five categories. The majority of participants (69 out of 182 or 37.9%) related opinions that represent negative stereotypes regarding obesity, i.e. "... obesity is negative for health/social/self-esteem reasons. . . ." Further, 13 out of 182 (7.1%) of participants provided answers indicative of positive stereotypes of obese people, i.e. "... obese individuals have better personalities ..."

Only 15 out of 182 (8.2%) of participants articulated benefits similar to those Orbach describes, i.e. "... obesity is freedom from sexual harassment and social pressures ...". The remainder of the sample either felt that body size was not related to any particular attribute (37 out of 182 or 20.3%) or did not respond (48 out of 182 or 26.3%).

DISCUSSION

Discussion of Results

Vignette and Word Pair Scores

Participants assigned attributions and experiences to the thin and obese body forms in consonance with Orbach's (1978) theory in vignette situations. The obese figure was perceived as the most desirable body to occupy in the majority of hypothetical situations, followed by the thin and normal figures, respectively. The exceptions to this generality, the WOMEN'S ROLES and VOGUE vignettes, overlap with the PUBLIC SPEAKING and ROOMATE scenarios with respect to the aspect of women's social relations they represent: the interaction with society. Although the obese figure was rated most favorably in the PUBLIC SPEAKING and ROOMATE vignettes, it was by a smaller margin than in any other vignette.

Vignettes in which the obese figure was greatly preferred depict the broader categories of women's relationships with men (the SEXIST MALE CO-WORKER, FRIDAY PARTY WITH LOVER, SATURDAY PARTY SINGLE, and RAPE vignettes), and with other women (the POOL COMPETITION AND BEACH HOSTILITY vignettes). Of these six vignettes, the POOL COMPETITION scenario resulted in the most profound difference between ratings for the most preferred figure (obese) and the least preferred figure (normal). Possibly, participants were able to imagine themselves in this situation more easily than in other vignettes. An alternate explanation is that this vignette delineates another aspect of women's relationships with men: the competition with other women for male attention.

The latter explanation permits the following conclusion: respondents felt particularly

more comfortable in an obese figure in those situations involving interactions with men, than in scenarios in which the emphasis was on their relationship with other women or on societal perceptions of themselves as women. The apparent incongruence of the RAPE vignette (in which mean ratings were relatively low for all three figures) illustrates the elevated awareness of women to issues of sexual violence. In fact, statements such as ". . . rape is not a sexual act, therefore body size doesn't matter. . ." were not uncommon amid responses to the open-ended question.

In general, responses to the open-ended question contradicted results on the vignettes. That is, the majority of participants did not ascribe positive traits, such as those Orbach (1978) describes to an obese body, although they had rated the obese silhouette most favorably earlier in the survey. In fact, most written associations between particular characteristics and the obese body fell within stereotypical parameters. The difference between these two areas of the survey suggests that participants may not be consciously aware of their own thoughts regarding the significance of various body forms.

Results for those word pairs derived from Orbach's (1978) theory supported the prediction that participants would perceive the obese figure as warmer, less defined, more other-involved and humbler than the other body forms. Participants rated the obese body as ungrateful and guilty compared to the normal and thin figures, respectively, indicating a refutation of Orbach's theory. However, the difference between means on these scores was relatively small. The fact that the obese figure received the lowest mean rating on the majority of word pairs discloses the degree to which participants approximated the stereotypical responses common to attributional research on obesity (Louderbeck, 1970; Al-Issa, 1980; Tiggemann & Rothblum, 1988).

It was predicted that the thin silhouette would be rated most favorably on all the remaining word pairs, with the exception of bad/good, pessimistic/optimistic and unproductive/productive (for which it was predicted that there would be little difference

between means). This prediction was not supported, therefore Orbach's (1978) assertion that thinness is associated with power, togetherness, competence and confidence was not maintained. However, the preponderance of word pairs for which the normal figure received the highest rating corroborates the findings of Bell et al. (1986). This is particularly reassuring, considering the silhouettes used in the present study were derived from the work of Bell et al (1986).

Additionally, vignette results parallel the findings of Guy, Rankin & Norvell (1980), in that participants associated obesity with androgyny. Vignette results contradict those of Chetwynd, Stewart & Powell (1975) and Beck, Ward-Hull & Mclear (1976), who reported that subjects associated the obese female figure with traditional feminine attributes. Possible explanations for the difference in subjects' perception of female obesity over this sixteen year period (1975-1991) will be explored later.

Manova results confirmed that the semantic differential technique developed for this study was a sensitive measure of the difference in attributions assigned to various body forms. Further, the existence of a significant effect for vignette and word pair suggests that both methods of structuring Orbach's (1978) theory succeeded in discriminating between individual constructs. The interactive effects between vignette and body form and between word pair and body form, imply that particular body forms were perceived differently according to specific situations or attributes.

BSRI Scores

Hypotheses regarding the Bem Femininity (BF) and Masculinity (BM) scores were supported by relatively few vignettes and word pairs, indicating that the ability of these indices to predict participant ratings of the obese body form is limited. Of interest, however, is the significant negative correlation between BM score and ratings for the obese body on the RAPE vignette. Although participants generally felt vulnerable to sexual

assault in the thin and normal bodies and safer in the obese body, participants with a high BM score rated the obese silhouette as less safe. This outcome supports Orbach's (1978) theory as it suggests that less traditional women are less likely to ascribe attributes encompassing issues of safety to an obese body.

Additionally, there were a number of significant correlations between BF and BM scores and word pair ratings of the normal body form. This finding suggests that sex-role typing may predict traits associated with the average female form. For example, participants with high masculinity scores reported that the normal silhouette was powerful, confident, active and effective. Comparatively, participants with high femininity scores described the normal figure as warm, giving, humble and innocent. Both groups of participants related that the normal figure was together, competent and smart.

The large number of significant positive correlations between BF scores and word ratings of the thin body form, and the relative absence of significant correlations with BM suggests that femininity alone may predict attributes affiliated with thinness. Participants with high femininity scores described the thin figure in a manner similar to the normal figure (warm, giving, together, competent, etc.).

Manova results revealed a significant effect of sex-role type for word pair scores independent of other factors, and for vignettes scores in the interaction with body form. These findings corroborate correlational results in the following conclusion: the word pair measure was generally more sensitive to the effect of sex-role than the vignette portion of the survey.

Sex-role results must be interpreted in terms of recent literature regarding the relationship between gender-role attributes, attitudes and behaviours. Cook (1985) suggests that the conceptual definitions of masculinity and femininity have changed to instrumentality and expressivity, respectively, to incorporate cultural adaptations to gender differences. Further, McCreary (1990) states that "...theorists and researchers alike have

considered gender role attributes to be stable, unvarying traits, as opposed to dynamic, interchangeable characteristics that can be utilized as a function of the varying demands of the social context... " (p. 267). In light of these comments, it is possible that because the vignette scenario presented attributes within a social context, participants were able to respond to changes in body size from varying gender-role orientations. Conversely, because participants did not adjust their gender-role expression when assessing word pairs, sex-role had a significant effect on ratings. To reiterate, context is important in determining the expression of characteristics such as sex-role.

Body Image

Descriptive measures of body image indicate that the selection of silhouettes to represent a thin, normal, and obese body form (silhouette #2, #5, and #7, respectively) was appropriate. That is, the mean real body image of the sample approximated the silhouette representing a normal female body, and the figure chosen to represent thinness was almost two silhouettes smaller than the mean ideal body. This implies that participants experienced the vignette situations and word pair labels in a body that was much thinner than the cultural ideal. Similarly, the obese figure was considerably larger than the mean real body, suggesting that participants also had an opportunity to imagine themselves as much larger than the average woman.

Two hypotheses were formulated to explore the relationship between body image and traits associated with a thin body form. These hypotheses were supported by the majority of vignettes and word pairs, revealing some ability of measures of body image to predict ratings of the thin silhouette. However, the hypothesis regarding historical body image was supported most extensively by vignette results, while the predicted relationship between body dissatisfaction and positive perception of the thin form was supported by word pair results. This suggests that participants responded differently on the two

measures.

Further examination of these results indicates that participants with a larger present, historical or ideal body image were inclined to rate the thin figure favorably in vignettes, especially in those situations describing interactions with men (RAPE, FRIDAY PARTY WITH LOVER, SEXIST MALE CO-WORKER, SATURDAY PARTY SINGLE) or other women (POOL COMPETITION, BEACH HOSTILITY). Comparatively, in situations involving cultural expectations, larger participants tended to evaluate the thin figure unfavorably (WOMEN'S ROLES, VOGUE), or there was no significant relationship between body size and vignette score (ROOMATE).

An opposite pattern emerges for the normal figure. In general, participants with a larger present, historical or ideal body image rated the normal figure favorably on vignettes regarding societal perception, and unfavorably in scenarios involving interpersonal exchanges with either gender. There were no significant correlations for the obese body form.

In summary, larger participants perceived thinness as advantageous when interacting with men or other women (in a competitive context), and adherence to normal standards of body size as preferable when confronted by societal expectations of themselves as women. This parallels the previously mentioned pattern for mean ratings of the obese body form, irrespective of participant body size. Explanations of this trend will be discussed later.

Correlations between word pair scores and measures of body image provide some examples of the internal consistency of this measure. First, the more dissatisfied a participant was with her present body, the more favorably she rated the thin figure, and the less favorably she perceived the normal and obese figures. Additionally, the larger a participants' ideal body was, the less favorably she judged the thin figure, and the more favorably she evaluated the normal and obese figures. These tendencies are particularly

obvious for the passive/active, pessimistic/optimistic, and unproductive/productive word pairs.

Comparatively, Bell et al (1976) found that obese participants rated the obese figure as least active and productive, but more optimistic than the thin figure. Additional evidence of divergence with the findings of Bell et al (1986) is provided by the correlations between real body image and word pair scores. Although most of these coefficients are not significant, the trend is for larger participants to judge the thin figure most harshly, followed by the obese and normal figures, respectively. Comparatively, Bell et al (1986) reported that obese participants rated obese silhouettes most critically.

Contrary to previous research (Al-Issa, 1980; Tiggeman & Rothblum, 1988), larger respondents in the present study tended to judge the obese figure as confident, happy and popular. However, this study confirmed the results of Tiggeman & Rothblum (1988) who reported that obese individuals do not deviate from the stereotypical association between obesity and warmth of personality.

Results of previous research are equivocal with respect to the relationship between sex-role typing and body image. In support of the findings of Worsely (1981_a), the present study revealed that participants with a high femininity score are relatively satisfied with their bodies. The absence of other significant relationships suggests that this study does not support previous accounts of obese individuals displaying more femininity (Lefley, 1971; Pomerantz, Greenberg & Blackburn, 1977), and confirms the findings of Hawkins, Turell & Jackson (1983).

A proportionate comparison of sex-role categories for measures of body image revealed that presently and historically, undifferentiated and masculine participants had the smallest and largest body images, respectively, with androgynous and feminine participants in between these two extremes. Additionally, although masculine subjects aspired to be larger than any other category, it was the category of participants with both high

masculinity and femininity scores (androgynous) who were generally the most satisfied with their present bodies. These findings corroborate those of Jackson, Sullivan & Rostker (1988), who report that masculinity in females is conducive to a more favorable body image. However, the present study also illustrates that high femininity alone may buffer body dissatisfaction.

Implications of Research

Theoretical Issues

Respondents in the present study attributed experiences and characteristics to the obese form in consonance with the issues of safety from sexual violence and sexual harassment, respect, competition and hostility between women, boundaries, and comfort with sexuality as described by Orbach (1978). Less obvious, however, is the appropriate interpretation of the thin figure. If, as Orbach (1978) maintains, "women are positively afraid of being thin. . ." (p. 70), then the question is raised as to why participants judged the thin silhouette as the second most desirable body in which to experience the vignettes. Results of this study endorse the conclusion that the normal body form provokes the most fear, not the thin.

One explanation for this apparent incongruence is the dynamic nature of female role expectations in the thirteen years since Orbach (1978) conceptualized her thesis. Glidden & Tracey (1989) argue the following:

"In the late 1980s, however, circumstances include some expansion of options available to women . . . and increased awareness of gender issues, especially among those with higher levels of educational attainment. . . ", and further: "Even college women with relatively traditional attitudes toward sex roles have probably incorporated this expanded set of career

and lifestyle alternatives into their conceptions of sex role identity" (p. 60).

Consonant with the evolution of role expectations for women are changes in the perceived ideal female body form, and the significance this ideal holds for women. To this end, Silverstein & Perdue (1988) state the following: "When the standard of female bodily attractiveness is slim, as it was in the 1920s and has been for the past two decades, women who stress the importance of attractiveness for women want to be slim" (p. 105). Silverstein et al (1988) found that desire for a slim, angular body form accompanied by attractiveness concerns is associated with dieting and binging. However, the same wish for a non-curvaceous body accompanied by purging and underweight is associated with an emphasis on success and intelligence (Silverstein et al, 1988). It appears that the issues surrounding the ideal female body are multidimensional and ever changing. Therefore, it is possible that a theory such as Orbach's (1978), which is predicated on the political climate of the late 1970s, is vulnerable to the expression of chronological alterations.

A look to a self-described "third wave feminist" provides an updated context in which to consider results of the present investigation. Wolfe (1990) interprets the concurrent increase in eating disorders and women's widening options, as evidence of "a violent backlash against feminism that uses images of female beauty as a political weapon against women's advancement: the beauty myth" (p.10). Wolfe (1990) construes the purpose of perpetuating this myth in terms of the contempt men feel for women's infringement on their domain: concrete symbols of power, such as money and prominent career positions. Further, she suggests that thinness promotes traits that balance the power of women's liberation. Not surprisingly, the traits are associated with traditional femininity including passivity, anxiety and emotionality (Polivy & Herman, 1976).

Wolfe's (1990) assertions permit the possibility that participants were responding to perceptions of this male contempt as they imagined themselves experiencing the various vignette scenarios, and therefore labelled the obese figure most positively in those

situations involving interactions with males (as per the constructs Orbach describes). However, if power is the central issue in these situations, the thin silhouette becomes the most logical second choice as it is a symbol of powerlessness, and therefore, diminishes the probability of negative male response to female power.

The above analysis may be extended to further explain the relatively weak effect of sex-role on attributions of thinness and obesity, particularly on the vignettes. The issue of adherence to traditional conceptions of the female gender may be irrelevant when compared to the pervasive awareness of implications of female power in the male domain.

This rationale serves to incorporate temporal transformations in the interplay of gender, power, and attributional aspects of body image, that have occurred since her theory was conceived. In doing so, it facilitates interpretation of the meaning of thinness for respondents in the present study.

It must also be considered that participants responded to dimensions of personality or character on the word pairs and to more sexual concepts on the vignettes. If the thin figure is seen to be more sexually attractive, then it would be the logical second choice in those vignettes involving men.

Methodological Issues

The present investigation employed a phenomenological approach to avoid stereotypical responses regarding various body forms. The most appropriate measure of the success of this technique is a comparison of the present results with those of Bell, Kirkpatrick & Rinn (1986), who used similar word pairs and silhouettes in a non-phenomenological survey. Overall, participants in the present study responded in a manner similar to respondents in the investigation of Bell et al (1986), on those word pairs derived from the latter study.

The responses of larger participants proved an exception to the above

generalization. Larger individuals tended to rate the thin figure unfavorably on word pairs, compared to the findings of Bell, Kirkpatrick & Rinn (1986), which indicated that participants judged silhouettes similar to their own actual body form most harshly. This deviation could be explained by the difference in approaches; perhaps larger participants perceived the labels commonly associated with their body form very differently when asked to label themselves. Alternatively, the disparate results could be attributed to sample differences: larger participants in the Bell et al (1986) study were selected from a population of clinically obese individuals.

Conclusions regarding the phenomenological approach are equivocal, particularly in light of the degree to which subjects responded in a non-stereotypical fashion on the vignettes. Whether the success of the vignettes in validating Orbach's concepts was due to the actual validity of these ideas, or the experiential tone of the vignettes, requires further investigation.

Clinical Issues

Results indicate that the constructs asserted by Orbach (1978) may be relevant for a non-clinical population of undergraduate females. However, because the theory was derived from experiences of women engaged in therapy for eating disturbances, a pertinent implication is the potential for therapeutic application of the issues explored in this study. If it is true that differing attributes and experiences are associated with various body forms, deciphering the significance of body size for an individual may facilitate comprehension and treatment of a host of disorders related to body image that are presently refractory to intervention.

A clinical investigation is the necessary reality test of a measure premised on hypothetical scenarios in imaginary body forms. The extrapolation to a clinical population is appropriate in consideration of the high incidence of eating disorders found in the

university age groups (American Psychiatric Association, 1987). Such research should be conducted with the goal of understanding why women maintain an obese or anorexic physique, despite the social and medical compromises.

Limitations of Research

The most pertinent limitations of the present study are related to the exploratory nature of the study. First, it must be noted that the investigator does not propose to have examined or measured all of Orbach's (1978) theory. Even within the section of the text explored, there were concepts that did not translate into a survey format, and were excluded from the investigation. The selection of survey items and their incorporation into vignettes and word pairs required a balance of strict adherence to Orbach's (1978) concepts, and comprehensibility of the survey.

Further methodological limitations of the study include the lack of a male control group by which to compare the effect of being female in the assorted vignettes, and the possibility of a carryover effect due to the repeated measures nature of the design. Although survey items were randomized with respect to sequence within the survey, individual items (ie. word pair list) were not completely randomized within themselves. Also, construct validity of the survey items was not fully assessed, especially with respect to indicators of eating disturbances.

Finally, comparisons with the study of Bell, Kirkpatrick & Rinn (1986) must be interpreted in light of the small subject number ($n=24$), and divergent population (clinical). Additionally, extrapolations from the present sample population must be made with an awareness of the rather restricted ethnic, age, and marital status categories of the participants, characteristics common to a university population.

Future Research

Due to the exploratory nature of the study, recommendations for future research begin with further statistical analysis of the present data. Of particular relevance is a closer examination of the possible groups of factors influencing the assignment of attributions to various body forms. A cluster or factor analysis may prove useful in this regard, particularly in light of the theoretical implications of the present study. Additional means comparisons with significance criteria may further clarify the hierarchy of each of the multivariate effects.

Future research implications originating in the limitations of the present investigation include application of the survey to an eating disordered population, and the inclusion of measures to assess eating disorders. Additional populations of interest include those demonstrating disorders of body image, such as transsexuals. Also, the survey should be administered to a population with a more substantial representation of racial variability than that offered by the present sample. While the clinical direction has been previously discussed, the ethnic issue has not, and merits the embellishment provided by recent research.

Root (1990) questions the current assumption that the occurrence of eating disorders in ethnic minorities is uncommon, and theoretically explores the factors that protect versus expose members of racial minority groups to disturbances in body image and eating behaviour. Among the factors that increase vulnerability, Root (1990) lists the following: the significance of power issues to oppressed individuals, upward social mobility of minorities (compared to the recent past), and destabilized family and sociocultural structures.

A final research direction addresses further clarification of the methodological issues raised by this study. Of specific interest would be a comparison of vignettes as per the present investigation, and the same vignettes adapting a non-phenomenological

approach, to further investigate the distinction between labeling the self versus labeling others in a situation. Additionally, the vignettes and word pairs should be readministered with another measure of gender-role attribution, and with a male control group.

CONCLUSION

The present investigation confirms previous speculations by feminist theorists that women assign attributes encompassing issues of safety, boundaries, respect, and social perceptions differentially across dimensions of the female body. Although results must be interpreted in terms of the exploratory nature of this study, their relevance is acutely delineated against the shadow of grim statistics of eating disorders.

Placed in the broader context of a relationship between body image and eating disturbances, the present investigation emphasizes the need for further research and treatment options that seek to comprehend and deconstruct the societal contrived notions surrounding thin and obese body forms.

Pertinent theoretical implications echo previous empirical efforts that describe the interplay of gender, power and body image in increasingly complex and dynamic terms.

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Appendices

Appendix A

Table A-1
Demographic Description of Subjects

	N	%
Age category		
15-19	177	57.7
20-24	102	33.2
25-29	4	1.3
30-34	6	2.0
35 or older	16	5.2
Year of Post-Secondary Education		
1st	157	51.1
2nd	77	25.1
3rd	32	10.4
4th	28	9.1
5th or more	9	2.9
Marital Status		
Single (living without a partner)	254	82.7
Single (living with a partner)	32	10.4
Married	12	3.9
Divorced or Separated	7	2.3
Ethnic		
White	28.2	91.9
Black	8	2.6
Asian	4	1.3
Native	2	.7
Other	9	2.9
Employment		
Unemployed	124	40.4
Employed Part-time	163	53.1
Employed Full-time	18	5.9

Appendix A

Table A-2

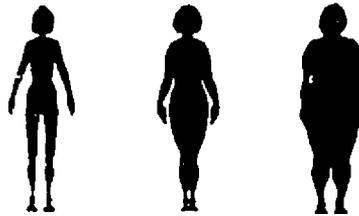
Description of Medical History Contributing to Obesity

	N	%
Thyroid Disorder	1	.3
Eating Disorder	13	4.2
Medication	2	.7
Psychiatric Illness	2	.7
Other Reasons		
Family History of Obesity	2	.7
Oral Contraceptives	2	.7
Pregnancy	2	.7
Increased Eating in First Yr. University	1	.3
Food Addiction (Stress)	1	.3
Total	26	8.4

Appendix B

Section A

In the pages that follow, you will find a series of unrelated situations. We would like you to imagine yourself in each situation 3 times. Each time you will imagine yourself in one of these 3 body forms:



Answer the questions based on how you would feel in each situation in body form # 1, then in body form #2, and finally in body form #3.

Example

You are at a birthday dinner for a friend. When the cake is served, several people decline, stating that they "are on a diet, don't want to get fat," etc.

On the scale below, 1 represents feeling anxious, and 7 represents feeling relaxed. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.

		anxious			relaxed			
	(BODY FORM #1)	1	②	3	4	5	6	7
	(BODY FORM #2)	1	2	3	4	⑤	6	7
	(BODY FORM #3)	1	2	3	④	5	6	7

You are walking to your car after an evening class. It is dark and you are alone. You have just heard that a rapist has escaped from prison and is hiding somewhere in the city. You realize that you would probably have no means of escape or protection should this man decide to attack you.

On the scale below, 1 represents feeling safe from sexual assault, and 7 represents feeling vulnerable to sexual assault. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.

	safe							vulnerable
 (BODY FORM #1)	1	2	3	4	5	6	7	
 (BODY FORM #2)	1	2	3	4	5	6	7	
 (BODY FORM #3)	1	2	3	4	5	6	7	

You are sitting alone after a discussion with some classmates. The topic of your conversation was the various roles of women in today's society, both traditional (i.e. wife and mother) and nontraditional (i.e. having a career). As you sit now and consider the conversation, you are wondering how others see you fitting into the traditional roles of wife and mother.

On the scale below, 1 represents thinking that others expect you to fulfill the wife/mother roles, and 7 represents thinking that others realize you may choose not to fulfill the wife/mother roles. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.



	expect					choose	
(BODY FORM #1)	1	2	3	4	5	6	7



(BODY FORM #2)	1	2	3	4	5	6	7
----------------	---	---	---	---	---	---	---



(BODY FORM #3)	1	2	3	4	5	6	7
----------------	---	---	---	---	---	---	---

You are about to give a presentation in front of an audience of your peers. As you wait, many thoughts fill your mind. One such thought is whether your audience will listen carefully to what you are saying, or if they will be distracted by thoughts regarding your sexual attractiveness.

On the scale below, 1 represents thinking that your audience will listen to what you are saying, and 7 represents thinking that your audience will be distracted by the above thoughts. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.

		listen						distracted
	(BODY FORM #1)	1	2	3	4	5	6	7
	(BODY FORM #2)	1	2	3	4	5	6	7
	(BODY FORM #3)	1	2	3	4	5	6	7

You are at a pool party with a group of friends. It is very warm, and everyone is wearing a bathing suit. You are noticing the appearance of the other women present.

On the scale below, 1 represents feeling you will compete with other women for the attention of men, and 7 represents feeling you will not compete with other women for the attention of men. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.

		compete					not compete	
	(BODY FORM #1)	1	2	3	4	5	6	7
	(BODY FORM #2)	1	2	3	4	5	6	7
	(BODY FORM #3)	1	2	3	4	5	6	7

It is Friday night and you are at a large social gathering with your boyfriend/husband. You are standing alone when a friend introduces you to a very attractive man by stating that you have something in common (i.e. an academic interest, a hobby, a particular sport, etc.). As you discuss your common interest, you find this man extremely appealing. You begin to wonder if you will act in a way that will bother your boyfriend/husband.

On the scale below, 1 represents thinking that your actions will not bother your boyfriend/husband, and 7 represents thinking that your actions will bother your boyfriend/husband. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.



	not bother					bother	
(BODY FORM #1)	1	2	3	4	5	6	7



(BODY FORM #2)	1	2	3	4	5	6	7
----------------	---	---	---	---	---	---	---



(BODY FORM #3)	1	2	3	4	5	6	7
----------------	---	---	---	---	---	---	---

You are at your place of employment and a male co-worker who is known for his sexist behavior toward women approaches you. He strikes up a conversation about the weather. As you are chatting, you realize that your conversation with this man would not be heard by anyone else. You begin to wonder if the conversation will lead to verbal sexual harassment.

On the scale below, 1 represents thinking there is a high probability the conversation will lead to verbal sexual harassment, and 7 represents thinking there is a low probability the conversation will lead to verbal sexual harassment. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.

		high probability					low probability	
	(BODY FORM #1)	1	2	3	4	5	6	7
	(BODY FORM #2)	1	2	3	4	5	6	7
	(BODY FORM #3)	1	2	3	4	5	6	7

You have just bought the latest copy of Vogue (fashion) magazine. As you flip through the pages, you notice that every advertisement contains a picture of a woman with a "perfect" body. You begin to think about the degree to which you compare with these women.

On the scale below, 1 represents thinking very little about this issue, and 7 represents thinking a lot about this issue. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.

		very little					a lot	
	(BODY FORM #1)	1	2	3	4	5	6	7
	(BODY FORM #2)	1	2	3	4	5	6	7
	(BODY FORM #3)	1	2	3	4	5	6	7

You are returning to your apartment after a particularly terrible day. You are exhausted, stressed, and can't wait to relax alone in your room. As you open the door, you are approached by one of your roommates. She wants to discuss a problem in her life. You feel concern, but you aren't sure you can deal with her needs right now.

On the scale below, 1 represents feeling invaded by pressure to meet your room-mate's needs, and 7 represents not feeling pressured to meet your room-mate's needs. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.

		invaded					not pressured	
	(BODY FORM #1)	1	2	3	4	5	6	7
	(BODY FORM #2)	1	2	3	4	5	6	7
	(BODY FORM #3)	1	2	3	4	5	6	7

You are going to the beach with a group of friends. Because it is a hot summer day, you all change into your bathing suits as soon as you arrive. You are aware of other women observing your body.

On the scale below, 1 represents thinking that other women will not feel hostile toward you, and 7 represents thinking that other women will feel hostile toward you. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.

	not	hostile					hostile	
	(BODY FORM #1)	1	2	3	4	5	6	7
	(BODY FORM #2)	1	2	3	4	5	6	7
	(BODY FORM #3)	1	2	3	4	5	6	7

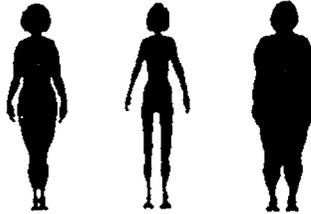
It is Saturday night and you are at a party. You are single and not dating anyone seriously. You are standing alone when a friend introduces you to a very attractive man by stating that you have something in common (i.e. an academic interest, a hobby, a particular sport, etc.). As you discuss your common interest, you find this man extremely appealing, and it is obvious that the feeling is mutual. You realize that you are sexually attracted to this man.

On the scale below, 1 represents feeling your sexuality is exposed, and 7 represents feeling your sexuality is not exposed. Circle the number from 1 to 7 that best describes how you would feel in this situation in each of the 3 body forms.

		exposed					not exposed	
	(BODY FORM #1)	1	2	3	4	5	6	7
	(BODY FORM #2)	1	2	3	4	5	6	7
	(BODY FORM #3)	1	2	3	4	5	6	7

Section B

In the pages that follow, you will find a list of word pairs. We would like you to think about the degree to which these words describe you. You will be asked to do this 3 times. Each time you will imagine yourself in one of these 3 body forms:



For each word pair list, circle the number from 1 to 7 that best describes you in the first body form, then in the second body form, and finally, in the third body form.

Example:



For each word pair below, circle the number from 1 to 7 that best describes you in this body form.

significant 1 2 ③ 4 5 6 7 insignificant

serene 1 2 3 ④ 5 6 7 agitated

stable 1 ② 3 4 5 6 7 unstable

reliable 1 2 3 4 5 6 ⑦ unreliable



For each word pair below, circle the number from 1 to 7 that best describes you in this body form.

cold	1	2	3	4	5	6	7	warm
giving	1	2	3	4	5	6	7	ungiving
defined	1	2	3	4	5	6	7	undefined
self-involved	1	2	3	4	5	6	7	other-involved
humble	1	2	3	4	5	6	7	vain
weak	1	2	3	4	5	6	7	powerful
together	1	2	3	4	5	6	7	not together
incompetent	1	2	3	4	5	6	7	competent
confident	1	2	3	4	5	6	7	not confident
guilty	1	2	3	4	5	6	7	innocent
happy	1	2	3	4	5	6	7	sad
passive	1	2	3	4	5	6	7	active
popular	1	2	3	4	5	6	7	unpopular
ineffective	1	2	3	4	5	6	7	effective
optimistic	1	2	3	4	5	6	7	pessimistic
stupid	1	2	3	4	5	6	7	smart
good	1	2	3	4	5	6	7	bad
unproductive	1	2	3	4	5	6	7	productive



For each word pair below, circle the number from 1 to 7 that best describes you in this body form.

cold	1	2	3	4	5	6	7	warm
giving	1	2	3	4	5	6	7	ungiving
defined	1	2	3	4	5	6	7	undefined
self-involved	1	2	3	4	5	6	7	other-involved
humble	1	2	3	4	5	6	7	vain
weak	1	2	3	4	5	6	7	powerful
together	1	2	3	4	5	6	7	not together
incompetent	1	2	3	4	5	6	7	competent
confident	1	2	3	4	5	6	7	not confident
guilty	1	2	3	4	5	6	7	innocent
happy	1	2	3	4	5	6	7	sad
passive	1	2	3	4	5	6	7	active
popular	1	2	3	4	5	6	7	unpopular
ineffective	1	2	3	4	5	6	7	effective
optimistic	1	2	3	4	5	6	7	pessimistic
stupid	1	2	3	4	5	6	7	smart
good	1	2	3	4	5	6	7	bad
unproductive	1	2	3	4	5	6	7	productive



For each word pair below, circle the number from 1 to 7 that best describes you in this body form.

cold	1	2	3	4	5	6	7	warm
giving	1	2	3	4	5	6	7	ungiving
defined	1	2	3	4	5	6	7	undefined
self-involved	1	2	3	4	5	6	7	other-involved
humble	1	2	3	4	5	6	7	vain
weak	1	2	3	4	5	6	7	powerful
together	1	2	3	4	5	6	7	not together
incompetent	1	2	3	4	5	6	7	competent
confident	1	2	3	4	5	6	7	not confident
guilty	1	2	3	4	5	6	7	innocent
happy	1	2	3	4	5	6	7	sad
passive	1	2	3	4	5	6	7	active
popular	1	2	3	4	5	6	7	unpopular
ineffective	1	2	3	4	5	6	7	effective
optimistic	1	2	3	4	5	6	7	pessimistic
stupid	1	2	3	4	5	6	7	smart
good	1	2	3	4	5	6	7	bad
unproductive	1	2	3	4	5	6	7	productive

Background Questionnaire

In this section you will find a series of questions on your personal background. Circle one answer for each question and/or fill in the blanks as directed.

1) Age:

- (1) 15 - 19 years
- (2) 20 - 24 years
- (3) 25 - 29 years
- (4) 30 - 34 years
- (5) 35 years or older

2) Year of post- secondary education (university or college):

- (1) 1st
- (2) 2nd
- (3) 3rd
- (4) 4th
- (5) 5th or more

3) Marital status:

- (1) single (living without a partner)
- (2) single (living with a partner)
- (3) married
- (4) divorced/separated
- (5) widowed

4) Ethnic background:

- (1) white
- (2) black
- (3) asian
- (4) hispanic
- (5) native
- (6) other _____

5) Employment status:

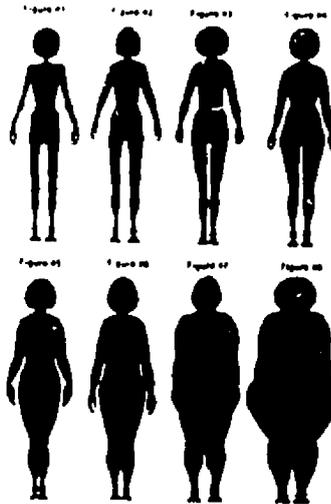
- (1) unemployed
- (2) employed part-time
- (3) employed full-time

6) Medical History:

Please indicate whether you have experienced obesity as a result of any of the following disorders.

- a) thyroid disorder
- b) eating disorder
- c) medication (i.e. major tranquillizer, steroids)
- d) psychiatric illness (i.e. depression)
- e) other (please specify) _____.

7) What are your personal thoughts regarding benefits versus compromises of being obese?



The above figures represent a range of female body forms.

1) Circle the figure number that most closely resembles your body form:

#1 #2 #3 #4 #5 #6 #7 #8

2) Circle the figure number that most closely resembles the body form you would like to have:

#1 #2 #3 #4 #5 #6 #7 #8

3) Circle the figure number that you have been most often in the past:

#1 #2 #3 #4 #5 #6 #7 #8

Bem Sex-Role Inventory Directions and Sample Items

Directions

On the opposite side of this sheet, you will find listed a number of personality characteristics. We would like you to use those characteristics to describe yourself, that is, we would like you to indicate on a scale of 1 to 7, how true of you each of these characteristics is. Please do not leave any characteristic unmarked.

Example: SLY

Write a 1 if it is never or almost never true that you are sly.

Write a 2 if it is usually not true that you are sly.

Write a 3 if it is sometimes but infrequently true that you are sly.

Write a 4 if it is occasionally true that you are sly.

Write a 5 if it is often true that you are sly.

Write a 6 if it is usually true that you are sly.

Write a 7 if it is always or almost always true that you are sly.

Sample Items

Defend my own beliefs	_____
Strong personality	_____
Eager to soothe hurt feelings	_____
Love children	_____
Athletic	_____
Shy	_____
Make decisions easily	_____
Individualistic	_____
Masculine	_____
Sincere	_____

Appendix C



The University
Of Alabama
In Huntsville

College of Liberal Arts
Department of Psychology

Huntsville, Alabama 35899

February 5, 1990

Anne-Marie Keating
30 Overdale Lane
Dartmouth, Nova Scotia B3A3V3
CANADA

Dear Ms. Keating:

I thoroughly enjoyed our phone conversation earlier this week and am please to grant you permission to use the silhouette instrument described in the article co-authored with Crystal Bell Sulyma.

Crystal's address is as follows:

Crystal B. Sulyma
7182 Cabot Drive
Nashville, TN 37209

Sincerely,

Sue W. Kirkpatrick
Associate Professor & Chair

Appendix D

November 26, 1990

Dear Introductory Psychology Professor:

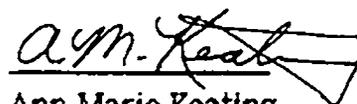
I am looking for 300 female students to complete a survey on the attributes assigned to various body forms. The data will be analyzed to fulfill requirements of my Master's Thesis, which has the approval of both my Advisory Committee and the Ethics Committee.

I am asking for your help by requesting that you circulate the attached sign up sheet during your class. I realize that it is the last week of classes, however, the survey will be administered next week, and students may receive credit for their time. The survey takes approximately 30 minutes to complete.

Please forward any questions/concerns and/or completed sign-up sheets to my mailbox. I can also be reached at 420-5252 (M/F) and 466-8887 (T/W/Th).

Thank-you in advance for your help in this matter.

Sincerely,

Handwritten signature of Ann Marie Keating in cursive script, with a horizontal line underneath the name and a large, stylized flourish extending to the right.

Ann Marie Keating
Graduate Student,
Dept. of Psychology

Please note the place and time of survey administration.

Burke Education Building
Theatre B
Wednesday, December 5, 1990
6:00 P.M.

NAME _____ **ID #** _____ **PHONE #** _____ **PROFESSOR**

Appendix E

Thank you for agreeing to complete this survey on the feelings and attributes women have toward their bodies. I am administering the survey to 300 female students, and will analyze the results to complete my Masters Thesis in Clinical Psychology. Dr. Grace Pretty is my thesis advisor.

The survey takes approximately 25 minutes to complete and is self explanatory. However, I emphasize the need for absolute honesty in responding. I assure you that your responses will remain anonymous and confidential.

You have the right to withdraw from the study at any time. In addition, you have the right to access the results of my research through the secretary of the Psychology Department or the library. A copy of my thesis will be available in both the above by the spring of 1991.

If you would like to discuss any aspect of the survey, please contact me by leaving a note with the Psychology secretary. In addition, I may be reached at the following numbers: W 420-5252, H 466-8887.

When you have completed the survey, please bring it to the front of the room. Thanks once again for your help.

Appendix F

Table F-1

Averaged Univariate Tests of Significance for Vignette Scores Using Unique Sum of Squares Involving Within-Subjects Effects

	SS	df	MS	F	Sig of F
Within Cells	7400.84	2691	2.75		
(Greenhouse - Geisser)		2505.22			
(Lower Bound)		299.00			
Vignette	3051.40	9	339.04	123.28	.000
(Greenhouse - Geisser)		8.38		123.38	.006
(Lower Bound)		1.00		123.38	.000
Within Cells	1999.12	598	3.34		
(Greenhouse - Geisser)		596.67			
(Lower Bound)		299.00			
Body Form	59.55	2	29.77	8.91	.000
(Greenhouse - Geisser)		2.00		8.91	.000
(Lower Bound)		1.00		8.91	.003
Within Cells	15916.55	5382	2.96		
(Greenhouse - Geisser)		4033.72			
(Lower Bound)		299.00			
Body Form by Vignette	5670.11	18	315.01	106.52	.000
(Greenhouse - Geisser)		13.49		106.52	.000
(Lower Bound)		1.00		106.52	.000

Appendix F

Table F-2

Tests of Significance for Between-Subjects Effect

Source of Variation	SS	df	MS	F
<u>Vignette Scores</u>				
within cells	1618.20	270	5.99	
SEXROLE	32.82	3	10.94	1.83
<u>Word Pair Scores</u>				
within cells	2506.87	258	9.72	
SEXROLE	113.34	3	37.78	3.89*

*p<.01

Appendix F

Table F-3

Averaged Univariate Tests of Significance for Vignette Scores Using Unique Sum of Squares Involving Between-Subjects Effects

	SS	df	MS	F	Sig of F
Within Cells	6700.17	2430	2.76		
(Greenhouse - Geisser)		2252.09			
(Lower Bound)		270.00			
Sexrole by Vignette	113.82	27	4.22	1.53	.040
(Greenhouse - Geisser)		25.02		1.53	.045
(Lower Bound)		3.00		1.53	.207
Within Cells	1753.61	540	3.25		
(Greenhouse - Geisser)		537.85			
(Lower Bound)		270.00			
Sexrole by Body Form	82.66	6	13.78	4.24	.000
(Greenhouse - Geisser)		5.98		4.24	.000
(Lower Bound)		3.00		4.24	.006
Within Cells	14329.77	4860	2.95		
(Greenhouse - Geisser)		3619.98			
(Lower Bound)		270.00			
Sexrole by Body Form by Vignette	201.58	54	3.73	1.27	.092
(Greenhouse - Geisser)		40.22		1.27	.122
(Lower Bound)		3.00		1.27	.286

Appendix F

Table F-4

Averaged Univariate Tests of Significance for Word Pair Scores Using Unique Sum of Squares Involving Within-Subjects Effects

	SS	df	MS	F	Sig of F
Within Cells	9552.05	4862	1.96		
(Greenhouse - Geisser)		3179.64			
(Lower Bound)		286.00			
Word Pair	1938.24	17	114.01	58.03	.000
(Greenhouse - Geisser)		11.12		58.03	.000
(Lower Bound)		1.00		58.03	.000
Within Cells	4690.81	572	8.20		
(Greenhouse - Geisser)		560.38			
(Lower Bound)		286.00			
Body Form	2228.59	2	1114.30	135.88	.000
(Greenhouse - Geisser)		1.96		135.88	.000
(Lower Bound)		1.00		135.88	.000
Within Cells	15772.96	9724	1.62		
(Greenhouse - Geisser)		4765.63			
(Lower Bound)		286.00			
Body Form by Word Pair	5224.96	34	153.68	94.74	.000
(Greenhouse - Geisser)		16.66		94.74	.000
(Lower Bound)		1.00		94.74	.000

Appendix F

Table F-5

Averaged Univariate Tests of Significance for Word Pair Scores Using Unique Sum of Squares Involving Between-Subjects Effects

	SS	df	MS	F	Sig of F
Within Cells	8542.83	4386	1.95		
(Greenhouse - Geisser)		2873.35			
(Lower Bound)		258.00			
Sexrole by Wordpair	141.67	51	2.78	1.43	.025
(Greenhouse - Geisser)		33.41		1.43	.054
(Lower Bound)		3.00		1.43	.236
Within Cells	4217.27	516	8.17		
(Greenhouse - Geisser)		507.71			
(Lower Bound)		258.00			
Sexrole by Body Form	53.37	6	8.90	1.09	.368
(Greenhouse - Geisser)		5.90		1.09	.368
(Lower Bound)		3.00		1.09	.368
Within Cells	14191.62	8772	1.62		
(Greenhouse - Geisser)		4262.73			
(Lower Bound)		258.00			
Sexrole by Body Form by Wordpair	177.55	102	1.74	1.08	.284
(Greenhouse - Geisser)		49.57		1.08	.333
(Lower Bound)		3.00		1.08	.360

Appendix E

Table F-6

Raw Score Means, Medians, and Standard Deviations for the Femininity and Masculinity Scores of the BSRI

	Original BSRI Females (n=340)	Present Sample Females (n=307)
<u>FEMININITY</u>		
Mean	5.05	5.04
Median	5.10	5.10
Standard Deviation	.53	.53
<u>MASCULINITY</u>		
Mean	4.79	4.50
Median	4.80	4.50
Standard Deviation	.66	.74

Appendix F

Table F-7

The Percentages of Female Participants Classified as Feminine, Masculine, Androgynous and Undifferentiated on the Basis of the Median Split Method

	Original BSRI Females (n=340)	Present Sample Females (n=307)
FEMININE	39.4%	21.2%
MASCULINE	12.4%	24.8%
ANDROGYNOUS	30.3%	21.8%
UNDIFFERENTIATED	17.9%	23.5%

Appendix F

Table F-8

Pearson Product Moment Correlations for BSRI Masculinity and Femininity Scores with Vignettes for the Thin Body Form

VIGNETTE	Rape	Women's Roles	Public Speaking	
BSRI Femininity Score	-.06	-.05	-.03	
BSRI Masculinity Score	.01	.01	.04	
VIGNETTE	Pool Competition	Friday Party With Lover	Sexist Male Co-worker	
BSRI Femininity Score	-.05	.10*	.07	
BSRI Masculinity Score	.11*	.09	.02	
VIGNETTE	Vogue	Roommate	Beach Hostility	Saturday Party Single
BSRI Femininity Score	-.04	.02	.10*	.06
BSRI Masculinity Score	-.07	.10*	.03	.04

*p<.05

Appendix E

Table F-9

Pearson Product Moment Correlations for BSRI Masculinity and Femininity Scores with Vignettes for the Normal Body Form

VIGNETTE	Rape	Women's Roles	Public Speaking	
BSRI Femininity Score	-.12*	-.06	.01	
BSRI Masculinity Score	.02	.05	.07	
VIGNETTE	Pool Competition	Friday Party With Lover	Sexist Male Co-worker	
BSRI Femininity Score	.09	.11*	-.04	
BSRI Masculinity Score	.02	.09*	.03	
VIGNETTE	Vogue	Roommate	Beach Hostility	Saturday Party Single
BSRI Femininity Score	.04	.09	.03	-.08
BSRI Masculinity Score	.05	.04	.08	.10*

*p<.05

Appendix F

Table F-10

Pearson Product Moment Correlations for the BSRI Masculinity and Femininity Scores with Word Pairs for the Thin Body Form

<u>WORD PAIR</u>	BSRI Femininity Score	BSRI Masculinity Score
Cold/Warm	.12*	.03
Ungiving/Giving	.12*	.01
Defined/Undefined	-.08	-.05
Self Involved/Other Involved	.01	-.09
Vain/Humble	-.01	.00
Weak/Powerful	.08	.07
Not Together/Together	.12*	.05
Incompetent/Competent	.14**	-.03
Not Confident/Confident	-.02	.01
Guilty/Innocent	.04	-.13**
Sad/Happy	.03	-.02
Passive/Active	.01	.08
Unpopular/Popular	.00	.04
Ineffective/Effective	.12*	.00
Pessimistic/ Optimistic	.09*	-.01
Stupid/Smart	.14**	.05
Bad/Good	.12*	.09
Unproductive/Productive	.16**	.04

*p<.05 ; **p<.01

Appendix E

Table F-11

Pearson Product Moment Correlations for the BSRI Masculinity and Femininity Scores with Word Pairs for the Normal Body Form

<u>WORD PAIR</u>	BSRI Femininity Score	BSRI Masculinity Score
Cold/Warm	.23**	.06
Ungiving/Giving	.09*	.07
Defined/Undefined	-.02	-.18**
Self Involved/Other Involved	.07	-.04
Vain/Humble	.22**	-.05
Weak/Powerful	.03	.20**
Not Together/Together	.11*	.12*
Incompetent/Competent	.13**	.16**
Not Confident/Confident	.01	.12*
Guilty/Innocent	.28**	.02
Sad/Happy	.00	.07
Passive/Active	-.03	.21**
Unpopular/Popular	.00	.07
Ineffective/Effective	.06	.19**
Pessimistic/ Optimistic	.03	.20**
Stupid/Smart	.24**	.14**
Bad/Good	.24**	.02
Unproductive/Productive	.23**	.07

*p<.05 ; **p<.01

Appendix E

Table F-12

Pearson Product Moment Correlations for Body Image Real (BIREAL), Body Image Ideal (BIIDEAL), Historical Body Image (BIHIS), and Body Dissatisfaction (BIDIS) Scores with Vignettes for the Normal Body Form

	BIREAL	BIIDEAL	BIHIS	BIDIS
<u>VIGNETTES</u>				
Rape	.06	-.11*	.00	.15**
Women's Roles	.03	.09	-.01	-.06
Public Speaking	.00	-.08	.00	.09
Pool Competition	-.14**	-.18**	-.18**	.00
Friday Party with Lover	-.05	-.03	-.10*	-.03
Sexist Male Co-Worker	.05	-.07	.02	.11*
Vogue	.02	.11*	.10*	-.08
Roommate	.04	.10*	.05	-.03
Beach Hostility	-.10*	-.12*	-.10*	.00
Saturday Party Single	-.02	-.04	-.02	.01

*p<.05 ; **p<.01

Appendix F

Table F-13

Pearson Product Moment Correlations for Body Image Real (BIREAL), Body Image Ideal (BIIDEAL), Historical Body Image (BIHIS), and Body Dissatisfaction (BIDIS) Scores with Word Pairs for the Normal Body Form

	BIREAL	BIIDEAL	BIHIS	BIDIS
<u>WORD PAIR</u>				
Cold/Warm	.04	.03	.05	.02
Ungiving/Giving	-.04	-.02	-.13**	-.03
Defined/Undefined	-.06	-.09	-.02	.02
Self Involved/Other Involved	-.05	.01	-.03	-.06
Vain/Humble	-.05	-.12*	-.09	.05
Weak/Powerful	.02	.13**	.06	-.09
Not Together/Together	.07	.22**	.13**	-.10*
Incompetent/Competent	.05	.08	.08	-.02
Not Confident/Confident	.02	.16**	.02	-.10*
Guilty/Innocent	.03	.07	.00	-.09
Sad/Happy	.12*	.15**	.14**	-.01
Passive/Active	.00	.18**	.03	-.16**
Unpopular/Popular	.22**	.19**	.17**	.06
Ineffective/Effective	.03	.06	.06	-.02
Pessimistic/ Optimistic	.14**	.24**	.15**	-.06
Stupid/Smart	-.03	.07	-.01	-.08
Bad/Good	-.06	.06	-.03	-.10*
Unproductive/Productive	-.05	.10*	-.03	-.13**

*p<.05 ; **p<.01

Appendix F

Table F-14

Pearson Product Moment Correlations for Body Image Real (BIREAL), Body Image Ideal (BIIDEAL), Historical Body Image (BIHIS), and Body Dissatisfaction (BIDIS) Scores with Vignettes for the Obese Body Form

	BIREAL	BIIDEAL	BIHIS	BIDIS
<u>VIGNETTES</u>				
Rape	.04	-.01	.01	.06
Women's Roles	.01	.07	-.01	-.05
Public Speaking	.01	-.01	-.03	-.01
Pool Competition	.08	.06	.07	.03
Friday Party with Lover	-.02	-.04	-.08	.01
Sexist Male Co-Worker	.06	-.04	.08	.09
Vogue	.06	.06	-.01	-.01
Roommate	.10*	.05	.04	.07
Beach Hostility	.06	.04	.04	.02
Saturday Party Single	.00	.03	-.04	-.03

*p<.05 ; **p<.01

Appendix E

Table F-15

Pearson Product Moment Correlations for Body Image Real (BIREAL), Body Image Ideal (BIIDEAL), Historical Body Image (BIHIS), and Body Dissatisfaction (BIDIS) Scores with Word Pairs for the Obese Body Form

	BIREAL	BIIDEAL	BIHIS	BIDIS
WORD PAIR				
Cold/Warm	.03	.01	.04	.02
Ungiving/Giving	-.03	-.04	-.11*	.00
Defined/Undefined	-.04	-.05	-.05	-.01
Self Involved/Other Involved	.06	.01	.06	.05
Vain/Humble	-.08	-.10*	-.10*	.01
Weak/Powerful	-.02	.04	.00	-.05
Not Together/Together	-.06	-.02	-.05	-.04
Incompetent/Competent	.04	.11*	.03	-.05
Not Confident/Confident	.01	.08	.05	-.06
Guilty/Innocent	-.01	.02	-.05	-.03
Sad/Happy	.01	.09*	.06	-.07
Passive/Active	.00	.18**	.02	-.15**
Unpopular/Popular	.03	.05	.09*	-.02
Ineffective/Effective	-.06	.10*	.00	-.14**
Pessimistic/ Optimistic	.00	.14**	.07	-.12**
Stupid/Smart	-.02	.02	-.01	-.03
Bad/Good	-.06	.06	-.05	-.10*
Unproductive/Productive	-.01	.14**	.03	-.13**

*p<.05 ; **p<.01