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Big and Beautiful: Attractiveness and Health Ratings of the Female Body by Male "Fat Admirers"

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Abstract This study examined the body weight and waist-to-hip ratio (WHR) preferences of "fat admirers" (FAs), that is, individuals who are sexually attracted to heavier partners. Fifty-six heterosexual men involved in the FA community rated a series of line drawings that varied in three levels of body weight and six of WHR for physical attractiveness and health. The results showed significant main effects of body weight and WHR, as well as a significant body weight × WHR interaction for both health ratings. In general, there was a preference for heavyweight figures and high WHRs for ratings of attractiveness and normal-weight figures and mid-ranging WHRs for ratings of health. Limitations of the study and explanations for fat admiration are discussed.

Keywords Physical attractiveness · Body weight · Waist-to-hip ratio · Fat admirer

Introduction

It is now almost 15 years since the theory that the female body shape is a reliable predictor of a woman's physical attractiveness was proposed by Singh (1993). This idea hinged on the evolutionary psychological prediction that cues, such as body shape, provide men with subtle but potent information about a woman's reproductive fitness (e.g., Buss, 1999; Buss & Schmitt, 1993). Because such information is not otherwise readily available, men were said to have evolved to find attractive those morphological features of the female body that signal reproductive fitness. Primary among these is a low waist-to-hip ratio (WHR), a measure of body shape.

In the intervening period since Singh (1993) published his seminal work, a great deal of scholarly research has examined preferences for female attractiveness. The resulting debate and controversy has surrounded two related issues. First, scholarly work has examined the *relative importance* of the WHR in comparison with global measures of body weight, such as body mass index (BMI; e.g., Furnham, Swami, & Shah, 2006; Streeter & McBurney, 2003; Tassinary & Hansen, 1998; Tovée, Hancock, Mahmoodi, Singleton, & Cornelissen, 2002; Tovée, Maisey, Emery, & Cornelissen, 1999; Tovée, Reinhardt, Emery, & Cornelissen, 1998; Wilson, Tripp, & Boland, 2005). Here, the empirical evidence supports the idea that BMI is of greater importance, at least when it comes to female physical attractiveness. Nevertheless, this is not to argue that WHR plays no role; rather, most researchers agree that it is the interaction between BMI and WHR, which may eventually provide the best way of understanding female bodily attractiveness (Swami & Furnham, 2006).

Second, there has been considerable debate concerning the *universality* of preferences for a low WHR, with many studies suggesting cross-cultural variability (Marlowe & Wetsman, 2001; Sugiyama, 2004; Swami & Tovée, 2005a, 2007; Tovée, Swami, Furnham, & Mangalparsad, 2006; Wetsman & Marlowe, 1999; Yu & Shepard, 1998). Several explanations have been put forward to account for these cross-cultural differences in preferences for WHR, ranging from context-dependent adjustments to local conditions

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(e.g., Sugiyama, 2004; Tovée et al., 2006) to differences in gender-role stereotyping across cultures (e.g., Swami, Antonakopoulos, Tovée, & Furnham, 2006) to differences in socioeconomic status (Swami & Tovée, 2005a).

More recently, there has been renewed appreciation for the role that situational factors play in determining WHR and body weight preferences. In a recent study, for example, Schmalt (2006) showed that individuals high in power motivation and individuals looking for a short-term relationship showed a stronger preference for low WHRs. Similarly, several studies have shown how situational or "state" experiences of hunger can lead to preference for a significantly heavier potential partner (Nelson & Morrison, 2005; Swami, Poulogianni, & Furnham, 2006; Swami & Tovée, 2006a). These studies have begun the task of determining how situational and motivational factors may influence judgments of attractiveness (Swami & Furnham, 2006).

A different approach to the study of physical attractiveness has examined the preferences of different human "subcultures." This research typically derives from the literature on body image and eating disorders and attempts to define the components of subcultures or communities that may buffer individuals from poor body esteem. Typical of this body of the literature are studies that have examined the attractiveness preferences of lesbians (e.g., Bergeron & Senn, 1998; Swami & Tovée, 2006b) and gay men (e.g., Levesque & Vichesky, 2006), finding that they possess different ideals of bodily attractiveness when compared with heterosexual men and women. Specifically, lesbians appear to idealize a heavier body weight in a potential partner than do heterosexual women or men (Swami & Tovée, 2006b), whereas gay men tend to idealize more muscular ideals (Levesque & Vichesky, 2006).

The present study sought to extend this literature by examining the attractiveness preferences of a group that has received relatively little coverage in the psychological literature, namely "fat admirers." Fat admirers (FAs) are usually heterosexual men who are sexually attracted to heavier partners (Blickenstorfer, 1996; Fabrey, 1972; Wachtel, 1976). While there is no widely-held consensus in defining a fat admirer, the term is typically used in relation to individuals who find attractive someone considered clinically overweight (a BMI higher than 25 kg/m^2) or obese (BMI above 30 kg/m^2)[1]. In recent years, there has arisen a substantial online community of FAs, where a large woman is referred to as a Big Beautiful Woman (BBW) and a large man as a Big Handsome Male (BHM) (Monaghan, 2005; cf. Bunzl, 2005). BBWs and BHMs can range from being slightly overweight to morbidly obese and, likewise, the preferences of FAs can be just as broad. FAs can be fetishists, only being aroused if fat is involved, or just have a preference for large partners (not unlike, for example, the preference for certain hair colors).

The relative scarcity of studies on the preferences of FAs can probably be traced back to the misperception that it is inconceivable that an individual could be attracted to obese others (Blickenstorfer, 1996; Mayer, 1993) or that such a preference is somehow "deviant" (Goode & Preisler, 1983). Yet, a great deal of both anecdotal (e.g., Blickenstorfer, 1996; Gates, 2000; Fabrey, 1972, 1980, 1982) and some empirical evidence (e.g., Tovée et al., 2006) suggests that some men and women do find an overweight or obese partner to be physically attractive. Indeed, there is now wider recognition of social and political aspects of being overweight, typically subsumed in university settings under the heading of "fat studies" (see Ellin, 2006).

In the United States, for example, the National Association for the Advancement of Fat Acceptance (NAAFA) has developed into a strong, supportive community for people who have fought against overweight and obesity discrimination, while providing an avenue for the development of intimate relationships between FAs and overweight individuals (Smith, 1995). Similar communities have developed in the United Kingdom, Europe, Australia, and New Zealand. In Britain, for example, there now exist online dating and matchmaking websites for BBWs (e.g., DatingBBW, LargerDate), as well as webrings (e.g., Fat & Proud) and online support networks (Big People UK, Loving It Large) for BBWs and BHMs. Moreover, it is possible to find images of overweight and obese women and men in specialist erotica (e.g., pornographic magazines like *Voluptuous* and *XL Girls*, both published by the Score Group). A relatively stable subculture has also developed around BBWs in online erotica and other adult materials (cf. Blank, 2000; Kulick, 2005).

To our knowledge, the present study is the first to explicitly examine the attractiveness and health preferences of FAs. Doing so is important for a number of reasons. First, it might be expected that such data will be able to provide new insight into the ongoing debate about the universality of preferences for low WHRs and normal body weight categories. Second, it will be informative to examine whether FAs perceive overweight women to be healthy. A wealth of evidence would suggest that overweight and obese women suffer from various health risks and decreased fertility (Calle, Rodriguez, Walker-Thurmond, & Thun, 2003), which would suggest that finding such women physically attractiveness is detrimental in evolutionary terms.

[1] Bray (1998) defined five BMI categories: emaciated (below 15 kg/m^2), under-weight (15–18.5 kg/m^2), normal (18.5–24.9 kg/m^2), overweight (25.0–29.9 kg/m^2) and obese (over 30 kg/m^2). It should be noted that some fat acceptance authors reject the term "obese," as it is considered to stigmatize fat (e.g., Schroeder, 1992; Wann, 1999). In the present study, we have maintained the term "obese" to specifically represent individuals with a BMI over 30 kg/m^2.

Finally, it is important to document and understand the preferences of FAs as this may offer valuable insights into the formation of attractiveness ideals and ways of combating a fixation with thinness. While the present study does not attempt to document prevalence rates of fat admiration, it nevertheless makes a start at empirically verifying its existence. Because of the exploratory nature of this study, no explicit hypotheses were formulated. Nevertheless, the available evidence led us to predict that that FAs will show counter-cultural preferences for heavy-weight over normal- and under-weight figures, and possibly for high over low WHRs.

Method

Participants

The participants of this study were approached and invited to take part in a study on their attitudes towards body size during several fat acceptance events held in London between December 2005 and June 2006. The events in questions were generally a forum for sociopolitical activism, although they also served as a site for esteem enhancement or a place to meet FAs. Although there were a large number of women at these events, only a very small minority identified as being Female Fat Admirers (FFAs). We, therefore, restricted our sample to male FAs. An additional reason for this restriction was logistical: we lacked comparable male stimulus sets for use with women (see below). The only other criteria for inclusion were that the participants should be heterosexual, of consenting age and identify as being part of the fat acceptance community. The last criterion was defined flexibly, but generally involved the holding or promotion of positive attitudes toward overweight and obese individuals. In practice, almost all participants who were approached identified as being part of the fat acceptance community.

In total, 88 men were invited to take part in the study, of whom 56 agreed and completed the study anonymously during the events. This represents a response rate of 63%. The main reasons for declining were lack of time, concerns about privacy, and concerns about the scientific community. The latter reason was notable: despite recent academic efforts to document the discrimination suffered by overweight individuals (e.g., Puhl & Brownell, 2003), many in the FA subculture still feel that the scientific community tends to portray overweight individuals negatively and malign their grievances. Of the participants who completed the experiment, the vast majority (96%) were of European Caucasian descent, and the remainder were of Afro-Caribbean descent. The mean age of participants was 36.69 years (SD = 9.97, range, 19–59). Participants also provided their height and weight measurements, which were calculated as their BMI (see below). All participants were naïve to the aims of the study and were not reimbursed for their participation.

Measures

The stimuli used were taken from Furnham et al. (2006). These consisted of 18 line drawings of small breast size, depicting six levels of WHR (0.6, 0.7, 0.8, 0.9, 1.0, and 1.1) and three levels of body weight (under-weight, normal-weight and heavy-weight). Variation in breast size was not included as a variable to minimize the number of stimuli to be rated and because earlier studies have shown breast size to a weak predictor of female physical attractiveness (Furnham et al., 2006). Within each weight category, the arms and legs were narrowed or thickened, and all other facial and bodily features were kept constant. The latter were designed to be ethnically ambiguous (see Fig. 1).

Procedure

All participants completed the study individually. The line drawings were presented as greyscale, high-resolution images on a 13.3-inch portable computer screen. The order of image presentation was randomized, and each image was presented for 45 s. Participants were asked to rate the images for two criteria, namely for "physically attractiveness (i.e., how physically attractive you think the woman is)" and "healthiness (i.e., how healthy you think the woman is)." They did so on a Likert scale of 1–7 (1 = low, 7 = high). Participants were also instructed that each image was different from the next and any questions were answered by a male experimenter prior to the experiment. The testing session lasted about 25 min and all participants were debriefed following the procedure.

Results

Participants' BMI

Using self-reported height and weight, we calculated participants' BMIs. Based on Bray's (1998) categorization of BMI, 1.8% of participants were under-weight, 41.1% were of normal-weight, 46.4% were overweight, and 10.7% were obese. We included participants' BMI group as a variable in subsequent analyses. The mean BMI of participants was only just outside the normal BMI range of 20–25 kg/m^2 (M = 26.17, SD = 4.53).

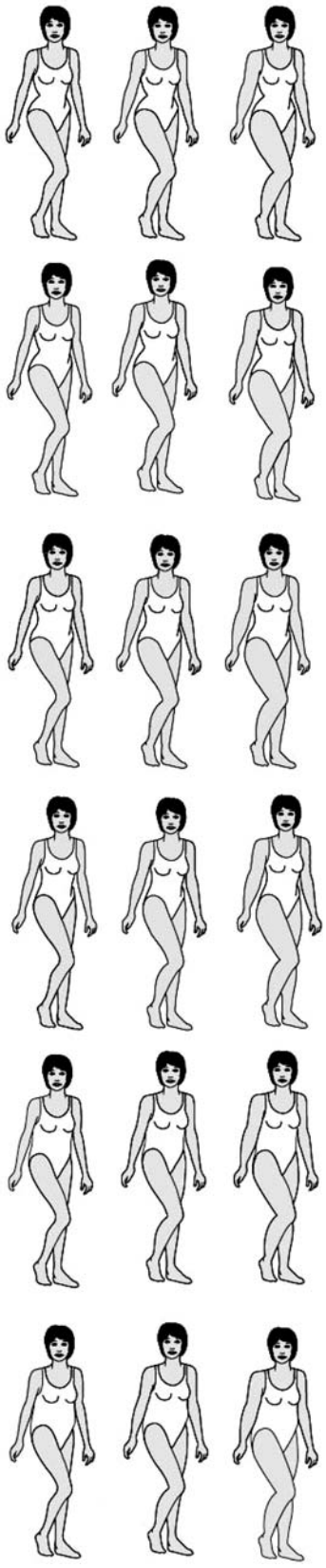

Fig. 1 The stimuli used in this study, which varied in 3 levels of body weight (columns) and six levels of WHR (rows)

Analysis of ratings

For both attractiveness and health ratings, a 3 (Body Weight) × 6 (WHR) × 4 (Participants' BMI group) repeated measures analyses of variance (ANOVAs) was computed. Because Mauchly's Test of Sphericity was significant for both body weight and WHR, the Greenhouse-Geisser correction was applied (Howell, 2001). A summary of the ANOVA results and the main effects of WHR, body weight, and their interactions are shown in Table 1.

The ANOVA revealed that both body weight and WHR had a significant effect on the ratings of figures for both physical attractiveness and health. However, the effects sizes revealed that body weight accounted for slightly more of the variance in the data than WHR. There was also a significant interaction of body weight and WHR for health ratings. Post-hoc tests for this interaction showed that there was a significant difference between all three body weight categories (heavy-weight > normal-weight > under-weight) for all WHRs except 1.1, where heavy- and normal-weight figures were not significantly different. Participants' BMI group did not have a significant effect on any of the ratings.

Considering attractiveness ratings individually, it is clear from Fig. 2 that there was a general trend of more positive ratings with increasing body weight and WHR. Overall, the heavy-weight figure was most preferred. Moreover, it appears that for both under-weight and heavy-weight categories, the 1.1 WHR was most preferred. For the normal-weight category, the 0.9 WHR was most preferred, followed by the 1.1 WHR. The most preferred figure for physical attractiveness was the heavy-weight figure with a WHR of 1.1.

For health ratings, the normal-weight figure was judged to be healthiest, followed by the heavy-weight figures (see Fig. 2). There appears to have been a "peak" at the 0.9 WHR, as this was most preferred across all three weight categories. This was followed by the 0.8 WHR for normal- and heavy-weight categories, and the 1.0 WHR for under-weight figures. The most preferred figure for healthiness was the normal-weight figure with a WHR of 0.9. This suggests that there was a small discrepancy between the attractiveness and health ratings.

Discussion

This was the first study to examine the physical attractiveness and health ratings of FAs. The results showed that, for attractiveness ratings, participants clearly rated the heavy-weight figure higher than the normal- and under-weight figures, with high WHRs being rated higher than low WHRs. In terms of health, normal-weight figures were

Table 1 ANOVA results with main effects of body weight, WHR, and interactions for attractiveness and health ratings

Source	Trait	df	F	Effect size (η_p^2)
Body weight	Physical attractiveness	1.12, 58.12[a]	9.51*	.16
	Health	1.27, 66.09[a]	7.09**	.12
WHR	Physical attractiveness	2.12, 110.32[a]	7.58*	.13
	Health	2.58, 134.22[a]	5.64*	.10
Body weight × WHR	Physical attractiveness	3.69, 191.98[a]	1.90	.04
	Health	5.38, 279.73[a]	2.05**	.11
Body weight × Participants' BMI	Physical attractiveness	3.35, 58.12[a]	1.50	.08
	Health	3.81, 66.09[a]	1.75	.09
WHR × Participants' BMI	Physical attractiveness	6.25, 110.32[a]	1.48	.08
	Health	7.74, 134.22[a]	1.68	.09
Body weight × WHR × Participant's BMI	Physical attractiveness	11.08, 191.98[a]	1.34	.07
	Health	16.14, 279.73[a]	1.77	.08

[a] Greenhouse-Geisser corrected, *$p < .001$, **$p < .05$

rated higher than heavy-weight figures, which in turn were preferred rated higher than under-weight figures. In addition, when rating figures for health, participants generally gave the highest ratings to the mid-to-high WHRs. These findings are in marked contrast to the findings of previous studies among "mainstream" groups in Euro-American societies (e.g., Furnham et al., 2006; Henss, 2000; Singh, 1993) and require explanation.

Before doing so, however, it is worth considering some of the limitations of this study. First, the present study only examined the preferences of male FAs, primarily because of the lack of suitable male stimuli and the small number of FFAs. Although a female preference for BHMs is also prevalent in the FA community, the admiration of BHMs does not appear to be as widespread as the admiration of BBWs. The FA subculture may consist of very few FFAs compared to male FAs, which raises interesting questions about whether fat admiration is sexually dimorphic and possibly paraphilic (see below). The available literature suggests that paraphilic behavior in women is comparatively rare (e.g., Steele, 1995), and to the extent that FA is a paraphilia, it may explain why FFAs are scarce in comparison with FAs. However, this is not something the present study specifically set out to investigate, and future studies should, therefore, also examine FFAs' preferences for BHMs, using suitable stimulus sets (e.g., Swami & Tovée, 2005b). Still, this study begins the task of more fully documenting the preferences of FAs, which we hope other studies will continue, possibly with larger sample sizes.

A second important limitation was the nature of the stimuli used. Although the use of line drawings has been criticized (e.g., Swami & Furnham, 2006; Swami & Tovée, 2005a; Tovée et al., 1998, 1999, 2002; Wilson et al., 2005), they were utilized in the present study because of their relative ease of use and the short period of time required to complete the study. Nevertheless, the line drawings were clearly deficient in depicting a range of body weights, and could quite legitimately be said to only depict body weights within a relatively narrow range. Indeed, many of the participants felt that their preferred female body weight fell outside the range of figures depicted (that is, they preferred even heavier figures than those depicted). Using stimuli that present a wider range of body weights, such as those used in studies by Swami and Tovée (2005a) and Tovée et al. (1998, 1999, 2002, 2006), would help to highlight the preferences of FAs in greater detail and specificity. For example, the use of progressively heavier figures would allow researchers to identify the upper limits of FA preferences (if there are upper limits).

These limitations notwithstanding, the present findings have important implications for the literature. First, our results suggest that FAs hold very different attractiveness ideals when compared with heterosexual men from the general population. That is, FAs appear to idealize women who might be considered clinically overweight or obese, which is markedly different to the idealization of thin (and possibly under-weight) women in mainstream society. These results also appear to mirror cross-cultural differences in preferences for body weight and shape (e.g., Furnham & Alibhai, 1983; Furnham & Baguma, 1994; Marlowe & Wetsman, 2001; Swami & Tovée, 2005a; Tovée et al., 2006; Wetsman & Marlowe, 1999; Yu & Shepard, 1998), where heavier women are generally preferred over normal- and under-weight women. In this light, the notion of universal criteria of physical attractiveness would appear suspect.

Second, it is interesting to note the disparity between the attractiveness and health ratings of FAs. In contrast to most

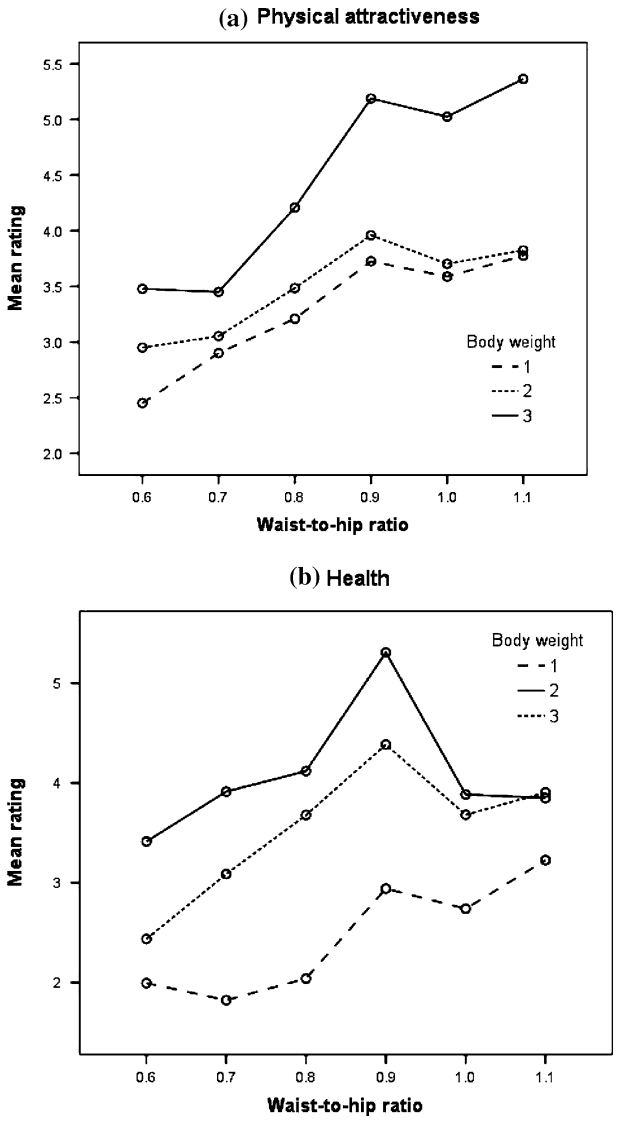

Fig. 2 Graphs of the body weight and WHR interactions (1 = Underweight, 2 = Normal-weight, 3 = Heavy-weight)

previous studies (e.g., Furnham et al., 2006; Furnham, Petrides, & Constantinides, 2005), which have found almost identical ratings for health and attractiveness, FAs appear to judge both attributes differentially. That is, while they prefer a heavy-weight figure in terms of attractiveness, they nevertheless judged a normal-weight figure to be healthy. Clearly, then, this is one community that may not conform to the notion that attractiveness is a useful cue for underlying health. It is possible that FAs are well-informed about the health and obesity link, and are thus making informed judgments about what they physically attractive, independent of health. More broadly, these results suggest that health and physical attractiveness ratings are not always correlated, but may be separate dimensions of sexual partner preference that can be dissociated from each other.

Explaining the preferences of FAs may not, however, be so easy. One possibility is that a large proportion of the FAs in this study were overweight and were, therefore, rating as attractive those figures that were most like themselves. Indeed, there is evidence suggesting that individuals are attracted to others who most resemble themselves in terms of overall attractiveness (Berscheid, Dion, Walster, & Walster, 1973), height (Susanne & Lepage, 1988), facial attractiveness (Penton-Voak, Perrett, & Pierce, 1999), and possibly body weight (Tovée, Emery, & Cohen-Tovée, 2000). However, in the present study, participants' BMI category did not appear to have an effect on their ratings of physical attractiveness and health. For instance, normal-weight participants, like their overweight counterparts, were rating overweight figures as the most attractive. Participants' own BMI as an explanation of male FAs' preferences for overweight and obese women, therefore, appears to be an inadequate solution.

An alternative is that FAs, perhaps like some lesbians (Brown, 1987), reject what they see as a societal fixation with thinness. As argued by Mayer (1993), fat admiration may stem from an idealization of individuals who challenge accepted norms about sexual identity and physical appearance. The mere act of being overweight, therefore, translates into a transgression of such norms and may be viewed as particularly liberating. In this sense, FAs may more fully "rationalize" their attractiveness preferences, and purposefully choose ideals that are atypical. In terms of the present results, however, these suggestions remain conjecture, especially as we have no evidence that FAs are more non-conforming than the general population. Nevertheless, this suggestion does highlight possible avenues for future research.

Finally, it seems plausible that male FA is paraphilic in the sense of it being a non-mainstream sexual practice without necessarily implying dysfunction or deviance. For instance, it may be that hunger or food was involved in the behavioral imprinting of a fat fetish in early childhood, a hypothesis favored by some psychoanalysts and demonstrated experimentally in non-human species (cf. Massie & Szajnberg, 1997; Plaud & Martini, 1999). A related theory also based on the principles of behavioral imprinting argues that when young men masturbate, the objects that are frequently nearby at the time of masturbation become objects of arousal in the future (Lowenstein, 2002). The individual is thus associating the object with sexual orgasm, and this may include either eroticized images of overweight individuals, food, and so on.

In preliminary discussions of "fat heterosexuality," Saguy (2002) has described FA in similar terms: she argues that the attraction FAs have for BBWs is a form of fetishism that ultimately reinforces gender inequality. In this view, male fat admiration may not be much different

from "thin heterosexuality," in that both objectify women and, in doing so, reinforce the vulnerability of overweight women. Related eroticized behaviors, such as that between "feeders" and "feedees," may underscore this aspect of vulnerability. A feeder, as the name suggests, is an individual in a relationship with a feedee, who is provided with an abundant supply of food either to encourage weight gain or to take pleasure from the act of eating. Saguy (2002) suggests that feeders (who tend to be men) may have the upper hand in such relationships, as feedees become dependent on them for more than just nutritional intake.

In this view, then, fat admiration is located within dynamic complex of gendered forces, where the vulnerability of overweight and obese women becomes sexually arousing for some men. However, such dynamics may only be part of the story. For one thing, "squashing"-another common male FA fantasy, in which one or several large women sit on a FA-may give women a sense of power over the men they squash. In turn, the squashed men may take pleasure in the feeling of being overpowered.

Clearly, more careful and detailed studies are required to examine these hypotheses. This study has made a start in documenting the attractiveness and health preferences of FAs. These findings may have important consequences for our understanding of eating and body weight disorders, as it would appear that FAs do not conform to "mainstream" societal ideals of what constitutes an attractive body. Extending the present research can only help elucidate the manner in which such preferences are formed and what effect that might have on the self-esteem of overweight individuals and their admirers.

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