

## Obesity as a status cue: perceived social status and the stereotypes of obese individuals

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### Abstract

Two studies examined the relationship between social status and obesity stereotypes. In Study 1, obese individuals were seen as having lower status than non-obese individuals, and status ratings were positively correlated with common obesity stereotypes. In Study 2, targets were depicted as overweight or lean, and as having a high-status or low-status job. High-status heavy targets were rated as less lazy and more competent than were their low-status counterparts, but status did not impact ratings of sloppiness or warmth. The findings indicate that obesity can serve as a status cue. Furthermore, the findings provide preliminary evidence that status is related to the attribution of certain stereotypes to obese individuals, while also highlighting the multifaceted nature of obesity stereotypes.

Discrimination against overweight and obese individuals is widespread, and weight bias has even been referred to as the last acceptable form of discrimination. Obese people suffer discrimination in virtually every area of their lives, including education, employment, healthcare, and romantic relationships (for a review, see Puhl & Brownell, 2001). There is evidence that negative attitudes toward obese individuals are worse today than they were 40 years ago (Latner & Stunkard, 2003). These negative attitudes are even observed among healthcare professionals specializing in obesity (Schwartz, Chambliss, Brownell, Blair, & Billington, 2003) and among obese individuals themselves (Crandall, 1994; Schwartz, Vartanian, Nosek, & Brownell, 2006). Thus, in addition to the numerous health consequences associated with excess weight (e.g., type 2 diabetes and heart disease), there are also important social consequences of obesity. With rates of overweight and obesity increasing dramatically over the past three decades (Flegal, Carroll, Ogden, & Johnson, 2002), the number of individuals who are at risk for experiencing weight-based discrimination is also increasing.

Alongside the pervasive negative attitudes and discrimination against obese people are a number of stereotypes that are consistently ascribed to overweight and obese people. Staffieri (1967), in his seminal study of body-image stereotypes among children, found that silhouettes that depicted heavy boys were judged to be more lazy, sloppy, ugly, and stupid, compared to muscular or thin boys. Since that initial

work, researchers have consistently found that overweight and obese people are seen as lazy, sloppy, lacking in self-discipline, lacking in self-confidence, overindulgent, unhappy, and unintelligent (e.g., Davison & Birch, 2004; Harris, Harris, & Bochner, 1982; Hebl & Heatherton, 1998; Tiggemann & Anesbury, 2000; Tiggemann & Rothblum, 1988). Although less consistent, some research has also shown that obese individuals are seen as jolly, warm, and friendly (e.g., Tiggemann & Rothblum, 1988).

Despite the prevalence of weight bias, it is unfortunately a topic that is underrepresented in the mainstream social psychological literature. A search of abstracts of *Journal of Personality and Social Psychology (JPSP)* and *Personality and Social Psychology Bulletin (PSPB)* through June 2009 using the keywords "fat," "obese," "obesity," and "overweight" resulted in 33 and 18 articles, respectively. As a point of comparison, a similar abstract search using the key terms "Black" or "African American" resulted in 204 articles in *JPSP* (a 6.18 : 1 ratio), and 100 articles in *PSPB* (a 5.56 : 1 ratio). Thus, there appears to be a lack of investment on the part of the scientific community in exploring the social psychological implications of weight. The present research aims to redress this shortcoming by examining obesity stereotypes in the context of prominent social psychological models of stereotyping. Specifically, the present studies examine the role of social status in people's perceptions of obese individuals.

## Social status and stereotypes

*Social status*, which is often defined in terms of differences in prestige, power, and influence, plays an important role in person perception and interpersonal interactions (e.g., Berger, Cohen, & Zelditch, 1972). Status-based models of stereotypes have provided useful frameworks for understanding the stereotypes attributed to a range of social groups across a variety of contexts. There has been no attempt, however, to examine the extent to which these models apply to the stereotypes of obese individuals.

Theorists have proposed that certain characteristics (e.g., gender) serve as status markers, and that social-status differences between groups can explain the differential attribution of stereotypical characteristics to those groups. For example, Conway and colleagues (Conway, Pizzamiglio, & Mount, 1996; Conway & Vartanian, 2000; Conway, Wood, Dugas, & Pushkar, 2003) have argued that gender stereotypes can be explained by the fact that women generally have lower status than do men (Lips, 1991). Conway et al. (1996) showed that individuals in low-status jobs were perceived as more communal (e.g., warm, kind, devoted to others), whereas individuals in high-status jobs were perceived as more agentic (e.g., independent, aggressive). Conway et al. (1996) provided further support for a status account of gender stereotypes by using an instantiation of status that is independent of occupational roles and gender. Fictional groups were described in which status was demarcated, for example, by priority access to resources and ornamentation on clothing. The results showed that the low-status group was seen as more communal, whereas the high-status group was seen as more agentic. Together, these findings suggest that gender serves as a status cue, and that social status can (at least in part) explain the attribution of communal traits to women and agentic traits to men.

Another status-based model of stereotype attribution is the stereotype content model described by Fiske and colleagues (e.g., Fiske, Cuddy, Glick, & Xu, 2002; Fiske, Xu, Cuddy, & Glick, 1999). This model focuses on a set of mixed stereotypes often associated with high- and low-status groups, and finds that high-status groups (e.g., rich people) are perceived as highly competent but low in warmth, whereas low-status groups (e.g., housewives) are perceived as low in competence but high in warmth. Moreover, people in low-status groups (who are seen as warm but incompetent) might be well liked but they are not particularly respected, whereas people in high-status groups (who are seen as competent but cold) might be respected but not particularly well liked (Eagly & Mladinic, 1989; Fiske et al., 1999). Recent evidence suggests that the stereotype content model is applicable across cultures (Cuddy et al., 2009) and across history (Durante, Volpato, & Fiske, 2009).

One explanation for the connection between social status and stereotypes is that these are instances of correspondence bias, whereby observers assume that dispositional traits explain an individual or group's social standing (Gilbert & Malone, 1995). For example, there is evidence that socioeconomic status (SES) is negatively correlated with rates of obesity (e.g., McLaren, 2007), and observers might infer that the low SES of obese individuals is a result of their being lazy and incompetent. Another explanation for the connection between social status and stereotypes is based in system justification theory, which suggests that stereotypes serve to legitimize existing social structures (Jost & Banaji, 1994). According to this perspective, seemingly positive stereotypes of low-status groups as being warm or communal compensate for the fact that they are also judged as being incompetent, thereby rationalizing the inequalities among groups by making the balance seem less "unfair" (Jost & Kay, 2005). In both cases, it is perceptions of a group as having high (or low) status that leads to the attribution of specific characteristics to that group, although the reason for these attributions might differ.

## The present research

Building on past research, the present studies aim to situate the stereotypes of obese individuals in a broader, social psychological context. Specifically, we seek to determine whether obesity (like gender) serves as a status cue, and whether social status is associated with some of the stereotypes attributed to obese individuals. Doing so will help us understand how representations of obesity fit with representations of other stigmatized groups, and also how judgments of obese individuals might be unique or distinct.

In Study 1, participants indicated their perceptions of the social status of obese people, relative to non-obese people, and participants' ratings of common stereotypes of obese people were then correlated with those status judgments. We predict that obese people will be judged as having lower social status, relative to non-obese people. We also predict that ratings of social status will be associated with the attribution of stereotypical traits (e.g., lazy, incompetent) to obese individuals. In Study 2, we manipulated the social status and body size of target individuals in order to more fully investigate the relation between status and the stereotypes of obese individuals. We predict that high-status obese individuals will be judged more favorably than will their low-status counterparts.

## Study 1

Despite evidence showing negative attitudes and stereotypes toward obese individuals, perceptions of social status have not been examined as a potential explanatory factor. Thus, in

this first study, we seek to establish (a) the existence of a perceived status differential between obese and non-obese individuals (obesity as a status cue); and (b) the connection between perceptions of social status and assignment of stereotypical traits to obese individuals, relative to non-obese individuals.

## Method

### Participants

Study 1 participants were 81 undergraduate students (52 females, 29 males) who took part in exchange for course credit in their introductory psychology classes. The participants' mean age was 18.8 years ( $SD = 1.2$ ; range = 18–26 years). Their mean body mass index (BMI; kg/m<sup>2</sup>) was 23 (range = 15–37). With regard to their race/ethnicity, 46 participants were Caucasian, 15 were Asian, 10 were African American, 7 were Hispanic, and 3 identified themselves as "other." The study was approved by the university's Institutional Review Board.

### Materials and procedure

Participants signed up for a study on social judgments. When they arrived for the study, they were seated at a personal computer in an individual cubicle. After providing their informed consent, the participants proceeded to complete a series of questionnaires on the computer, in the order described here.

### Social status

Participants responded to two items assessing perceptions of the relative social status of obese people, compared to non-obese people. These items (based on Conway et al., 1996) are "In our society, obese people generally have lower social status than non-obese people," and "Compared to obese people, non-obese people are more able to influence others." Each item was rated on a 7-point Likert-type scale ranging from 1 (*completely disagree*) to 7 (*completely agree*). The two items were positively correlated ( $r = .34, p = .002$ ), and were combined into a single index of perceived social status. Because this was a relative measure of social status, scores above the midpoint of the scale (i.e., a score of 4) indicate that participants perceived obese people to have lower social status, compared to non-obese people; whereas scores below the midpoint indicate that obese people were seen as having higher social status than were non-obese people.

### Stereotypes questionnaire

The participants were then presented with a series of character traits (in random order) and were asked to indicate the extent to which the trait applied to thin people, as compared

to obese people. The traits were rated on a 7-point scale ranging from -3 (*much more like thin people*) to +3 (*much more like obese people*). These traits included a number of common stereotypes of obese individuals (*lazy, self-confident, disciplined, sloppy, overindulgent, poor personal hygiene, competent, intelligent, and unhappy*) and were embedded in a series of filler traits.

Following Conway and Vartanian (2000), the participants were asked separately to indicate their perceptions of the cultural stereotypes of obese people and their own personal beliefs about obese people. The order of whether participants responded to cultural stereotypes versus their own personal beliefs was counterbalanced. In each case, the nine stereotypic traits were combined into an overall index of obesity stereotypes (after reverse-coding positive traits). Cronbach's alphas were .78 and .76, respectively, for the cultural stereotypes index and the personal beliefs index.

### Controllability of body weight

Past research has indicated that beliefs about the controllability of body weight are an important determinant of weight bias (e.g., Crandall, 1994; Tiggemann & Anesbury, 2000). Therefore, participants also completed the willpower subscale of the Antifat Attitudes Scale (Crandall, 1994), which assesses the extent to which people believe that body weight and obesity are under personal control (e.g., "Fat people tend to be fat pretty much through their own fault";  $\alpha = .67$ ). Participants responded to each item on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores representing a stronger belief that body weight and obesity are under personal control.

### Demographics

Finally, the participants responded to several demographic questions. They reported their age; height and weight (which were used to calculate their BMI); ethnicity; and year in college.

## Results

### Perceived social status

We conducted a single-sample  $t$  test to determine whether obese individuals were perceived as having lower social status, compared to non-obese individuals. Mean ratings on the social status scale ( $M = 4.59, SD = 1.31$ ) were significantly above the midpoint of the scale (i.e., a score of 4),  $t(80) = 4.07, p < .001, d = 0.45$ , confirming that obese people are perceived as having lower social status, relative to non-obese people.

## Stereotypes

Single-sample *t* tests also confirm that participants were aware of the cultural stereotypes of obese people. The mean rating on the cultural stereotype index ( $M = 1.27$ ,  $SD = 0.69$ ) indicates that participants saw these characteristics as being more in line with the cultural stereotype of obese people than the cultural stereotype of thin people,  $t(80) = 16.62$ ,  $p < .001$ ,  $d = 1.84$ . The pattern of results for individuals' personal beliefs about obese people, relative to thin people, paralleled those for the cultural stereotypes: Participants rated the stereotypical characteristics as more like obese people than thin people ( $M = 0.88$ ,  $SD = 0.61$ ),  $t(80) = 12.91$ ,  $p < .001$ ,  $d = 1.44$ . A paired-sample *t* test further shows that the cultural stereotypes were endorsed more strongly than were participants' personal beliefs,  $t(80) = 5.58$ ,  $p < .001$ ,  $d = 0.62$  (corrected for dependence of means).

## Correlations between status and stereotypes

Perceptions of social status were significantly correlated with the stereotyping of obese individuals. Specifically, the more participants perceived obese individuals as having relatively low social status, the more they attributed to them common stereotypes of obese people ( $r = .36$ ,  $p = .001$ ), and the more they saw those characteristics as forming part of the cultural stereotype of obese people ( $r = .38$ ,  $p = .001$ ).

## Controllability beliefs

The correlation between perceived social status and the willpower subscale of the Antifat Attitude Scale was marginally significant ( $r = .21$ ,  $p = .06$ ). The willpower subscale was not correlated with cultural stereotypes about obese people ( $r = .03$ ,  $p = .81$ ), but was significantly correlated with participants' personal beliefs about obese people ( $r = .22$ ,  $p = .05$ ). Controlling for scores on the willpower subscale did not change the magnitude of the correlations between perceived social status and the stereotype indexes.

## Discussion

The findings of Study 1 provide some preliminary support for the idea that obesity operates as a status cue, and that the stereotypes of obese individuals are related to the perceived status differential between obese and non-obese individuals. First, obese people were rated as having lower social status than were non-obese individuals. Second, as in past research, a number of traits (e.g., *lazy*, *sloppy*) were more strongly associated with obese people than with non-obese people. Importantly, these stereotypes were correlated with judgments of the social status of obese, relative to non-obese individuals. Specifically, attribution of these stereotypical characteristics to obese individuals was related to perceiving obese people as having lower social status.

The fact that stereotyping was less pronounced when assessing individuals' personal beliefs, compared to their perceptions of the cultural stereotypes of obese people, is consistent with other related research (e.g., Conway & Vartanian, 2000) and suggests that people are somewhat reluctant to acknowledge having a biased personal point of view. Despite the lower overall ratings of the stereotypes for participants' personal beliefs, however, the correlation between stereotypes and perceived status was of a similar magnitude for personal beliefs and perceptions of the cultural stereotypes. The present study also found that beliefs about the controllability of body weight were unrelated to cultural stereotypes about obese individuals and were only weakly correlated to people's personal beliefs about the stereotypes of obese individuals. Furthermore, beliefs about the controllability of body weight were only weakly related to perceptions of social status.

## Study 2

Although the findings of Study 1 provide some initial support for a status-based account of the stereotypes of obese individuals, the findings were based solely on self-report ratings and were correlational in nature. Study 2 sought to build on this first study by manipulating the social status and body size of a target individual in order to evaluate the effects of these manipulations on perceptions of the target individuals. Conway et al. (1996) noted that "A status account for gender is supported by research that indicates that gender differences in behavior fade when gender is preempted as a status cue" (p. 34). Similarly, Berger, Rosenholtz, and Zelditch (1980) suggested that certain characteristics (e.g., gender) operate as a diffuse status cue that is considered relevant unless evidence to the contrary is provided. The question of interest in Study 2 is whether the same logic applies to judgments of obese individuals.

A recent study found that when obese customers were dressed in casual attire, store clerks treated them more negatively than they treated non-obese customers who were dressed in similar casual attire; however, when they were dressed in professional attire, obese customers were treated the same as were non-obese customers (King, Shapiro, Hebl, Singletary, & Turner, 2006). Thus, when provided with other relevant information, perceivers may be less likely to use an individual's body size in forming impressions of that individual because body size is deemed less relevant, or perceivers might combine the multiple sources of information (e.g., body size, attire) in forming their impression of the target individual (Berger et al., 1972). In the context of stereotypes of obese individuals, people might use body size as a "diffuse status cue," resulting in judgments of obese people as lazy and sloppy, unless other relevant information is provided. If this is the case, then encountering an obese person who is also

high-status should result in lower ratings of those stereotypical traits (*Hypothesis 1*).

An important domain in which weight bias is evident is employment settings. Overweight and obese individuals are afforded fewer employment opportunities: They are less likely to be hired, they earn lower wages, they are less likely to be promoted, and they are more likely to be terminated than are their non-obese counterparts (Puhl & Brownell, 2001). Many of these lost opportunities can be attributable to the way obese individuals are perceived by others, since a number of the common stereotypes of obese individuals (e.g., lazy, lacking self-discipline) might be seen as hindrances to successful performance in employment settings. Research examining perceptions of overweight individuals in employment contexts has, indeed, found that overweight applicants are seen as less qualified for jobs (Klesges et al., 1990), and that overweight salespersons are rated as less effective, less punctual, less enthusiastic, and less trustworthy than are non-overweight salespersons (Jasper & Klassen, 1990; Zemanek, McIntyre, & Zemanek, 1998; for reviews, see Roehling, 1999; Rudolph, Wells, Weller, & Baltes, 2009).

It is clear that overweight and obese individuals suffer in employment settings, which can have a direct impact on their livelihood. Combined with the fact that occupation is a particularly salient marker of social status, this is an ideal context in which to examine a status account of the stereotypes of obese individuals. In Study 2, social status was manipulated by modifying the target's job description on an "employee profile card," and body size was manipulated via the photograph that accompanied the profile card.

In line with the stereotype content model (Fiske et al., 1999, 2002), Study 2 took into consideration the potentially mixed stereotypes of obese individuals. Specifically, Study 2 included measures of two primary dimensions of person perception (i.e., competency and warmth), which allowed us to examine perceptions of obese individuals within the framework of a general model of stereotyping. Fiske et al. (2002) suggested that low-status groups are seen as more warm than they are competent. Those authors further suggested that, relative to high-status groups, low-status groups are seen as less competent and more warm. We hypothesize that because both occupation and body size can function as status cues, this same pattern of results can be expected for individuals in low-status jobs, relative to high-status jobs; and also for heavy individuals, relative to lean individuals. Specifically, we predict the following:

*Hypothesis 2a.* Heavy targets will be rated as more warm than competent, whereas lean targets will be rated as more competent than warm.

*Hypothesis 2b.* Heavy targets will be rated as both less competent and more warm than will lean targets.

*Hypothesis 3a.* Individuals in low-status occupations (whether lean or heavy) will be rated as more warm than competent, but this differential will be less pronounced (or even reversed) among individuals in high-status occupations.

*Hypothesis 3b.* Individuals in low-status occupations (whether lean or heavy) will be rated as both less competent and more warm than will individuals in high-status occupations.

## Method

### Participants

Study 2 participants were 123 undergraduate students (41 males, 81 females, 1 unspecified) who took part in exchange for partial course credit in their psychology course. The participants' mean age was 19.5 years ( $SD = 1.0$ ; range = 18–22 years), and their mean BMI was 23 (range = 17–35).

### Materials and procedure

Participants took part in Study 2 during regular class time of a second-year psychology course. Each participant was provided with a questionnaire packet that included an "employee profile card" describing a target individual. The participants were simply told to review the information on the profile card and answer the questions about that individual that followed. Participants were instructed to complete the questionnaires in the order that they appeared, without looking back to previous pages.

### Profile cards

The profile card appeared at the top of the first page of the questionnaire packet, and provided some basic information about a male target (name, age, and hometown). Two pieces of information were manipulated on the card. First, the target's occupation was varied to represent a high-status job (surgeon at a local hospital) or a low-status job (janitor at a local hospital). Second, the target's body size was manipulated by including a head-and-shoulders photograph of a lean male or a heavyset male. Both men were smiling, neatly groomed, and dressed in a blue, button-down shirt.

### Rating scale

Directly below the profile card was the target rating questionnaire. Participants rated the target on a variety of characteristics on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). These characteristics included two of the characteristics that are most commonly associated with obese individuals (i.e., *lazy* and *sloppy*; Puhl & Brownell, 2001). In

addition, following the work of Fiske et al. (1999, 2002), the targets were also rated on eight characteristics related to the dimension of competence (*competent, competitive, confident, intelligent, efficient, skillful, capable, and disciplined*;  $\alpha = .89$ ) and six characteristics related to the dimension of warmth (*warm, sincere, trustworthy, likeable, friendly, and good-natured*;  $\alpha = .88$ ).

### Perceptions of social status

Next, the participants indicated their perceptions of the status of the target individual on six items: "This person is high-status," "This person has power to control his own outcomes," "This person has power to influence others," "This person has a prestigious job," "This person holds a position of power," and "This person is responsible for supervising others." Each item was rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The six items were combined into a single index of perceived social status ( $\alpha = .93$ ).

### Recall form and demographics

After completing the target ratings, the participants completed a "recall" form, asking them to recall the contents of the profile card (i.e., the target's age, gender, and hometown). They were also asked to rate the target's body type on 7-point scale ranging from 1 (*very thin*) to 7 (*very fat*). The participants then provided demographic information, including age; height and weight (which were used to calculate their BMI); year in college; and ethnicity.

## Results

### Manipulation check

We conducted a pair of 2 (Body Size: heavy vs. lean)  $\times$  2 (Occupation: janitor vs. surgeon) ANOVAs to confirm that the body-size and status manipulations were successful. For body-size ratings, there was a main effect of target body size,

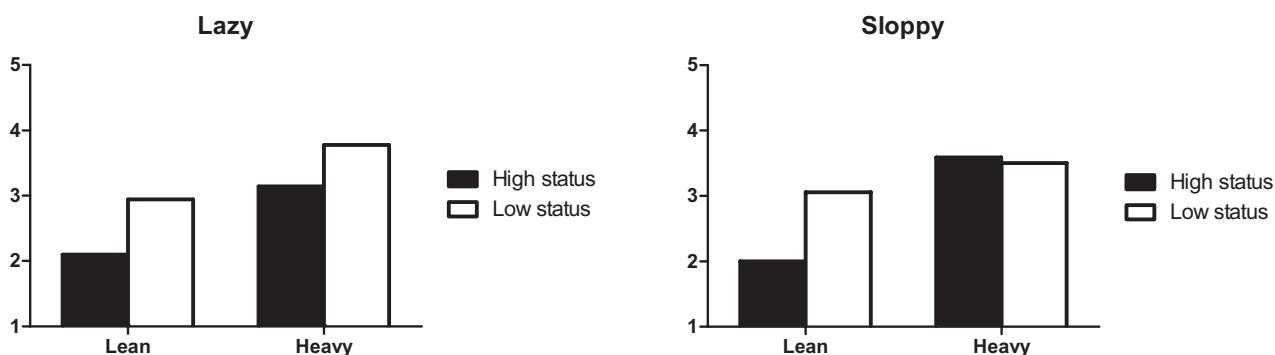
indicating that participants rated the heavy target as significantly heavier ( $M = 5.82, SD = 0.62$ ) than the lean target ( $M = 3.13, SD = 0.88$ ),  $F(1, 119) = 379.31, p < .001, d = 3.53$ . There was no main effect of the occupation manipulation, and there was no Body Size  $\times$  Occupation interaction. For perceptions of status, there was a main effect of occupation, indicating that participants rated the janitor as having lower social status ( $M = 3.09, SD = 1.11$ ) than the surgeon ( $M = 5.70, SD = 0.69$ ),  $F(1, 118) = 243.79, p < .001, d = 2.82$ . There was also a significant main effect of body size, with the heavy target seen as having lower social status ( $M = 4.17, SD = 1.55$ ) than the lean target ( $M = 4.54, SD = 1.65$ ),  $F(1, 118) = 3.87, p = .05, d = 0.23$ . This latter finding provides additional support for obesity as a status cue. There was no interaction between occupation and body size.

### Stereotype analyses

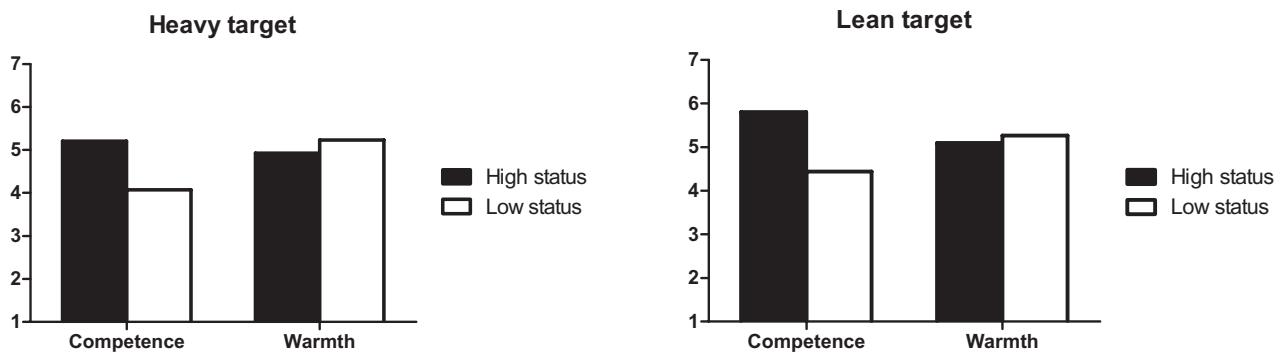
#### Common obesity stereotypes

Two-way ANOVAs with body size (heavy vs. lean) and occupation (janitor vs. surgeon) as between-subjects factors were conducted separately for ratings of how lazy and how sloppy the target was (see Figure 1). For the trait *lazy*, there was a main effect of body size, showing that the heavy target was rated as lazier ( $M = 3.48, SD = 1.29$ ) than was the lean target ( $M = 2.52, SD = 1.30$ ),  $F(1, 119) = 17.54, p < .001, d = 0.74$ . There was also a main effect of occupation, showing that the janitor was rated as lazier ( $M = 3.37, SD = 1.37$ ) than was the surgeon ( $M = 2.60, SD = 1.38$ ),  $F(1, 119) = 10.82, p = .001, d = 0.56$ . There was no interaction between body size and occupation. Of central importance to a status account of obesity stereotypes (Hypothesis 1), planned contrasts show that the heavy target was rated as less lazy when he was described as a surgeon than when he was described as a janitor ( $p < .05, d = 0.51$ ).

For the trait *sloppy*, there was a main effect of body size, showing that the heavy target was rated as sloppier ( $M = 3.54,$



**Figure 1** Mean ratings of perceptions of laziness and sloppiness as a function of body size and social status.



**Figure 2** Mean ratings of perceptions of competence and warmth as a function of body size and social status.

$SD = 1.43$ ) than was the lean target ( $M = 2.53$ ,  $SD = 1.42$ ),  $F(1, 119) = 16.31$ ,  $p < .001$ ,  $d = 0.71$ . There was also a main effect of occupation, showing that the janitor was rated as sloppier ( $M = 3.29$ ,  $SD = 1.54$ ) than was the surgeon ( $M = 2.77$ ,  $SD = 1.44$ ),  $F(1, 119) = 3.82$ ,  $p = .05$ ,  $d = 0.35$ . These main effects were qualified by a Body Size  $\times$  Occupation interaction,  $F(1, 119) = 5.29$ ,  $p = .02$ . Simple effects analyses show that the lean surgeon was rated as less sloppy than was the lean janitor ( $p = .003$ ,  $d = -0.80$ ), but heavy targets did not benefit from having higher status ( $p = .81$ ,  $d = -0.06$ ). Thus, Hypothesis 1 was not supported for ratings of sloppiness.

### Competency and warmth

We conducted a mixed ANOVA with body size (heavy vs. lean) and occupation (janitor vs. surgeon) as the between-subjects factors, and with characteristic type (competency vs. warmth) as the within-subjects factor (Figure 2). There was a main effect of characteristic type, indicating that participants overall rated targets as more warm than competent,  $F(1, 119) = 8.36$ ,  $p = .005$ . There was a main effect of body size, indicating that participants overall rated the lean target as more competent/warm than the heavy target,  $F(1, 119) = 6.52$ ,  $p = .01$ . There was also a main effect of occupation, indicating that participants overall rated the surgeon as more competent/warm than the janitor,  $F(1, 119) = 18.87$ ,  $p < .001$ .

Interactions effects involving characteristic type are of particular importance to our hypotheses. All tests of simple effects used the Bonferroni correction for multiple comparisons. As predicted, there was a significant interaction between body size and characteristic type,  $F(1, 119) = 4.92$ ,  $p = .03$ . Consistent with Hypothesis 2a, simple effects analyses show that the heavy target was rated as more warm than competent ( $M = 5.09$  vs.  $M = 4.61$ ;  $p < .001$ ,  $d = 0.38$ , corrected for dependence of means). There was, however, no difference between ratings of warmth and competence for the lean

target ( $M = 5.18$  vs.  $M = 5.13$ ;  $p = .66$ ,  $d = 0.05$ , corrected for dependence of means). Consistent with Hypothesis 2b, the heavy target was also rated as less competent than the lean target ( $M = 4.61$  vs.  $M = 5.13$ ;  $p < .001$ ,  $d = -0.53$ ). There was no difference between the groups for ratings of warmth ( $M = 5.09$  vs.  $M = 5.18$ ;  $p = .51$ ,  $d = -0.11$ ). As predicted, there was also a significant interaction between occupation and characteristic type,  $F(1, 119) = 73.66$ ,  $p < .001$ . Consistent with Hypothesis 3a, simple effects analyses reveal that the janitor was rated as more warm than competent ( $M = 5.25$  vs.  $M = 4.26$ ;  $p < .001$ ,  $d = 1.24$ , corrected for dependence of means). In contrast, the surgeon was rated as more competent than warm ( $M = 5.51$  vs.  $M = 5.01$ ;  $p < .001$ ,  $d = 0.45$ , corrected for dependence of means). Consistent with Hypothesis 3b, simple effects analyses also reveal that the janitor was rated as less competent than was the surgeon ( $M = 4.26$  vs.  $M = 5.51$ ;  $p < .001$ ,  $d = -1.57$ ). The difference between the janitor and the surgeon for ratings of warmth was not significant ( $M = 5.25$  vs.  $M = 5.01$ ;  $p = .13$ ,  $d = 0.28$ ). Finally, there was no significant three-way interaction,  $F(1, 119) = 0.80$ ,  $p = .78$ .

### Correlations among stereotype ratings

Ratings of laziness ( $r = -.51$ ,  $p < .001$ ) and ratings of sloppiness ( $r = -.42$ ,  $p < .001$ ) were negatively correlated with ratings of competence. In contrast, neither laziness ( $r = -.01$ ,  $p = .92$ ) nor sloppiness ( $r = .08$ ,  $p = .41$ ) was significantly correlated with ratings of warmth.

### Discussion

The results of Study 2 are largely consistent with those of Study 1. First, heavy targets, on average, were rated as having lower social status than were their lean counterparts. Second, high-status obese targets were rated as less lazy (a common obesity stereotype) than were their low-status counterparts (Hypothesis 1). For the trait *sloppy* (another common obesity

stereotype), however, the obese targets did not benefit from having high status. Third, constructs that have been shown in past research to differentiate between high-status and low-status individuals (i.e., *competence* and *warmth*) were also related to target body size. Specifically, heavy targets were rated as more warm than competent (Hypothesis 2a), and were also rated as less competent, relative to lean targets (Hypothesis 2b). Furthermore, for both heavy and lean targets, individuals in low-status occupations were rated as more warm than competent, and individuals in high-status occupations were rated as more competent than warm (Hypothesis 3a). Finally, for both heavy and lean targets, individual in low-status occupations were rated as less competent than were their high-status counterparts (Hypothesis 3b). Overall, the results of Study 2 show that manipulating status does have an impact on people's perceptions of heavy targets (as well as of lean targets).

## General discussion

The present research examined the role of social status in the stereotypes of obese individuals. In both studies, obese people were seen as having lower social status than were non-obese people, indicating that obesity (like gender) can serve as a status cue. Study 1 further showed that perceptions of obese people's social status, relative to non-obese people, were correlated with the attribution of a number of stereotypical traits to obese individuals.

A status account of obesity stereotypes suggests that encountering an obese person of high status should result in lower ratings on some of the traits that are stereotypically associated with obese individuals. This was demonstrated in Study 2 in that the obese surgeon was seen as less lazy and more competent than was the obese janitor. Of note, although obese targets were rated more favorably on some characteristics (e.g., less lazy, more competent) when they were portrayed as having high status, lean targets were also rated more favorably when they were described as having high status than when they were described as having low status. This pattern of findings is consistent with the suggestion that perceivers combine multiple sources of information regarding status (in this case, body size and occupation) when forming impressions of a target individual (Berger et al., 1972). Thus, an individual who is both lean *and* a surgeon (each being a marker of higher status) would be rated more favorably than would an individual who possesses only one of those characteristics (i.e., who is either lean *or* a janitor). These findings are also consistent with those of Hebl and Mannix (2003; Experiment 2), who found that providing positive information about a target individual (e.g., winning a prestigious award) increased positive ratings of that individual, but did not do so differentially for heavy and lean targets. Overall, these findings situate the stereotypes of obese individuals in a

broader social psychological context by showing that social status can be relevant to judgments of obese people, just as social status is relevant to judgments of other social groups (e.g., women and men).

It is important to highlight that, although status can account for the attribution of certain traits to obese individuals (e.g., lazy, competent), other traits do not appear to be related to status. For example, obese targets did not benefit from having higher status in terms of how sloppy they were perceived in Study 2, and ratings of warmth were not affected by the status manipulation. Therefore, social status may not be sufficient to account for the multifaceted nature of the stereotypes of obese individuals.

Other frameworks must be considered in order to fully account for the stereotypes ascribed to obese individuals. For example, system justification theory (Jost & Banaji, 1994) can possibly explain the attribution of certain seemingly positive characteristics to obese individuals. Some earlier research has shown that obese people are perceived as being jolly, friendly, and warm (e.g., Tiggemann & Rothblum, 1988), and we found that (low-status) heavy targets were rated as more warm than competent (consistent with the stereotype content model). These "positive" stereotypes can serve to legitimize the existing social structure by making judgments of obese people (lazy but jolly) and lean people (hard-working but aloof) seem more balanced. In addition, prejudice toward obese people has often been attributed to the belief that body weight is under personal control (Crandall, 1994; Tiggemann & Anesbury, 2000). In the present research, control beliefs showed a small positive correlation with the attribution of stereotypes to obese people. Believing that body weight is controllable, therefore, might be another way in which the stereotypes of obese individuals are legitimized. Examining how system justification and compensatory stereotypes relate to perceptions of obese individuals will be an important direction for future research.

Another possibility is that future research must examine the strong emotional reactions that people have toward obese individuals, including feelings of disgust (Vartanian, 2010). For example, Krendl, Macrae, Kelley, Fugelsang, and Heatherton (2006) found activation in brain regions associated with disgust (e.g., the amygdala) when participants viewed images of stigmatized groups (including obese individuals). They further showed that the magnitude of the activation in these regions was greatest for the most negatively evaluated images. This perspective does not preclude the role of status in obesity stereotypes, but it does suggest that perhaps certain stereotypes that are attributed to obese individuals (e.g., being sloppy, having poor personal hygiene) are directly related to experiencing disgust. These strong negative emotional reactions might explain why perceptions of obese individuals are so resistant to change (e.g., Anesbury & Tiggemann, 2000).

There are some notable limitations to this research. First, the manipulation in Study 2 used a narrow definition of social status (i.e., job prestige) and focused on only one employment sector (i.e., healthcare). Furthermore, in order to obtain jobs that were clearly different in their status and prestige, we ended up with occupations that also differed in a number of other respects, such as the education, training, qualities, or skills required for the job, the level of interaction with others, and so on. Examining a wider array of occupational domains, and varying grades of job status, would provide valuable information about the robustness of the status–stereotype link in perceptions of obese individuals.

Second, Study 2 included only White male targets. Appearance and weight are generally more salient for women than for men (e.g., Tiggemann & Rothblum, 1988), and there is some evidence that women are more likely to be the targets of weight bias than are men (e.g., Faulkner et al., 1999). Other research has also found race differences in weight bias, such that a larger body size appears to be more acceptable for African Americans (e.g., Hebl & Heatherton, 1998). Given that race and gender are also closely connected to judgments of social status, it would be valuable for future research to examine how manipulating status and weight affects judgments of other targets.

Third, the present research focused on body size as a status marker, but physical attractiveness might also be a relevant feature in this context. Research examining physical attractiveness as a status marker has shown that attractive individuals are seen as having higher social status (e.g., Kalic, 1988). Taken with research indicating that attractive individuals are ascribed socially desirable traits and life outcomes (e.g., Eagly, Ashmore, Makhijani, & Longo, 1991), and the fact that obese individuals are seen as less attractive than are non-obese individuals, it is possible that perceptions of status are influenced by attractiveness, as well as by body size. Specifically, the impact of body size on judgments of status might be attenuated for individuals who are highly attractive. Indeed,

judgments of obese job candidates were less negative when their attractiveness was equated with that of lean job candidates (Rothblum, Miller, & Garbutt, 1988). Future research should tease apart these two elements in order to assess their independent contribution to status judgments.

Another important avenue for future research would be to examine the impact that the perceptions of social status have on people's behavioral reactions toward—and interpersonal interactions with—obese individuals. Klein, Snyder, and Gonzalez (2009) found that normal-weight individuals have a greater sense of personal empowerment when they anticipate interacting with an obese individual. Would such feelings of empowerment then lead to different treatment of obese individuals, relative to lean individuals, such as with respect to their position or role in a team or organization? Research in this domain could lead to a better understanding of workplace discrimination, and could lay the foundation for efforts to reduce unfair treatment directed toward obese people.

Overweight and obese individuals experience bias and discrimination in virtually every area of their lives, including employment settings. The present research demonstrated that obesity operates as a status cue such that obese individuals are perceived as having lower social status than are non-obese individuals. Furthermore, perceptions of social status are associated with the attribution of certain stereotypes (e.g., lazy, incompetent) to obese individuals. Attributing to obese individuals characteristics that are incompatible with strong work performance can make it less likely that these individuals will be hired for a job or considered for a promotion, which would not only affect their livelihood, but would also create a self-fulfilling prophecy that perpetuates the perceived status differential between obese and non-obese individuals. Working toward correcting these perceptions and breaking the cycle of negative judgments of obese individuals will be important if we hope to afford people across the weight spectrum the opportunities that they deserve.

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