

23 Anti-Fat Prejudice

Christian S. Crandall

Angela Nierman

University of Kansas

Michelle Hebl

Rice University

Prejudice against heavyweight people is prevalent, powerful, and potent. As with many other prejudices, the stereotyping, prejudice, and discrimination aimed at people on the basis of their weight can have a powerful effect on their lives. In this chapter, we review evidence revealing that differential treatment on the basis of weight occurs in all the major domains of heavyweight people's lives, with strong consequences for achievement, self-esteem, career opportunities, friendships, and physical and mental health (see Brownell, Puhl, Schwartz, & Rudd, 2005, for a book-length review of many of these issues). Prejudice against heavyweight people is much like other prejudices—it limits opportunities; is associated with a negative stereotype; and prototypically involves the domination of powerful, unstigmatized individuals or groups over stigmatized, less powerful individuals or groups. In many ways, however, prejudice against heavyweight people is different, special, and relatively unusual when compared to the more commonly discussed and researched prejudices of race and gender. There are simply a wide range of phenomena and practices associated with many prejudices that are not applicable to anti-fat prejudice, and there are aspects of anti-fat prejudice that often do not appear when considering racism and sexism. In this chapter, we consider some of the ways in which anti-fat prejudice is both similar to and different from the prejudices of race and gender.

We begin by reviewing research that shows the relative disadvantage of heavyweight people compared to leaner people. This review begins with some of the traditional dimensions examined in race and gender research (e.g., adverse effects on mental health, discrimination in the workplace). After making a case that anti-fat prejudice is a significant and important prejudice, we then discuss a variety of topics associated with anti-fat prejudice that are critical to consider, some of which are different from those associated with the prejudices of race and gender.

EFFECTS ON MENTAL HEALTH

Mistreatment on the basis of weight begins at an early age. Rejection of heavyweight people has been documented consistently among 3-year-olds (Cramer & Steinwert, 1998), elementary school children (Latner & Stunkard, 2003; Richardson, Goodman, Hastorf, & Dornbusch, 1961), and 7- to 9-year-old boys and girls (Kraig & Keel, 2001). Heavyweight children are less often nominated as friends (Staffieri, 1967), much less likely to be chosen as a best friend, and more likely to receive few or no friendship choices than leaner peers (Strauss & Pollack, 2003). There are a number of domains in which heavyweight children experience negative outcomes on a daily basis, the sum of which may have strong associations with deficits in mental health.

AU: Brownell, Puhl, Schwartz, & Rudd (2005) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Richardson, Goodman, Hastorf, & Dornbusch (1961): is not given in your references. Please either add a full entry there or delete the citation here.

AU: Staffieri (1967) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Latner & Stunkard (2003) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Kraig & Keel (2001) is not given in your references. Please either add a full entry there or delete the citation here.

TEASING

Teasing by peers is alienating and leads to negative self-images, and poorer relations with one's peers (Troop-Gordon & Ladd, 2005). In one study, 96% of heavyweight girls reported being the subject of hurtful comments or weight-related teasing (Neumark-Sztainer & Eisenberg, 2005). In another study, heavyweight children were more than 15 times as likely to be ganged up on and victimized by peers than were leaner children (Lagerspetz, Kjorkvist, Nerts, & King, 1982). In a sample of more than 4,700 middle and high school adolescents, nearly 30% of girls, and nearly 20% of boys reported being teased about their weight more than a few times a year (Neumark-Sztainer et al., 2001). However, 45% of heavyweight girls and 50% of heavyweight boys reported being teased much more often.

What are the repercussions or associations with this teasing? Teens who were teased were more likely to use diet pills, abuse laxatives, and binge eat than were those who did not experience teasing. Such teens were also more likely to report depression, suicidal thoughts, and suicide attempts; the effects seemed to be worse for girls than boys. That is, heavyweight girls who had been teased reported twice the level of suicidal ideation than did girls who had not been teased (51% vs. 25%). Although boys reported fewer suicidal thoughts overall, boys who had been teased reported more than three times the level of suicidal thoughts (13% vs. 4%; Eisenberg, Neumark-Sztainer, Haines, & Wall, 2006; Haines, Neumark-Sztainer, Eisenberg, & Hannan, 2006) than did those who had not been teased, even after controlling for body weight.

SELF-ESTEEM

The relationship between stigmatization and self-esteem is complex. Although many theories strongly connect negative physical characteristics (e.g., being heavyweight) with a negative self-view, this is often not the case (Crocker & Major, 1989). Thus, it is not surprising to learn that the body of empirical evidence examining the relationship between self-esteem and weight is not simple or clear. In the domain of body-related self-esteem, heavyweight adults have lower esteem than their leaner adult counterparts (French, Story, & Perry, 1995). This lower body-related esteem seems to be in part caused by the teasing (Thompson, Herbozo, Himes, & Yamamiya, 2005).

Despite the effects we have discussed thus far, the effects on global self-esteem do not seem to be as consistent or strong. For instance, in a meta-analysis conducted by Miller and Downey (1999), they found a reliable, significant, but modest correlation of $r = -.12$ between actual weight and self-esteem. This relationship is weak, but it is notable in that several studies have found no such significant correlation (see Crocker & Major, 1989). Miller and Downey also found a correlation between self-perceived weight and self-esteem ($r = -.34$), suggesting that low self-esteem may affect just how heavy a person may see himself or herself as.

The self-esteem of heavyweight people can suffer from discrimination, depending on other attitudes. Women who are both heavyweight and have anti-fat attitudes have significantly more negative self-esteem than do women who are heavyweight and do not have such attitudes (Crandall & Biernat, 1991). When rejected by a fellow student as a dating partner, heavyweight women tended to attribute this rejection to their weight, and they felt depressed, hostile, and anxious, and had lower appearance-based self-esteem than average-weight women, and women who were not rejected (Crocker, Cornwall, & Major, 1993).

One important source of self-esteem is the development of a social identity based on group membership (e.g., Brewer, 1991; Hogg & Abrams, 1990). One's identity is flexible, and is typically constructed in such a way as to maximize one's own positive distinctiveness (Tajfel & Turner, 1981). As a result, people tend to have positive views of their own groups, which, in turn, enhance their self-esteem. This ingroup bias is a pervasive and highly dependable research finding (Aberson, Healy, & Romero, 2000; Brewer, 1979; Crocker & Luhtanen, 1990). In a surprising set of findings, however, heavyweight people do not seem to show ingroup bias; hence, heavyweight people are cut off from one important source of self-esteem. Across seven different samples of college students, Crandall

AU: Neumark-Sztainer et al. (2001) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Neumark-Sztainer & Eisenberg (2005) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Check date: Crandall & Biernat (1991) here, but (1990) in references and other text cites; please correct whichever is wrong.

AU: Thompson, Herbozo, Himes, & Yamamiya (2005) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Tajfel & Turner (1981) is not given in your references. Please either add a full entry there or delete the citation here.
AU: Brewer (1979) is not given in your references. Please either add a full entry there or delete the citation here.

(1994) found no significant correlation between high levels of body mass index (BMI) and positive ratings of heavyweight people ($r = -.01$, $N = 1,384$). The same pattern was found in two separate samples of college students collected by Crandall and Biernat (1991), and across separate samples of students from six nations on five continents. That is, there was no sign of a positive ingroup bias among heavyweight people. It is remarkable that heavyweight people do not show such a bias, as it is one of the most widespread and reliable of all social psychological phenomena (Scheepers, Spears, Doosje, & Manstead, 2006).

It is critical, in discussing issues surrounding mental health, to point out that research does not show that obesity results from poor mental health (Britz et al., 2000). That is, heavyweight people do not suffer unduly from mental disorders (e.g., Van Hanswijck de Jonge, Van Furth, Lacey, & Hubert, 2003), nor is there evidence that mental disorders lead to obesity. The psychological consequences of mistreatment of heavyweight people are real (see Brownell et al., 2005) but there is no reason to believe that heavyweight people are any more disordered than their leaner counterparts. Two exceptions to this include disorders related to body image and dieting (e.g., Hudson, Hiripi, Pope, & Kessler, 2007) and the fact that antipsychotic medicines often generate significant weight gains (Allison & Casey, 2001).

EDUCATION

Education is often described as the single most important factor in occupational and social class advancement (e.g., Argyle, 1994). At nearly every educational level, the heavier the student, the fewer the opportunities that he or she has. In the preteen years, heavyweight students primarily experience discrimination and harassment at school (e.g., Neumark-Sztainer, Story, & Faibisch, 1998). Across all grades, teachers exhibit very profound anti-fat attitudes toward their students (Neumark-Sztainer, Story, & Harris, 1999).

Is weight associated with lower cognitive skills? The research evidence is very mixed. For instance, Datar, Sturm, and Magnabosco (2004) found that heavyweight kindergarteners and first graders scored lower on math and reading skills than their leaner peers. This relationship disappeared when social-class-relevant variables were controlled for, suggesting that weight may be more of a marker of socioeconomic class than a measure of lesser abilities. Crandall (1995), however, found no relation between BMI and high school grade point average in a U.S. national sample. Furthermore, Kuo et al. (2006) found that BMI was positively associated with a variety of cognitive skills among older adults, including reasoning tasks and visual-spatial processing speed. At best, then, the literature reveals that weight is not a reliable predictor of lower cognitive skills.

Canning and Mayer (1966) showed that despite equal grades, standardized test scores, and high school quality, heavyweight adolescents were underrepresented at several prestigious colleges and universities in the Northeast. Similarly, Pargman (1969) and Crandall (1991, 1995) found a significant underrepresentation of heavyweight students at Boston University and the University of Florida, respectively. Interestingly, in both cases, the universities that were examined did not require face-to-face interaction or photos for admissions, suggesting that the biasing factor is not a straightforward denigration of the heavyweight applicants. Once admitted, there is evidence that heavyweight students are sometimes judged more harshly and that they are more likely to be dismissed from college than are their leaner counterparts (Weiler & Helms, 1993).

Based on a nationally representative sample of high school seniors, Crandall (1995) showed that weight had no relationship to the enjoyment of the academic component of high school, high school grades, or the desire to attend college. The barriers to attending college do not seem to be in the academic preparation or motivation of the students. Rather, it seems that they may involve demographic correlates such as low socioeconomic status (SES) or the reliance on pernicious stereotypes that limit heavyweight individuals. Crandall (1995) showed that parents are significantly less likely to give financial support to their heavyweight children than their average-weight children for college (regardless of ability to pay), and this effect was particularly striking among daughters.

AU: Check date: Crandall & Biernat (1991) here, but (1990) in references and other text cites; please correct whichever is wrong.

AU: Van Hanswijck de Jonge, Van Furth, Lacey, & Hubert (2003) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Brownell et al. (2005) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Pargman (1969) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Crandall (1991) is not given in your references. Please either add a full entry there or delete the citation here.

WORKPLACE

Heavyweight individuals face a great deal of prejudice and discrimination in the workplace (i.e., Fikkan & Rothblum, 2005; Rothblum, Brand, Miller, & Oetjen, 1990). These biases emerge across the entire employment cycle—from being recruited initially to being promoted among the ranks—and these effects are particularly detrimental for women (see Roehling, 1999 for a review). We consider, in some detail, how such biases affect three different contexts: hiring paradigms, promotion and pay scales, and customer service (treatment of customers).

HIRING PARADIGMS

A number of studies have examined perceptions and ratings of job applicants as well as the specific hiring recommendations that are made. This research shows that heavyweight applicants are perceived to have more negative work-related attributes (Polinko & Popovich, 2001) than those who are leaner. Additional research has shown a similar pattern with actual hiring decisions; that is, heavyweight job applicants are recommended for hire much less often than are their thinner counterparts, even when the credentials of both sets of candidates are equal (Larkin & Pines, 1979; Pingitore, Dugoni, Tindale, & Spring, 1994). In fact, the anti-fat stigma in hiring paradigms is so strong at times that it even seems to affect job applicants who are simply in physical proximity to heavyweight individuals. Hebl and Mannix (2003) found that a male job applicant was rated much more negatively and recommended for hire significantly less when he was seen with a heavyweight woman compared to an average weight woman, even if there was no relationship or association between the two beyond physical proximity.

AU: Larkin & Pines (1979) is not given in your references. Please either add a full entry there or delete the citation here.

PROMOTION AND PAY SCALES

Promotions are often based on the evaluations that employees receive and the opportunities that they are given. A number of studies show that heavyweight employees are evaluated much more negatively and receive more limited workplace opportunities than employees who are leaner. For instance, heavyweight salespeople were rated as being less punctual, enthusiastic, productive, competent, well-mannered, and trustworthy than were average-weight salespersons (Jasper & Kassen, 1990; Larkin & Pines, 1979; Zemank, McIntyre, & Zemanek, 1998) and they are assigned to less important and desirable sales territories (Bellizi & Hasty, 1998). Such differences emerge at higher levels of employment, too; for instance, research reveals that heavyweight managers are rated as less desirable and worthy of recognition than are managers who are leaner (Decker, 1987). There may be some truth to the fact that heavyweight individuals are not performing as well as their thinner counterparts; however, research testing this idea shows that part of the performance decrement arises from differences in training that heavyweight versus average weight individuals receive from others. That is, Shapiro, King, and Quinones (2007) found that the size (heavyweight or not) of individuals assigned to play the role of trainee significantly increased negative expectations held—and evaluations given—by trainers. Trainer attitudes and behaviors created a self-fulfilling prophecy, whereby trainers actually showed decrements in performance in some conditions.

Given these differences in evaluations—clearly linked to promotion decisions—it would make sense that strong differences be observed between the salaries that heavyweight and average-weight individuals earn. Such salary differences seem to exist for women alone (Pagan & Davila, 1997; Register & Williams, 1990; Sargent & Blanchflower, 1994; Sobal & Stunkard, 1989). In a study examining consequences of weight in adolescence and young adulthood, women who were heavyweight as adolescents or young adults ultimately had lower household incomes (\$6,710 less per year) than did women who were leaner (Gortmaker, Must, Perrin, Sobol, & Dietz, 1993). For men, the relationship was not significant.

AU: Check spelling: Jasper & Kassen (1990) here, but Klassen in references; please correct whichever is wrong.

AU: Larkin & Pines (1979) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Shapiro, King, & Quinones (2007) is not given in your references. Please either add a full entry there or delete the citation here.

CUSTOMER SERVICE

Another area in which prejudice and discrimination has been documented against heavyweight individuals is in the customer service that they receive. Recently, King, Shapiro, Hebl, Singletary, and Turner (2006) conducted three studies in which they examined the treatment from store personnel that heavyweight versus leaner individuals received when they entered retail stores. All three studies revealed that heavyweight individuals did not receive more overt forms of discrimination (i.e., there were no differences in being greeted, actually receiving help) but that they did receive significantly more subtle, interpersonal discrimination (i.e., less eye contact, less friendliness) than leaner individuals. These subtle and seemingly small amounts of discrimination still have severe consequences (Martel, Lane, & Willis, 1996; Valian, 1999). Furthermore, King and colleagues showed that such discrimination against heavyweight individuals also has negative ramifications for the organizations that are discriminating. That is, heavyweight individuals who have experienced such discrimination report spending less money at the store than they intended to, and that they are less willing to recommend the store to others and less likely to return for future patronage.

As a whole, then, there is consistent and discouraging evidence that heavyweight individuals face a great deal of discrimination in the workplace. Although we focused our review on only some aspects of the workplace, it is again important to note that they emerge across virtually every aspect of the employment cycle (see Roehling, 1999).

MARRIAGE, RELATIONSHIPS, AND FAMILY

Anti-fat bias has been well documented in a wide array of public domains, including the workplace, education, and health care institutions. Consequently, antidiscrimination policies have been implemented to discourage the unfair treatment of heavyweight individuals. Although outside the realm of legal regulation, anti-fat bias also enters into the private domain of personal relationships. This section focuses on the consequences of anti-fat bias in the areas of friendship, dating, and marriage.

FRIENDSHIP

Heavyweight people have fewer friends, are less popular, are less liked, have fewer social skills, and are lonelier than their leaner counterparts (e.g., Davison & Birch, 2004; Harris, Harris, & Bochner, 1982). Strauss and Pollack (2003) found that heavyweight adolescents were more likely to be socially marginalized and to be peripheral to social networks than were leaner adolescents. Other studies, however, find that heavyweight people are rated as being just as friendly, or even friendlier, than leaner people (Tiggemann & Rothblum, 1988). Friendships seem to be based in part on weight, with leaner men and women forming friendships with other lean people, and heavier women and men forming friendships with other heavy people (Crandall, Schiffhauer, & Harvey, 1997).

Heavyweight individuals may learn to compensate for their appearance by developing effective social skills (Miller, Rothblum, Felicio, & Brand, 1995). Miller et al. (1995) found that heavyweight women were able to compensate for the anti-fat prejudice of their conversation partners when they were aware that they were visible, and in these conditions were judged no differently in social competence than leaner women. New research is sorely needed to disentangle subjective biases (i.e., the negative stereotypes about heavyweight individuals) from objective differences (i.e., differences in social skills and talents as a function of weight).

DATING

In addition to the stereotypes that heavyweight people are unpopular and socially unskilled, heavyweight individuals are less preferred as sexual partners than leaner individuals (Chen & Brown, 2005). They also were rated as less attractive, less likely to be in a dating relationship, and less

AU: King, Shapiro, Hebl, Singletary, and Turner (2006) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Valian (1999) is not given in your references. Please either add a full entry there or delete the citation here.

deserving of an attractive romantic partner than their leaner counterparts (Cossrow, Jeffrey, & McGuire, 2001; Harris, 1990; Pearce, Boergers, & Prinstein, 2002). This is not to say that heavy-weight people do not date, but rather that they begin dating later as adolescents, date less often, and date less attractive partners than do leaner individuals (Cawley, Joyner, & Sobal, 2006; Pearce et al., 2002). Because social standards often equate physical attractiveness with thinness, it is especially difficult for heavyweight individuals, particularly women, to enter into romantic relationships (Regan, 1996). As with friendship, dating relationships reveal that anti-fat bias does not prevent heavyweight individuals from having successful, romantic relationships, but it does mean that they must overcome stereotypes, prejudice, and discrimination.

MARRIAGE

Considering that the onset of dating is often delayed for heavyweight individuals given the difficulty they experience in entering into intimate relationships, it is not surprising that heavyweight individuals also might get married later in life relative to leaner individuals. There is some evidence to suggest that heavyweight adults have lower marriage rates than do their leaner counterparts; however, this may be limited to marriage rates among young adults (Fu & Goldman, 1996; Gortmaker et al., 1993). Once married, however, the quality of the marital relationship does not seem to be any different for heavyweight versus leaner individuals. Sobal, Rauschenbach, and Frongillo (1995) found no significant relationships between weight and marital satisfaction, conflict, or problems.

Some studies report greater marital instability in heavier than leaner people (Macías, Leal, López-Ibor, Rubio, & Caballero, 2004), but others show that a marriage may be more stable when one or both of the partners are heavyweight; obese women report less marital unhappiness (Sobal et al., 1995).

It is likely that there is as much variability in marriage success among heavyweight as leaner couples; partners' weight does not seem to be the determining factor in relationship success. Rand, Kowalske, and Kuldau (1984) found marital improvement in some couples following surgery for extreme obesity and marital deterioration in others. Surgery may simply accentuate the existing quality of the marriage; when weight is changed by surgery, good marriages improve and bad marriages fail (Macías et al., 2004; Marshall & Neill, 1977).

Just as in friendship choice, lean people marry lean partners and heavy people marry heavy partners. Allison et al. (1996) found a significant correlation between the relative weight of each partner that cannot be otherwise explained by cohabitation, age similarity, or selective survival of marriages between couples more similar in relative weight. For some couples, one or both partners being heavyweight may serve a stabilizing or protective function in the marriage (Marshall & Neill, 1977). Some men say they prefer heavier women because the heaviness of their wives protects them from competition with other males and the possibility of abandonment (Marshall & Neill, 1977). Married heavyweight women may report less unhappiness than unmarried heavyweight women because they feel less pressure to lose weight than when they were seeking a partner, and because the affection in the marriage is less contingent on weight and appearance (Marshall & Neill, 1977; Sobal et al., 1995).

Forming and maintaining meaningful relationships is typically a challenge for everyone, regardless of weight. Being heavyweight can make the experience of meeting new friends and finding suitable dating partners even more difficult, especially for women. However, the final word on intimate relationships is not as dismal as in the public domains of anti-fat bias, nor as definitive. Despite stereotypes, heavyweight people often are socially skilled and well liked. They do find compatible dating partners, participate in romantic relationships, get married, and enjoy satisfaction with their partners.

HEALTH CARE

Much research has documented prejudice and discrimination in the health care system by examining the attitudes and behaviors of physicians, residents, medical students, and nurses. Many of the studies are 20 years old or more, but they converge in showing that all of these individuals tend to hold negative attitudes toward and discriminate against those who are heavyweight. Physicians hold heavyweight individuals responsible for their condition and attribute their failures at weight loss to gluttony and a general lack of cooperation and discipline (DeJong, 1980; Price, Desmond, Krol, Snyder, & O'Connell, 1987; Price, Desmond, Ruppert, & Stelzer, 1989; Young & Powell, 1985). Although one recent study showed that physicians and other health professionals may be somewhat less likely to show overt forms of anti-fat bias toward heavy patients than are nonhealth professionals, this study simultaneously revealed that physicians are equally likely to exhibit cognitive biases and deep-rooted stereotypes against heavyweight individuals (Teachman & Brownell, 2001). Such biases may be strengthened in physicians during their training, as they realize that heavier people often require more space, more surgery time, increased recovery times, and nonstandard sizes of equipment (Gallagher, 1996, 1998). Indeed, medical residents have reported liking their heavyweight patients less and believing that they are more emotional than their leaner patients (Blumberg & Mellis, 1985). Similarly, responses from medical students reveal that they believe heavyweight patients are not as likely to benefit from medical help, are more depressed and nervous, and would benefit from seeing a psychiatrist or a clinical psychologist more than would patients who are leaner (Bretytspraak, McGee, Conger, Whatley, & Moore, 1977).

Physicians not only perceive patients differently on the basis of weight, they also discriminate against those who are heavyweight (Hebl & Xu, 2001). For instance, when asked to make medical recommendations, physicians indicated that they would spend less time (approximately 9 minutes fewer) and would display more negative behaviors (i.e., having less desire to help, being less patient, displaying less positivity) toward heavyweight patients than those who were leaner. Fewer than 50% of physicians recommended responses (e.g., weight loss, nutrition counseling, exercise counseling) that would seem to be relevant for heavier individuals, recommendations that some health experts believe are the critical foundation for obesity health care (Galuska, Will, Serdula, & Ford, 1999; Wee, McCarthy, Davis, & Phillips, 1999).

In a study examining whether heavyweight patients detect this discrimination, Hebl, Xu, and Mason (2002) had patients exiting their appointments complete a brief questionnaire describing the physician–patient interaction they had just had. A gender difference emerged such that heavyweight women tended to feel that the quality of care they received was equal or better than that reported by women who were leaner; however, heavyweight men reported that the quality of their care was equal or worse than that reported by average-weight patients. Heavyweight patients are less likely to receive warm, friendly, and caring treatment by physicians. Because a friendly physician–patient relationship improves medical care, and an unfriendly one harms care (Gawande, 2007; Groopman, 2007), it is critical that heavyweight patients pay careful attention to the quality of their relationship with caregivers.

GENDER, ETHNICITY, CULTURE, AND SOCIAL CLASS

Weight matters for everyone, but the degree of importance differs according to its social context. Because prejudice of any sort depends on cultural categories, definitions, boundaries, and values, one must understand the pattern of prejudice across locations and targets.

GENDER

There is no doubt that weight is much more important to the self and social perception for women than for men. Women are more body conscious, are more concerned about (and dissatisfied with)

AU: Hebl & Xu (2001) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Hebl, Xu, and Mason (2002) is not given in your references. Please either add a full entry there or delete the citation here.

body shape and size, diet more often, and feel that their weight interferes with their social life more than men (e.g., Brownell et al., 2005; Harris & Walters, 1991; Rodin, Silberstein, & Striegel-Moore, 1984; Stake & Lauer, 1987; Tiggemann & Rothblum, 1988). Women's dissatisfaction with their own bodies and a concomitant sense of unattractiveness in comparison to men is both reliable and increasing (Feingold & Mazzella, 1998). Concerns about weight and dieting are an important factor in the etiology of eating disorders, which disproportionately affect women (Cachelin & Regan, 2006; Striegel-Moore & Franko, 2006).

The social costs of weight, in terms of dating and marriage, affect women more than men (Cawley et al., 2006; Regan, 1996), and relational aggression is more common toward heavyweight girls than heavyweight boys (Pearce, et al., 2002). Salary differences associated with weight are mostly for women; men do not experience wage penalties until they exceed their ideal standard by more than 100 pounds (Maranto & Stenoien, 2000; cf. Frieze, Olson, & Good, 1990). The cost of weight to self-esteem is also significantly greater for women than for men (Miller & Downey, 1999; see also Crandall & Biernat, 1991).

Overall, the research consistently shows that weight affects women more strongly than men. The interpersonal costs (e.g., jobs, dating, friendship) and the intrapersonal costs (e.g., self-esteem, mental health, eating disorders) are all significantly greater for women than for men.

ETHNICITY AND CULTURE

The research focusing on anti-fat bias and different ethnic groups tends to find prejudice against most heavyweight people of all colors, although there are some important exceptions and variations. Most of the research on ethnicity and race focuses on the Black–White comparison, but there is also a growing literature on attitudes of Latinos, from Mexico, Central and South Americas. (There is a significant debate about the meaning of ethnicity and its relation to culture, and here we finesse the issue by conflating the distinction in this section.)

Black individuals tend to be more satisfied with their own body shape (Hebl & Turchin, 2005), rate heavyweight women as more attractive (Hebl & Heatherton, 1998), and are less likely to reject heavyweight women as dating partners (Harris & Walters, 1991) than are White individuals. The wage penalties for mildly obese White women (20% over ideal weight) appear to be more severe than those for severely obese (100% over ideal weight) Black men (Maranto & Stenoien, 2000). Black men have a larger acceptable standard for women's weight than White men, and in ratings studies, large Black men are stigmatized less than large White men (Hebl & Turchin, 2005). Although White women rate heavyweight women lower on a variety of dimensions, Black women generally do not show the same denigration of heavyweight women, especially when rating heavyweight Black women (Hebl & Heatherton, 1998).

For Mexican Americans, acculturation to the dominant cultural view is associated with greater concern about weight and more anti-fat attitudes (e.g., Ayala, Mickens, Galindo, & Elder, 2007; Olvera, Suminski, & Power, 2005). Hispanic parents appear to be tolerant of their heavyweight children (Rich et al., 2005) and are more accepting of obesity in adults than are White Americans (e.g., Anderson, Hughes, Fisher, & Nicklas, 2005).

There is evidence of body dissatisfaction, distorted body image, and dislike of fatness for both self and others in Mexico (Gomez-Peresmitre, Griselda, Liliana-Moreno, Suguey-Saloma, & Gisela-Pineda, 2001). In a comparison between students in Mexico City and students in the United States (in Florida and Kansas), the Mexican students reported more positive attitudes toward heavyweight people than the Americans did (Crandall & Martinez, 1996).

Crandall and colleagues (Crandall et al., 2001) compared anti-fat attitudes in six nations, three representing individualistic countries (Australia, Poland, and the United States) and three representing collectivistic countries (India, Turkey, and Venezuela). Overall, fatness was seen as highly negative (e.g., "In our culture, being fat is considered a bad thing" and "In our culture, being thin is

AU: Harris & Walters (1991) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Brownell et al. (2005) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Maranto & Stenoien (2000) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Crandall & Biernat (1991) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Harris & Walters (1991) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Maranto & Stenoien (2000) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Crandall & Martinez, (1996) is not given in your references. Please either add a full entry there or delete the citation here.

an important part of being attractive”) in the individualistic countries, but was significantly more positive in the collectivist countries.

In a review of the connection between SES and obesity, Sobal and Stunkard (1989) found that obesity in women was associated with low SES in developed societies, but by contrast obesity was associated with high SES in developing nations. They reported that a “review of social attitudes toward obesity and thinness reveals values congruent with the distribution of obesity by SES in different societies” (p. 260). People in developing societies are significantly more positive toward obesity, and under many circumstances find it highly desirable (Brown & Konner, 1987). In general, one must argue that anti-fat prejudice is deeply embedded in the values, ideologies, and cultural norms and mores of a society (Crandall & Schiffhauer, 1998; De Garine, 1995).

AU: Crandall & Schiffhauer (1998) is not given in your references. Please either add a full entry there or delete the citation here.

THEORETICAL ACCOUNTS OF ANTI-FAT PREJUDICE

There are few theories specifically designed to account for anti-fat stigma. Such theories might clarify why anti-fat stigma is particularly severe, help predict contexts in which individuals are especially vulnerable to the stigma, and ultimately work to avoid or remediate the pernicious effects associated with being heavyweight. In this section, we briefly summarize modern theories of stigma and their potential applications to anti-fat stigma. For an extended discussion of many of these theories, we point interested readers to a recent chapter by King, Hebl, and Heatherton (2005).

STEREOTYPE CONTENT MODEL

This theory proposes that the content of stereotypes varies along two dimensions of more and less socially desirable traits: warmth and competence (Fiske, Cuddy, Glick, & Xu, 2002). For example, the stereotype of Asian American individuals is high on the competence dimension but low on the warmth dimension. The point at which a particular stereotype falls on the dimensions of warmth and competence is associated with specific affective reactions (i.e., prejudices). Across a large number of participants and multiple samples, Fiske et al. (2002) showed that the content of stereotypes for feminists, housecleaners, gay men and lesbians, and other stigmatized groups fell into four clusters along the dimensions of warmth and competence.

Although not originally included, this model could be extended to include anti-fat stigma. The stigma of obesity may be particularly negative because it is both visible and perceived to be controllable (Weiner, Perry, & Magnusson, 1988) and numerous studies show that being heavyweight is associated with perceptions of being lazy, undisciplined, and gluttonous (DeJong & Kleck, 1981; Harris, Harris, & Bochner, 1982; Hebl & Kleck, 2002). Such findings suggest that stereotypes about heavyweight individuals are likely to be low in both warmth and competence dimensions, a combination that results in the worst amount of stigmatization (Fiske et al., 2002). As a result of these dimensions, it is likely that affective reactions to heavyweight individuals consist of disgust and contempt.

INTERGROUP EMOTIONS THEORY

This theory proposes that emotions are central to the process of stigmatization and draws on appraisal and self-categorization theories (see Mackie, Devos, & Smith, 2000; Smith & Henry, 1996). More specifically, this theory suggests that prejudice is driven by specific emotional reactions to an outgroup that are generated by appraisals of the outgroup. When individuals feel that their ingroup is more powerful than an outgroup, their emotional response (i.e., anger) may lead to action tendencies that are manifested in discrimination toward members of that outgroup.

Although not originally developed to explain anti-fat stigma, this theory is useful in understanding potentially negative reactions toward heavyweight individuals. Societal ideals reveal that thinness has greater status in our society than does heaviness (Hebl, King, & Shapiro, 2007).

Identification with the high-status group (i.e., thin individuals) may trigger specific emotions (i.e., anger) toward the low-status group (i.e., heavyweight individuals) and ultimately result in both overt and subtle forms of prejudice and discrimination.

Predictions regarding anti-fat stigma that follow from an intergroup emotions approach may be contradictory to those made by the stereotype content model. Although both theories predict negative emotional reactions to heavyweight individuals, intergroup emotions theory predicts anger as the outcome, whereas the stereotype content model predicts disgust as the outcome. Although both emotions are negative in valence, these two emotions may have different sets of implications for remediating anti-fat stigma; strategies targeted to diminish anger might differ significantly from strategies designed to lessen disgust. Future research might consider which of these emotions—anger or disgust—are most salient in response to heavyweight individuals (see also Cottrell & Neuberg, 2005).

EVOLUTIONARY APPROACHES

There are a number of evolutionary approaches (i.e., sociofunctional, biocultural, disease) that focus even more intensely than the previously discussed theories on addressing why stigmatization occurs. Such approaches are grounded in the assumption that stigmatizing others can serve meaningful purposes to the stigmatizer (Neuberg, Smith, & Asher, 2000). For instance, Neuberg and his colleagues argue that stigmatization is rooted in an inherent biological need to live in effective groups to promote the survival of their genetic makeup. Individuals or groups who are perceived to threaten the survival of one's ingroup will be stigmatized. Neuberg et al. argued that individuals will attempt to minimize perceived threat from stigmatized outgroups with specific emotional (i.e., prejudice) and behavioral (i.e., discrimination) responses. Thus, the process of stigmatization arose as a by-product of evolution, in which the stigmatizing individuals successfully minimized threat by rejecting others (see also Kurzban, Tooby, & Cosmides, 2001).

The renewed interest in evolutionary explanations for psychological phenomena encourages exploration of the biological functionality of the stigmatization of heavyweight individuals. On the one hand, proponents of this approach might argue that obesity is often genetically based and has been linked with severely negative health outcomes (see Wadden, Brownell, & Foster, 2002); thus, it may be functionally adaptive to avoid heavyweight individuals in the process of mate selection. Consistent with this approach, heavyweight individuals could arguably consume more resources than other individuals, making it more difficult to support the interests of the group as a whole. On the other hand, Kurzban and Leary (2001) suggested that a biocultural approach cannot explain the anti-fat stigma. They suggested that obesity is a relatively new condition in evolutionary terms in that it is only within the last several hundred years that leisure has been coupled with excess food. Thus, evolutionary theories may have limited value in understanding anti-fat stigma.

Park, Schaller, and Crandall (in press) suggested that humans possess a behavioral pathogen avoidance mechanism that allows them to avoid contagious disease. To the extent that this mechanism may be biased in favor of perceiving disease (and thus be overinclusive in the perception of threats), people might avoid others with a deviant weight (e.g., obese people). In a series of studies, they showed that people who are chronically concerned about infectious disease had more negative attitudes toward fat people, and that making infectious disease salient enhanced the rejection of obese targets.

AU: Park, Schaller, and Crandall (in press) is not given in your references. Please either add a full entry there or delete the citation here. If retained, please update both here and in your references if now published.

SYSTEM JUSTIFICATION APPROACH

System justification theory (SJT) suggests that individuals of both high- and low-status groups are motivated to reinforce and justify the status quo, or existing social arrangements. There are both cognitive reasons (e.g., need for cognitive closure, uncertainty reduction) and motivational reasons (e.g., belief in a just world, illusion of control) for participating in system justification (Jost & Banaji,

1994; Jost, Pelham, & Carvallo, 2002). SJT may explain why heavyweight individuals perceive their weight negatively. That is, unlike members of some stigmatized groups (e.g., African American individuals) who maintain high self-esteem despite their stigma (Crocker & Major, 1989), heavyweight individuals tend to share the thoughts and feelings of their stigmatizers, view themselves negatively, and have low self-esteem (Crandall & Biernat, 1990; Crocker, Cornwell, & Major, 1993). This is probably because the attitudes, beliefs, and values that explain and justify anti-fat prejudice are fundamental and ubiquitous values, such as Protestant ethic, individualism, and belief in a just world (Crandall, 1994), which are socialized and internalized without regard to weight status. These ideologies, adopted as a part of socialization into the dominant value culture, in turn prohibit escape from justification beliefs that excuse and normalize anti-fat prejudice. One step toward remediation of anti-fat stigma may be to change the reinforcing thoughts, feelings, and values of heavyweight people themselves.

JUSTIFICATION SUPPRESSION MODEL

The justification suppression model (JSM) by Crandall and Eshleman (2003) proposes that individuals face two conflicting demands: (a) wanting to express their emotions and (b) wanting to maintain egalitarian values and self-image. The JSM suggests that prejudice is expressed as a function of three processes: genuine prejudice, suppression, and justification. The core emotional component of prejudice—genuine prejudice—is pure, original, and unmanaged negative feelings toward members of a devalued group. Because the expression of prejudice is at odds with an egalitarian self-image, suppression—motivated processes that seek to reduce the expression of prejudice—moderate this expression. However, because affect has strong motivational properties, and the suppression of this motivation creates tension and discomfort, and depletes energy, justification processes—any process that allows the expression of genuine prejudice, without internal guilt or anxiety, or other external punishments.

AU: This sentence doesn't seem complete. Please reword and complete for clarity

According to the JSM, the expression of prejudice is decreased when suppression is maximized and justification is minimized, and prejudice is most likely to be expressed when suppression is minimized and justifications are maximized. Prejudice suppression can be enhanced by extensive practice, egalitarian goal commitment, and having many cognitive resources (e.g., time, attention, energy).

The JSM suggests that genuine prejudice on the basis of weight can come from many sources—media effects, categorization of weight into ingroups and outgroups, competition over scarce resources, classical conditioning of emotions, direct tuition by families and peers, and so on. It is not particularly well-suited to asking “Why is there prejudice based on weight?” Instead, the JSM is best applied to anti-fat prejudice in examining suppression and justifications. Egalitarian values, which are negatively correlated with anti-fat attitudes (e.g., Crandall, 1994), are associated with motives to suppress prejudice (Crandall, Eshleman, & O’Brien, 2002; Katz & Hass, 1988). By contrast, factors that are associated with higher levels of anti-fat attitudes (e.g., Protestant ethic, attributions of responsibility, belief in a just world, negative stereotypes) are associated with greater expressions of anti-fat attitudes. The expression of prejudice and discrimination is complex, and any full account of prejudice on the basis of weight must look not only at the affective state of prejudice, but also the moderators, suppressors, and justifications of that prejudice.

WHAT IS REMARKABLE, UNUSUAL, OR UNIQUE ABOUT WEIGHT-BASED PREJUDICE?

Prejudice against heavyweight people is similar to gender and ethnic prejudice in many important ways. All of these characteristics are visible, almost immediately perceived, and usually central to the perception of the target (Schneider, 2004). There are powerful stereotypes about all of these groups, and across a wide range of contexts—workplace, friendships, education, health care—there

are many potential disadvantages to being a member of these groups. In all of these cases, the relative position of groups is closely connected to cultural values—the prejudice and discrimination against these groups is closely connected to religion, fundamental cultural values about work, pleasure, and justice. None of these prejudices can be understood alone, but rather must be understood as part of a complex cultural worldview and social ideology.

PEOPLE ARE RESPONSIBLE FOR THEIR WEIGHT

The stigma of weight differs from many other stigmas in important and interesting ways. Perhaps the most important difference is that weight is seen as mutable—the afflicted are seen as responsible for their condition (e.g., Tiggemann & Rothblum, 1997), and capable of becoming significantly leaner (e.g., Price et al., 1987). This kind of perception leads to attributions of responsibility, a circumstance that is highly predictive of anti-fat attitudes (Crandall, 1994; Crandall et al., 2001; Crandall & Horstman Reser, 2005; Weiner, Perry, & Magnusson, 1988). The fact that adiposity and body shape are mostly biologically determined, with a very large genetic contribution and a substantial cultural environment component, has not yet reached most members of the Western public (see Kolata, 2007). People are rarely personally blamed for their gender or race.

WEIGHT IS ESCAPABLE

Although people rarely leave their gender or ethnic groups, many people actively seek to lose weight and their heavyweight status—in the United States, dieting and weight loss is a \$55 billion-a-year industry (Marketdata Enterprises, 2006). One of the most important buffers against prejudice and discrimination for racial, religious, and ethnic minorities, and also for women is to identify strongly with their group, to connect with other members of their group, and build a positive and stable sense of self, connected to their group membership (e.g., Branscombe, Schmitt, & Harvey, 1999; McCoy & Major, 2003; Noel, 1964). However, when people are members of low-status or devalued groups, but see their status as malleable, with the availability of social mobility through permeable boundaries into a higher status group, they fail to identify with their own group, avoid identification with the group, and do not pursue strategies of social change and group improvement (Ellemers, 1991; Ellemers, Van Knippenberg, de Vries, & Wilke, 1988). Although diets rarely work, and are not a realistic strategy for individual improvement, the belief that they could work cuts heavyweight people off from one of the most effective strategies for well-being—they do not show ingroup bias and do not strongly identify with their group (see Crandall, 1994).

SOCIAL NORMS ABOUT EXPRESSION

There are powerful social norms in the United States and Canada that suppress the overt expression of prejudice against women and racial minorities (e.g., Devine, Plant, Amodio, & Harmon-Jones, 2002; Legault, Green-Demers, Grant, & Chung, 2007). These norms exist for anti-fat attitudes as well, but they are significantly weaker (see Crandall et al., 2002, Table 1). In some ways, research about anti-fat prejudice is more straightforward, in that it is not as hard to find people who will overtly agree with negative statements such as “I really don’t like fat people much” (Crandall, 1994). Comparable items measuring racial, ethnic, and gender items lost this unsubtle content many years ago (Crandall & Biernat, 1999). Although much of the research on racial prejudice—and plenty on gender as well—in the current century has focused on subtle and implicit biases and neurological phenomena (e.g., Nosek, 2007; Richeson, et al., 2003), and some of this has been applied to weight prejudice (Bessenoff & Sherman, 2002). Some prejudices seem to have gone underground, whereas others remain in plain sight. The field of stereotyping and prejudice needs a theory of social change—a focus many decades ago that seems to have been lost (Bettleheim & Janowitz, 1964).

AU: Bessenoff & Sherman (2002) is not given in your references. Please either add a full entry there or delete the citation here.

AU: Crandall & Biernat (1999) is not cited in text. Please either add a citation there or delete the entry here.

AU: Check spelling: Bettleheim & Janowitz (1964) here, but Bettelheim in references; please correct whichever is wrong.

IS OBESITY RELATED RESEARCH BIASED AGAINST THE NULL HYPOTHESIS?

When one reviews the kinds of effects discrimination researchers look at, we find education, employment, and marriage in many of them. Certainly there is discrimination in employment with respect to gender and race—these literatures are vast, reporting a wide range of effects. This chapter reviews some of these areas for weight-based prejudice, and reports many of the same effects. However, there is a kind of confirmation bias in these studies—researchers sensibly set out to locate effects that seem likely to be present. Common sense and past history guide researchers, as they should. In addition, however, there is also a confirmation bias that may be based in stereotyping—researchers look for differences among groups (based on gender, ethnicity, or weight) that are stereotype relevant. This reveals effects on employment and education, but we found surprisingly few decrements in personal relationships for heavyweight participants—this finding is interesting in part because it seems counterstereotypic.

However, stereotyping and prejudice researchers should not be so affected by stereotypes in defining the domains they study. We know very little about whether heavyweight people have different rates of drug use, alcohol abuse, crime, auto accidents, work, and farm-related accidents. Do we research areas where stigmatized groups are likely to excel? Do we define, a priori, those areas that matter to people's lives, and then study them regardless of our preconceived notions of whether the domain is relevant? We suggest that scientists do not follow such a strategy, but that much could be learned by exercising it.

SUMMARY AND CONCLUSIONS

Prejudice based on weight affects an ever-growing body of people across many of the most important dimensions of life. It rivals all other prejudices in terms of breadth of impact, the number of people affected, and the lack of group-based strategies for social change. Any understanding of prejudice as a phenomenon must look across the wide range of targets of prejudice, and weight-based prejudice helps reveal the complexity and texture of prejudice.

REFERENCES

- Aberson, C. L., Healy, M., & Romero, V. (2000). Ingroup bias and self-esteem: A meta-analysis. *Personality and Social Psychology Review*, 4, 157–173.
- Allison, D. B., & Casey, D. E. (2001). Antipsychotic-induced weight gain: A review of the literature. *Journal of Clinical Psychiatry*, 62(Suppl. 7), 22–31.
- Allison, D. B., Neale, M. C., Kezis, M. I., Alfonso, C., Heshka, S., & Heymsfield, S. B. (1996). Assortative mating for relative weight: Genetic implications. *Behavior Genetics*, 26(2), 103–111.
- Anderson, C. B., Hughes, S. O., Fisher, J. O., & Nicklas, T. A. (2005). Cross-cultural equivalence of feeding beliefs and practices: The psychometric properties of the child feeding questionnaire among Blacks and Hispanics. *Preventive Medicine*, 41, 521–531.
- Argyle, M. (1994). *The psychology of social class*. London: Routledge.
- Ayala, G. X., Mickens, L., Galindo, P., & Elder, J. P. (2007). Acculturation and body image perception among Latino youth. *Ethnicity and Health*, 12, 21–41.
- Bell, M. P., & McLaughlin, M. E. (2006). Outcomes of appearance and obesity in organizations. In A. M. Konrad, P. Prasad, & J. K. Pringle (Eds.), *Handbook of workplace diversity* (pp. 455–474). Thousand Oaks, CA: Sage.
- Bellizzi, J. A., & Hasty, R. W. (1998). Territory assignment decisions and supervising unethical selling behavior: The effects of obesity and gender as moderated by job-related factors. *Journal of Personal Selling and Sales Management*, 18, 35–49.
- Bettelheim, B., & Janowitz, M. (1964). *Social change and prejudice*. New York: Collier-Macmillan.
- Biernat, M., & Crandall, C. S. (1999). Racial attitudes. In J. Robinson, P. Shaver, & L. Wrightsman (Eds.), *Measures of political attitudes* (2nd ed., pp. 297–411). New York: Academic.
- Blumberg, P., & Mellis L. P. (1985). Medical students' attitudes toward the obese and the morbidly obese. *International Journal of Eating Disorders*, 4, 169–175.

AU: Bell & McLaughlin (2006) is not cited in text. Please either add a citation there or delete the entry here.

AU: Biernat & Crandall (1999) is not cited in text. Please either add a citation there or delete the entry here.

AU: Check spelling: Bettelheim & Janowitz (1964) here, but Bettelheim in text cite; please correct whichever is wrong.

- Branscombe, N. R., Schmitt, M. T., & Harvey, R. D. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology, 77*, 135–149.
- Bretyspraak, L. M., McGee, J., Conger, J. C., Whatley, J. L., & Moore, J. T. (1977). Sensitizing medical students to impression formation processes in the patient interview. *Journal of Medical Education, 52*, 47–54.
- Brewer, M. R. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin, 17*, 475–482.
- Britz, B., Siegfried, W., Ziegler, A., Lamertz, C., Herpertz-Dahlmann, B. M., Remschmidt, H., et al. (2000). Rates of psychiatric disorders in a clinical study group of adolescents with extreme obesity and in obese adolescents ascertained via a population based study. *International Journal of Obesity, 24*, 1707–1714.
- Brown, P. J., & Konner, M. (1987). An anthropological perspective on obesity. *Annals of the New York Academy of Sciences, 499*, 29–46.
- Cachelin, F. M., & Regan, P. C. (2006). Prevalence and correlates of chronic dieting in a multi-ethnic U.S. community sample. *Eating and Weight Disorders, 11*, 91–99.
- Canning, H., & Mayer, J. (1966). Obesity—Its possible effect on college acceptance. *New England Journal of Medicine, 275*, 1172–1174.
- Cawley, J., Joyner, K., & Sobal, J. (2006). Size matters: The influence of adolescents' weight and height on dating and sex. *Rationality and Society, 18*, 67–94.
- Chen, E. Y., & Brown, M. (2005). Obesity stigma in sexual relationships. *Obesity Research, 13*, 1393–1397.
- Cossrow, N. H., Jeffrey, R. W., & McGuire, M. T. (2001). Understanding weight stigmatization: A focus group study. *Journal of Nutrition Education, 33*, 208–214.
- Cottrell, C. A., & Neuberg, S. L. (2005). Different emotional reactions to different groups: A sociofunctional threat-based approach to “prejudice.” *Journal of Personality and Social Psychology, 88*, 770–789.
- Cramer, P., & Steinwert, T. (1998). Thin is good, fat is bad: How early does it begin? *Journal of Applied Developmental Psychology, 19*, 429–451.
- Crandall, C. S. (1994). Prejudice against fat people: Ideology and self-interest. *Journal of Personality and Social Psychology, 66*, 882–894.
- Crandall, C. S. (1995). Do parents discriminate against their own heavyweight daughters? *Personality and Social Psychology Bulletin, 21*, 724–735.
- Crandall, C. S., & Biernat, M. (1990). The ideology of anti-fat attitudes. *Journal of Applied Social Psychology, 20*, 227–243.
- Crandall, C. S., D'Anello, S., Sakalli, N., Lazarus, E., Nejtardt, G. W., & Feather, N. T. (2001). An attribution-value model of prejudice: Anti-fat attitudes in six nations. *Personality and Social Psychology Bulletin, 27*, 30–37.
- Crandall, C. S., & Eshleman, A. (2003). A justification-suppression model of the expression and experience of prejudice. *Psychological Bulletin, 129*, 414–446.
- Crandall, C. S., Eshleman, A., & O'Brien, L. T. (2002). Social norms and the expression and suppression of prejudice: The struggle for internalization. *Journal of Personality and Social Psychology, 82*, 359–378.
- Crandall, C. S., & Horstman Reser, A. (2005). Attributions and weight-based prejudice. In K. D. Brownell, R. M. Puhl, & M. B. Schwartz (Eds.), *Weight bias: Nature, consequences and remedies* (pp. 83–96). New York: Guilford.
- Crandall, C. S., Schiffhauer, K. L., & Harvey, R. (1997). Friendship pair similarity as a measure of group value. *Group Dynamics, 1*, 133–143.
- Crocker, J., Cornwell, B., & Major, B. (1993). The stigma of overweight: Affective consequences of attributional ambiguity. *Journal of Personality and Social Psychology, 60*, 218–228.
- Crocker, J., & Luhtanen, R. (1990). Collective self-esteem and ingroup bias. *Journal of Personality and Social Psychology, 58*, 60–67.
- Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review, 96*, 608–630.
- Datar, A., Sturm, R., & Magnabosco, J. L. (2004). Childhood overweight and academic performance: National study of kindergartners and first-graders. *Obesity Research, 12*, 58–68.
- Davison, K. K., & Birch, L. L. (2004). Predictors of fat stereotypes among 9-year-old girls and their parents. *Obesity Research, 12*, 86–94.
- Decker, W. H. (1987). Attributions based on managers' self-presentation, sex, and weight. *Psychological Reports, 61*, 175–181.
- De Garine, I. (1995). *Social aspects of obesity*. New York: Routledge.

- DeJong, W. (1980). The stigma of obesity: The consequences of naive assumptions concerning the causes of physical deviance. *Journal of Health and Social Behavior*, *21*, 75–87.
- DeJong, W., & Kleck, R. E. (1981). The social psychological effects of overweight. In C. P. Herman, M. P. Zanna, & E. T. Higgins (Eds.), *Physical appearance, stigma, and social behavior* (pp. 65–87). Hillsdale, NJ: Erlbaum.
- Devine, P. G., Plant, E. A., Amodio, D., & Harmon-Jones, E. (2002). The regulation of explicit and implicit race bias: The role of motivations to respond without prejudice. *Journal of Personality and Social Psychology*, *82*, 835–848.
- Eisenberg, M. E., & Neumark-Sztainer, D. (2005). Weight-teasing and emotional well-being in young adults: Longitudinal findings from Project EAT. *Journal of Adolescent Health*, *36*, 100–101.
- Eisenberg, M. E., Neumark-Sztainer, D., Haines, J., & Wall, M. (2006). Weight-teasing and emotional well-being in adolescents: Longitudinal findings from Project EAT. *Journal of Adolescent Health*, *38*, 675–683.
- Ellemers, N. (1991). *Identity management strategies: The influence of socio-structural variables on strategies of individual mobility and social change*. Gronigen, The Netherlands: Rijkuniversiteit Gronigen.
- Ellemers, N., Van Knippenberg, A., de Vries, N., & Wilke, H. (1988). Social identification and permeability of group boundaries. *European Journal of Social Psychology*, *18*, 497–513.
- Feingold, A., & Mazzella, R. (1998). Gender differences in body image are increasing. *Psychological Science*, *9*, 190–195.
- Fikkan, J., & Rothblum, E. (2005). Weight bias in employment. In K. D. Brownell, R. M. Puhl, M. B. Schwartz, & L. Rudd (Eds.), *Weight bias: Nature, consequences, and remedies* (pp. 15–28). New York: Guilford.
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, *82*, 878–902.
- French, S. A., Story, M., & Perry, C. L. (1995). Self-esteem and obesity in children and adolescents: A literature review. *Obesity Research*, *3*, 479–490.
- Frieze, I. M., Olson, J. E., & Good, D. C. (1990). Perceived and actual discrimination in the salaries of male and female managers. *Journal of Applied Social Psychology*, *20*, 46–67.
- Fu, H., & Goldman, N. (1996). Incorporating health into models of marriage choice: Demographic and sociological perspectives. *Journal of Marriage and the Family*, *58*, 740–758.
- Gallagher, S. M. (1996). Meeting the needs of the obese patient. *American Journal of Nursing*, *96*, 1S–12S.
- Gallagher, S. M. (1998). Caring for obese patients. *Nursing*, *43*, 32HN1–32HN3.
- Galuska, D. A., Will, J. C., Serdula, M. K., & Ford, E. S. (1999). Are health care professionals advising obese patients to lose weight? *Journal of the American Medical Association*, *282*, 1576–1578.
- Gawande, A. (2007). *Better: A surgeon's notes on performance*. New York: Metropolitan Books.
- Gomez-Peresmitre, G., Griselda, A. H., Liliana-Moreno, E., Suguey-Saloma, G., & Gisela-Pineda, G. (2001). Trastornos de la Alimentación: Factores de Riesgo en Tres Diferentes Grupos de Edad: Pre-puberes, Puberes y Adolescentes [Eating disorders: Risk factors in three different age groups: Prepubescent, pubescent and adolescent]. *Revista Mexicana de Psicología*, *18*, 313–324.
- Gortmaker, S. L., Must, A., Perrin, J. M., Sobol, A. M., & Dietz, W. H. (1993). Social and economic consequences of overweight in adolescence and young adulthood. *New England Journal of Medicine*, *329*, 1008–1012.
- Groopman, J. (2007). *How doctors think*. New York: Houghton Mifflin.
- Haines, J., Neumark-Sztainer, D., Eisenberg, M. E., & Hannan, P. J. (2006). Weight-teasing and disordered eating behaviors in adolescents: Longitudinal findings from Project EAT (Eating Among Teens). *Pediatrics*, *117*, 209–215.
- Harris, M. B. (1990). Is love seen as different for the obese? *Journal of Applied Social Psychology*, *20*, 1209–1224.
- Harris, M. B., Harris, R. J., & Bochner, S. (1982). Fat, four-eyed, and female: Stereotypes of obesity, glasses, and gender. *Journal of Applied Social Psychology*, *12*, 503–516.
- Hebl, M. R., & Heatherton, T. F. (1998). The stigma of obesity in women: The difference is black and white. *Personality and Social Psychology Bulletin*, *24*, 417–426.
- Hebl, M. R., King, E. B., & Shapiro, J. (2007). *When is thin "in" for Black women?* Unpublished manuscript, Rice University.
- Hebl, M. R., & Kleck, R. E. (2002). Acknowledging one's stigma in the interview setting: Effective strategy or liability? *Journal of Applied Social Psychology*, *32*, 223–249.
- Hebl, M. R., & Mannix, L. M. (2003). The weight of obesity in evaluative others: A mere proximity effect. *Personality and Social Psychology Bulletin*, *29*, 28–38.

AU: Eisenberg & Neumark-Sztainer (2005) is not cited in text. Please either add a citation there or delete the entry here.

AU: Hebl, King, & Shapiro (2007): Please provide city, state location for Rice University.

- Hebl, M. R., & Turchin, J. M. (2005). The stigma of obesity: What about men? *Basic and Applied Social Psychology, 27*, 267–275.
- Hogg, M. A., & Abrams, D. (1990). *Social identifications: A social psychology of intergroup relations and group processes*. London: Routledge.
- Hudson, J. I., Hiripi, E., Pope, H. G., Jr., & Kessler, R. C. (2007). The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biological Psychiatry, 61*, 348–358.
- Jasper, C. R., & Klassen, M. L. (1990). Perceptions of salespersons' appearance and evaluation of job performance. *Perceptual and Motor Skills, 71*, 563–566.
- Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system justification and the production of false consciousness. *British Journal of Social Psychology, 33*, 1–27.
- Jost, J. T., Pelham, B. W., & Carvallo, M. R. (2002). Non-conscious forms of system justification: Implicit and behavioral preferences for higher status groups. *Journal of Experimental Social Psychology, 83*, 586–602.
- Katz, I., & Hass, R. G. (1988). Racial ambivalence and American value conflict: Correlational and priming studies of dual cognitive structures. *Journal of Personality and Social Psychology, 55*, 893–905.
- King, E., Hebl, M., & Heatherton, T. F. (2005). Theories of stigma: Limitations and needed direction. In K. D. Brownell, R. M. Puhl, & M. B. Schwartz (Eds.), *Bias, stigma, discrimination, and obesity* (pp. 109–120). New York: Guilford.
- Kolata, G. (2007). *Rethinking thin: The new science of weight loss—and the myths and realities of dieting*. New York: Farrar, Straus & Giroux.
- Kuo, H. K., Jones, R. N., Milberg, W. P., Tennstedt, S., Talbot, L., Morris, J. N., et al. (2006). Cognitive function in normal-weight, overweight, and obese older adults: An analysis of the Advanced Cognitive Training for Independent and Vital Elderly cohort. *Journal of the American Geriatrics Society, 54*, 97–103.
- Kurzban, R., & Leary, M. R. (2001). Evolutionary origins of stigmatization: The functions of social exclusion. *Psychological Bulletin, 127*, 187–208.
- Kurzban, R., Tooby, J., & Cosmides, L. (2001). Can race be erased? Coalitional computation and social categorization. *Proceedings of the National Academy of Sciences, 98*, 15387–15392.
- Lagerspetz, K. M., Kjorkvist, K. A. J., Nerts, M., & King, E. (1982). Group aggression among schoolchildren in three schools. *Scandinavian Journal of Psychology, 23*, 45–52.
- Legault, L., Green-Demers, I., Grant, P., & Ching, J. (2007). On the self-regulation of implicit and explicit prejudice: A self-determination theory perspective. *Personality and Social Psychology Bulletin, 33*, 732–749.
- Macías, J. A. G., Leal, F. J. V., López-Ibor, J. J., Rubio, M. A., & Caballero, M. G. (2004). Marital status in morbidly obese patients after bariatric surgery. *Journal of Psychiatry, 7*(3), 22–27.
- Mackie, D. M., Devos, T., & Smith, E. R. (2000). Intergroup emotions: Explaining offensive action tendencies in an intergroup context. *Journal of Personality and Social Psychology, 79*, 602–616.
- Marketdata Enterprises. (2006). *The U.S. weight loss and diet control market* (9th ed.). Tampa, FL: Author.
- Marshall, J. R., & Neill, J. (1977). The removal of a psychosomatic symptom: Effects on the marriage. *Family Practice, 16*, 273–280.
- Martel, R., Lane, D. M., & Willis, C. (1996). Male–female differences: A computer simulation. *American Psychologist, 51*, 157–158.
- McCoy, S. K., & Major, B. (2003). Group identification moderates emotional responses to perceived prejudice. *Personality and Social Psychology Bulletin, 29*, 1005–1017.
- Miller, C. T., & Downey, K. T. (1999). A meta-analysis of heavyweight and self-esteem. *Personality and Social Psychology Review, 3*, 68–84.
- Miller, C. T., Rothblum, E. D., Felicio, D., & Brand, P. (1995). Compensating for stigma: Obese and nonobese women's reactions to being visible. *Personality and Social Psychology Bulletin, 21*, 1093–1106.
- Neuberg, S. L., Smith, D. M., & Asher, T. (2000). Why people stigmatize: Toward a biocultural framework. In T. F. Heatherton, R. E. Kleck, M. R. Hebl, & J. G. Hull (Eds.), *The social psychology of stigma* (pp. 31–61). New York: Guilford.
- Neumark-Sztainer, D., Story, M., & Faibisch, L. (1998). Perceived stigmatization among overweight African-American and Caucasian adolescent girls. *Journal of Adolescent Health, 23*, 264–270.
- Neumark-Sztainer, D., Story, M., & Harris T. (1999). Beliefs and attitudes about obesity among teachers and school health care providers working with adolescents. *Journal of Nutrition Education, 31*, 3–9.
- Noel, D. L. (1964). Group identification among Negroes: An empirical analysis. *Journal of Social Issues, 20*, 71–84.
- Nosek, B. A. (2007). Implicit–explicit relations. *Current Directions in Psychological Science, 16*, 65–69.

AU: Check spelling: Jasper & Klassen (1990) here, but Klassen in text citation; please correct whichever is wrong.

- Olvera, N., Suminski, R., & Power, T. G. (2005). Intergenerational perceptions of body image in Hispanics: Role of BMI, gender, and acculturation. *Obesity Research, 13*, 1970–1979.
- Pagan, J. A., & Davila, A. (1997). Obesity, occupational attainment, and earnings. *Social Science Quarterly, 78*, 756–770.
- Pearce, M. J., Boergers, J., & Prinstein, M. J. (2002). Adolescent obesity, overt and relational peer victimization, and romantic relationships. *Obesity Research, 10*, 386–393.
- Pingitore, R., Dugoni, B. L., Tindale, R. S., & Spring, B. (1994). Bias against overweight job applicants in a simulated employment interview. *Journal of Applied Psychology, 79*, 909–917.
- Polinko, N. K., & Popovich, P. M. (2001). Evil thoughts but angelic actions: Responses to overweight job applicants. *Journal of Applied Social Psychology, 31*, 905–924.
- Price, J. H., Desmond, S. M., Krol, R. A., Snyder, F. F., & O'Connell, J. K. (1987). Family practice physicians' beliefs, attitudes, and practices regarding overweight. *American Journal of Preventative Medicine, 3*, 339–345.
- Price, J. H., Desmond, S. M., Ruppert, E. S., & Stelzer, C. M. (1989). Pediatricians' perceptions and practice regarding childhood overweight. *American Journal of Preventative Medicine, 5*, 95–103.
- Rand, C. S., Kowalske, K., & Kuldau, J. M. (1984). Characteristics of marital improvement following obesity surgery. *Psychosomatics, 25*, 221–226.
- Regan, P. C. (1996). Sexual outcasts: The perceived impact of body and gender on sexuality. *Journal of Applied Social Psychology, 26*, 1803–1815.
- Register, C. A., & Williams, D. R. (1990). Wage effects of obesity among young workers. *Social Science Quarterly, 71*, 130–141.
- Rich, S. S., DiMarco, N. M., Huettig, C., Essery, E. V., Andersson, E., & Sanborn, C. F. (2005). Perceptions of health status and play activities in parents of overweight Hispanic toddlers and preschoolers. *Family and Community Health, 28*, 130–141.
- Richeson, J. A., Baird, A. A., Gordon, H. L., Heatheron, T. F., Wyland, C. L., Trawalter, S., et al. (2003). An fMRI investigation of the impact of interracial contact on executive function. *Nature Neuroscience, 6*, 1323–1328.
- Rodin, J., Silberstein, L., & Striegel-Moore, R. (1984). Women and weight: A normative discontent. *Nebraska Symposium on Motivation, 32*, 267–307.
- Roehling, M. V. (1999). Weight-based discrimination in employment: Psychological and legal aspects. *Personnel Psychology, 52*, 969–1016.
- Rothblum, E., Brand, R. A., Miller, C. T., & Oetjen, H. A. (1990). The relationship between obesity, employment discrimination, and employment-related victimization. *Journal of Vocational Behavior, 37*, 251–266.
- Sargent, J. D., & Blanchflower, D. G. (1994). Obesity and stature in adolescence and earning in young adulthood. *Archives of Pediatric Adolescent Medicine, 148*, 681–687.
- Scheepers, D., Spears, R., Doosje, B., & Manstead, A. S. R. (2006). Diversity in in-group bias: Structural factors, situational features, and social functions. *Journal of Personality and Social Psychology, 90*, 944–960.
- Schneider, D. J. (2004). *The psychology of stereotyping*. New York: Guilford.
- Seidell, J. C. (1998). Societal and personal costs of obesity. *Experimental Clinical Endocrinology and Diabetes, 2*, 7–9.
- Smith, E. R., & Henry, S. (1996). An in-group becomes part of the self: Response time evidence. *Personality and Social Psychology Bulletin, 22*, 635–642.
- Sobal, J., Rauschenbach, B. S., & Frongillo, E. A., Jr. (1995). Obesity and marital quality. *Journal of Family Issues, 16*, 746–764.
- Sobal, J., & Stunkard, A. J. (1989). Socioeconomic status and obesity: A review of the literature. *Psychological Bulletin, 105*, 260–275.
- Strauss, R. S., & Pollack, H. A. (2003). Social marginalization of overweight children. *Archives of Pediatric and Adolescent Medicine, 157*, 746–752.
- Striegel-Moore, R. H., & Franko, D. L. (2006). Adolescent eating disorders. In C. A. Essau (Ed.), *Child and adolescent psychopathology: Theoretical and clinical implications* (pp. 160–183). New York: Routledge/Taylor & Francis.
- Teachman, B. A., & Brownell, K. D. (2001). Implicit anti-fat bias among health professionals: Is anyone immune? *International Journal of Obesity and Metabolic Disorders, 25*, 1525.
- Tiggemann, M., & Rothblum, E. D. (1988). Gender differences in social consequences of perceived overweight in the United States and Australia. *Sex Roles, 18*, 75–86.

AU: Seidell (1998) is not cited in text. Please either add a citation there or delete the entry here.

- Tiggemann, M., & Rothblum, E. D. (1997). Gender differences in internal beliefs about weight and negative attitudes towards self and others. *Psychology of Women Quarterly*, 21, 581–593.
- Troop-Gordon, W., & Ladd, G. W. (2005). Trajectories of peer victimization and perceptions of the self and school-mates: Precursors to internalizing and externalizing problems. *Child Development*, 76, 1072–1091.
- Valian, V. (2000). *Why so slow? The advancement of women*. Cambridge, MA: MIT Press.
- Van Hanswijck de Jonge, P., van Furth, E. F., Lacey, J. H., & Waller, G. (2003). The prevalence of DSM-IV personality pathology among individuals with bulimia nervosa, binge eating disorder and obesity. *Psychological Medicine*, 33, 1311–1317.
- Wadden, T. A., Brownell, K. D., & Foster, G. D. (2002). Obesity: Responding to the global epidemic. *Journal of Consulting and Clinical Psychology*, 70, 510–525.
- Wee, C. C., McCarthy, E. P., Davis, R. B., & Phillips R. S. (1999). Physician counseling about exercise. *Journal of the American Medical Association*, 282, 1583–1588.
- Weiler, K., & Helms, L. B. (1993). Responsibilities of nursing education: The lessons of *Russell v. Salve Regina*. *Journal of Professional Nursing*, 9, 131–138.
- Weiner, B., Perry, R. P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of Personality and Social Psychology*, 55, 738–748.
- Young, L. M., & Powell, B. (1985). The effects of overweight on the clinical judgments of mental health professionals. *Journal of Health and Social Behavior*, 26, 233–246.
- Zemank, J. E., McIntyre, R. P., & Zemanek, A. (1998). Salespersons' weight and ratings of characteristics related to effectiveness of selling. *Psychological Reports*, 82, 947–952.

AU: Van Hanswijck de Jonge, van Furth, Lacey, & Waller (2003) is not cited in text. Please either add a citation there or delete the entry here.

AU: Valian (2000) is not cited in text. Please either add a citation there or delete the entry here.