

Media Context, Female Body Size and Perceived Realism

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Published online: 29 June 2008
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Abstract Women with larger body types are underrepresented and presented negatively on television. Two experiments explored the possibility that program context, specifically the roles women play on television, may influence judgments about the realism of various women's body types. Both experiments, one with 92 undergraduate students at a large university in the northeastern United States, and one with 69 mall patrons in the same area, found that while the body type of an actress had little effect in a domestic setting, larger women were perceived as less realistic and less likely to get a television role in a professional setting. The results have implications for how audiences judge body types and for how audiences make realism judgments.

Keywords Media context · Female body size · Perceived realism · Gender roles

Introduction

The study presented here explores the possibility that people perceive a connection between body size and professionalism in women such that larger women are less acceptable in professional contexts. It also explores the possibility that this relationship is mediated by individual differences such that people with less egalitarian attitudes towards women and/or people who are more invested in physical appearance may be less likely to accept women of larger body sizes in professional contexts. In Experiment 1, college undergraduates saw images of small, medium and large sized actresses supposedly auditioning for roles in either a professional or a domestic context. Participants were asked to evaluate the women's attractiveness, realism in that role, and likelihood to get a role in that context. In Experiment 2, the study was replicated using mall patrons as participants. Experiment 2 also attempted to detect what attributes of the differently sized women were driving the judgments of realism and appropriateness for the roles. In general, the study examined whether differences in television program contexts make a difference in evaluations of realism and attractiveness of different female body sizes.

Television is, in general, a world in which how women look is critical. About twice as many comments are made by TV characters about how a woman looks than about how a man looks (Lauzen and Dozier 2002). For at least the last 20 years, content analyses have shown that television entertainment underrepresents overweight women and overrepresents thin women (Kaufman 1980; Silverstein et al.

The research reported in Experiment 1 was conducted as part of a communication class in 2004. The following students participated in the project: Rachel Brenner, Rosalinda Camacho, Katie Distler, Marissa Ericsson, Yasmin Fodil, Anthony García, Kyle Georgalas, Jessica Golden, Stephanie Kwai, Kuan-Hui Leu, Makena Mason, Sarai Mejia, Natalie Morin, Liz Pandich, Steve Reuter, Ryan Schmidt, Samantha Sichel, Sam Sinkavich, Jessica Tong, Daniel Weiner, Jessica Weir.

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1986), with almost two thirds of the women portrayed on television weighing 15% less than the average American woman (Spitzer et al. 1999). Women in prime time advertising are more likely than men to be physically attractive, thin, and partially clothed (Lin 1998). Larger women are often depicted negatively—as less attractive and less likely to have romantic relationships (Fouts and Burggraf 1999, 2000; Greenberg et al. 2003). There is evidence that these depictions influence beliefs about the appropriate role of women, standards of attractiveness, lower self-esteem, and encourage eating disorders (Harrison and Fredrickson 2003; Stice et al. 1994). The growing perceived discrepancy between self-image and ideal media image predicts weight concern among women (Posavac and Posavac 2002). Exposure to thin women predicts preference for smaller waists and hips (Harrison 2003), eating disorder symptoms (Harrison 1997; Stice et al. 1994), approval of surgery as a means to achieve body perfection (Harrison 2003), and a tendency to eat less when in front of peers (Harrison et al. 2006).

One aspect that has not been explored is whether any of these depictions of women are perceived as realistic by audiences. Perceptions of realism are important because they may modify some of the effects of these depictions. At least in some cases messages perceived to be realistic have greater effects. For example, realistic negative portrayals of alcohol drinking result in more negative attitudes towards alcohol abuse than less realistic messages (Bahk 2001), and there is evidence that perceived realism completely mediates the relationship between exposure to Internet pornography and recreational attitudes toward sex (Peter and Valkenburg 2006a). The perceived realism judgments of interest here are similar to Potter's semantic component of magic window reality (Potter 1988). Perceived realism is defined as the degree of perceived similarity between mediated characters and situations, and real life characters and situations (for a more complete discussion see Shapiro and Chock 2003). Different setting contexts have been shown to influence perceptions of the realism of a media presentation (Shapiro and Chock 2004). It is possible that body types that are seen as realistic in one media context are not seen as realistic in another media context. One of the issues this study examines is that a very thin woman in a domestic context might seem less realistic than that same woman in a professional context.

A person's judgments about realism may simultaneously compare media portrayals to real life and may evaluate the portrayals according to his or her expectations of media. For example, people may think that any body type is realistic in any context, but they may know that certain TV genres are less likely to portray women with some body types. To detect this distinction, this study evaluates both people's perceptions of the realism of the character and,

separately, people's perceptions of the likelihood that women with certain body types will be chosen to be on TV by the decision makers. Likewise, to evaluate whether perceptions of attractiveness vary across contexts, we introduce a measure for people's evaluation of attractiveness of the models. The goal of this study is to look at the effect of context on both the perceived realism of women's body types, and the perceived likelihood of certain body types being selected for TV roles.

Women's Social Roles on TV

Some scholars have claimed that TV lags behind in acknowledging women's changing social roles (D. M. Davis 1990), but there is evidence of a shift in the roles women play on television. The proportion of women shown working outside the home in prime time drama remained fairly constant averaging about 55 to 60% in the 1970s through the 1990s (Signorielli and Bacue 1999). However, the number of women employed as professionals in drama increased from about 21% in the 1970s to almost 30% in the 1990s. This trend does indicate a shift from women portrayed in traditional female occupations to more non-traditional "masculine" jobs, or, at least, it suggests a broader scope of occupations for women (Ferrante et al. 1988). A comparison of female representations in TV commercials from the 1950s and the 1980s shows that women in the 1980s are less likely to be shown as parents, and much more likely to be shown in diverse occupations, but that the total proportion of working women on TV decreases through time: women are portrayed mainly as "floating consumers" without reference to activity, parental or professional (Allan and Coltrane 1996). Female characters have traditionally been portrayed as less influential to plot and conflict resolution than male characters (Skill and Wallace 1990), but there is now evidence that the presence of one female producer or writer in the show can reverse this trend in prime time dramas and sitcoms, resulting in portrayals with more egalitarian use of dialogue and behavior (Lauzen and Dozier 2004). However, this increase of egalitarian portrayals may depend on genre: reality shows with female producers still present female characters who are less involved in conflict resolution (Lauzen et al. 2006). The experiments presented here keep genre constant by focusing only on scripted shows.

While professional roles on television have tended to become more flexible, women are still expected to be attractive. Women are more likely than men to be shown as attractive or alluring in TV commercials, and this is the main vehicle of their endorsement appeal (Downs and Harrison 1985; Lin 1997). Hargreaves and Tiggemann (2003), found that young adolescent males with moderate concern about body image are the most influenced by

images of “unrealistically” slender women, rating slimness and attractiveness as important traits to evaluate women. This effect on males could act as a route through which women learn that slimness is an important element of the female identity. Jagger (2001), in a study of 100 relationship ads, found that women are more likely to offer physical attractiveness and appealing body shape whereas men offer economical stability. Likewise, in personal ad requests, women ask for economically stable and professional men, whereas men request physically attractive women (S. Davis 1990). A similar study of personal ads by Pfof and Fiore (1990) found that women described as seeking “masculine” occupations were deemed to be less preferable heterosexual partners. These studies suggest that there is a perceived incompatibility between non-traditional gender roles and desirability as romantic partners and that it may be difficult for women to balance motivations to be professionally successful and to be sexually attractive.

The cultural shift in sex roles has been proposed as a mediating variable (among others) of the increase in extreme eating disorders among women striving to be thin (Striegel-Moore et al. 1986). Women entering a world of traditionally masculine occupations may feel a pressure to compensate the sexual attractiveness they “lose” by going to extremes in order to achieve the current standards of beauty, in this case, thinness. Indeed, thinness in general has been associated with life happiness and professional success in white women (Evans 2003; Hebl and Heatherton 1998).

Some interesting evidence pointing in this direction comes from a study of 1901–1993 Vogue models, showing that curvaceousness of female standards of beauty decreases as economic prosperity, female participation in the economy and female higher education increase; and as the proportion of young unmarried women decreases (Barber 1998). Singh (1993) finds that women with more curvaceous body sizes are perceived as more incompetent. Barber (1999) suggests that thinness may be a cue to lower reproductive potential and higher socio-economic status, indicating that fat reserves are not necessary since resources are being produced independently and efficiently. In general, it would seem that body types act as a cue to separate domestic (reproductive) and professional characteristics. Our society appears to evaluate women using mutually exclusive stereotypes of physical attractiveness and professional competence (Barber 1998). As women have occupied public and non-traditional roles, the standard of beauty for them has become one of less weight and less curvaceousness. It is possible that our judgments of the realism of media images of women are biased not only by the over-representation of thin women, but by the gender role context in which they are presented. If so, larger women will seem more realistic and seem more acceptable in traditional roles whereas thin women will seem more realistic in professional roles.

Realism and Effects of Media

Perceived realism of media has been recognized as an interesting characteristic of media for some time (Bandura et al. 1963; Greenberg and Reeves 1976; Hawkins 1977; Noble 1973; Reeves 1978). Perceived realism of a media presentation may influence mental processing, attitudes, beliefs, and behavior (Potter 1988); learning and parasocial interaction (Rubin 1979; Rubin et al. 1985), responses to advertising and public service announcements (Andsager et al. 2001), and perhaps act as a filter that enhances critical viewing (Austin and Meili 1994; Austin et al. 1990; Huesmann et al. 1983). At least in some cases messages perceived to be realistic have greater effect. Several studies find that presentations labeled as real encourage aggressiveness more than fictional presentations (Atkin 1983; Bandura et al. 1963; Berkowitz and Alioto 1973; Feshbach 1972; Geen 1975; Geen and Rakosky 1973; Noble 1973; Sawin 1981; Thomas and Tell 1974), and perceived realism of sexually explicit material online predicts positive attitudes towards recreational sex (Peter and Valkenburg 2006b). Realistic negative portrayals of alcohol drinking result in more negative attitudes towards alcohol abuse than less realistic messages (Bahk 2001). But the influence of perceived realism appears to be complex. For example, one study found that a different standard may be at work in using judgments about realism to interpret alcohol ads than to interpret anti-alcohol public service announcements (Andsager et al. 2001).

Context and Perceived Realism

Recent studies found that the more typical the people and events described or portrayed in media stories, the more realistic those people and events were judged to be (Shapiro and Chock 2003). It seems unlikely that this is always true. People tend to be more influenced by media when they have few other sources of information available to them (Ball-Rokeach 1998; Ball-Rokeach and DeFleur 1976). When we process stories about unfamiliar settings we have fewer sources of information than when we process stories about familiar settings (Perry 1987; Prentice et al. 1997; Slater 1990). For example, typicality has more influence on the realism of a news story if it is set in a familiar context, such as the US, than if it is set in an unfamiliar context, such as Brazil (Shapiro and Chock 2004). Another study found that contextual information that informs causal attributions about an event changes judgments about the realism of the story (Shapiro et al. 2004). Tell me something I didn't know about why you did that: Attribution and perceived reality. Unpublished manuscript). Different activity contexts (achievement or interpersonal) also produce different judg-

ments as to what emotional responses are characteristic for men and women (Kelly and Hutson-Comeaux 1999)

Egalitarian Values and Investment in Physical Appearance

People vary in their attitudes towards women's insertion in the workplace (Spence et al. 1973). Beliefs in equality for women may play a role in evaluations of women's body sizes in different contexts. There is evidence that, in general, endorsement of the thin body ideal is related to hostility towards women as well as to low levels of egalitarian attitudes towards women, in the form of “benevolent” sexism (Forbes et al. 2007). It is not clear whether these judgments will translate into evaluations of women in media contexts.

Likewise, the belief in the overall investment in physical appearance may influence evaluations. People vary in the importance they attribute to physical appearance (Cash and Labarge 1996). Participants who believe looks are important and lead to or represent success might be more likely to use physical appearance as a cue for appropriateness in success oriented contexts. Alternatively, their focus on physical appearance may lead them to disregard professional or domestic context, and evaluate based exclusively on physical characteristics. It seems important to measure people's levels of egalitarian values towards women and their investment in appearance. Even if predictions for different contexts are hard to make we can ask the question of how attitudes towards women and investment in appearance affect evaluations of differently sized women in different media roles.

Hypotheses

Overall, the literature indicates that thin ideals of beauty are associated with changes in women's traditional social roles. It is possible then that TV viewers hold an expectation of thinness as associated with particular social roles. While larger women are expected or accepted in traditional social roles (domestic settings), thinness may help to maintain attractiveness and realism in less traditional roles (professional settings). Judgments of realism may parallel viewer's evaluations about who is likely to get a TV role, particularly if viewers think that judgments of producers are based on realism. This is the bases for our first four hypotheses.

- H1 Thin models will be perceived as more realistic in a professional setting than in a domestic setting.
- H2 Large models will be perceived as more real in a domestic setting than in a professional setting.
- H3 Thin models will be perceived as more likely to get a role in a professional setting than in a domestic setting.

- H4 Large models will be perceived as more likely to get a role in a domestic setting than in a professional setting.

While the expectation of thinness may be context dependent, thinness as a social norm of attractiveness in women may generalize across contexts. Thus,

- H5 As models are thinner they will be perceived as more attractive.

In addition, we explore two research questions:

- RQ1 What is the relationship between belief in equality for women and evaluations of differently sized women in different media roles?
- RQ2 What is the relationship between believing in the importance of physical appearance and evaluations of differently sized women in different media roles?

Experiment 1

Method

Participants

Participants in the first experiment were 92 college undergraduates (29 male, 63 female) recruited from two introductory communication classes at a large Northeastern University, during the Fall of 2004. The students received extra credit in the class. The majority (80%) of the participants identified themselves as ethnic Caucasian; 10% identified themselves as Asian/Pacific Islander, 4% as Hispanic/Latino, 3% as African American and 3% as “other ethnicity”. The average age of the participants was 19.7 years ($SD=3.48$), with ages ranging from 18 to 31.

Materials

The materials used were two separate paper and pencil packets, administered to the participants one after the other during the same session. The first page of packet 1 told the participants that they would be seeing images of women that had auditioned for a TV show. Participants were randomly assigned to be told either that the women were auditioning for a role as a married homemaker with children, or for a role as a competitive and powerful lawyer. The homemakers were depicted in a kitchen setting. The lawyers were depicted in a conference room. Participants were instructed to look at each image and then answer some questions about it. Each packet presented black and white images of six women (two small, two medium and two large), each image taking up a complete page. The women were pictured in either a kitchen or an

office, consistent with the cover story. A questionnaire of seven items measuring the dependent variables (perceived realism, attractiveness, and likelihood that the woman would get the role) followed each image.

The images were produced using digital manipulation of six “original” images of moderately attractive Caucasian women. The women appeared to be in their late twenties to early thirties. The images of these women were manipulated to make the women appear thinner or fatter, resulting in three different body sizes that we called “small”, “medium” and “large”. Average measurements of hips, waist and chest for each of the models in each of the sizes show that the size ratio of small to medium to large was approximately 0.8: 1.0: 1.1. This means that smaller women’s hips, waist and chests were, on average, 20% smaller than those of medium women; and larger women’s hips, waist and chest were, on average, 10% larger than those of medium women (medium sized women were the original images in all six cases). The ratio of hips to waist to chest was very similar for all body sizes (small=1.25: 1: 1.03; medium=1.21: 1: 0.99; large=1.16: 1: 0.9), such that the manipulation was only of body size, not of curvaceousness. The images were then set against two contexts: a kitchen or a conference room. This produced a total set of 36 images (six women \times three sizes \times two contexts). Each participant saw all six women: two of them in their small size, two in their medium size, and two in their large size. To control for order of presentation effects, packets were assembled by creating six different orders of presentation, formed by four adjacent 3×3 Greco-Latin squares combining women (six total, combined in blocks of two) and body size (small, medium, large). Thus each participant saw all six women, and each participant saw two examples of each body type. Across participants all six depicted women appeared in all three body types.

Packet 2, administered after the participants had seen and rated the images, was a questionnaire designed to measure participants’ attitudes towards women (AWS) and investment in appearance (ASI), as well as some final questions to collect demographic information on sex, age and ethnicity. Filler items to distract participants from the focus of the study were obtained from the Scale of Ethnocultural Empathy (Wang et al. 2003).

Procedure

Participants were randomly assigned to the between-subjects condition (traditional context vs. non-traditional context). They were also randomly assigned to the order of presentation of the images they were to evaluate. After signing consent forms to participate, they received the first packet. Participants read the cover story, and then saw the first image, rated it in terms of perceived realism, attractiveness and likelihood to get the role, and then

proceeded to the next image. After they did this for the six images, participants turned in the first packet and received the second questionnaire with the AWS, ASI, and demographic information questions. Finally, participants read a brief statement explaining the real purpose of the study and asking them not to share this information with other potential participants, were thanked for their participation, and were free to leave.

Covariates

Twenty-three items regarding attitudes towards women were taken from the short version (25 items) of the AWS scale (Spence et al. 1973). Two items (“It is ridiculous for a woman to run a locomotive and for a man to darn socks” and “There should be a strict merit system in job appointment and promotion without regard to sex”) were considered anachronistic and left out. The AWS scale measures attitudes towards women in terms of traditional vs. egalitarian attitudes; higher values on the scale indicate a more egalitarian attitude towards women. The AWS scale items were reversed when necessary and a reliability procedure was run. Three items fell below a .2 corrected item to total scale correlation and were dropped from the scale. The items dropped were: “the modern woman is entitled to the same freedom from regulation and control that is given to the modern man,” “women should be encouraged not to become sexually intimate with anyone before marriage, even with their fiancés,” and “swearing and obscenity are equally more repulsive in the speech of a woman than a man.” The reliability (Cronbach’s α) of the remaining 20-item scale was .88.

The 14-item Appearance Schema Inventory (Cash and Labarge 1996) was used to measure how much importance participants gave to physical appearance. Some filler questions on empathy towards ethnic minorities were introduced to distract participants from the main objective of the questionnaire. Reliability procedures showed that one item (“attractive people have it all”) fell below a .2 corrected item to total scale correlation, so it was dropped from the scale. The reliability of the remaining 12-item scale was .79.

Dependent Measures

All questions were answered on a six-interval scale anchored by “strongly disagree” and “strongly agree” with all intervals in between labeled. Two questions assessed the likelihood of getting the role: “It is likely that this person will get the role in the show,” and “the producers of the show will like this woman for this role.” These two items were combined to form a “likelihood to get the role” scale ($r=.85$). Three items were used to assess perceived realism: “to the average person, this woman would seem real in this role,” “if this

character existed in real life, she would look like this,” and “I think this person would seem real in this role.” These items have been successfully used to assess perceived realism (Shapiro and Chock 2003, 2004). The three items were combined to form a realism scale (Cronbach’s $\alpha=.91$). One item assessed attractiveness: “This woman is attractive.” The single item measurement for attractiveness may be considered to decrease reliability, but it is a straightforward measure, and we preferred to keep the questionnaire short and allow for multiple images to be evaluated.

Results

For each dependent variable a 3 (size of model: small, medium, large) \times 2 (setting: domestic, professional) \times 2 (sex: male, female) mixed analysis of variance was run using the repeated measures procedure of the Statistical Package for Social Sciences (SPSS) General Linear Model. Size of model was a within subjects factor. The others were between-subjects factors.

Realism

Hypothesis 1 stated that thin women would be the most real for the professional setting. Hypothesis 2 stated that large women would be the most real for the domestic setting. As predicted by these hypotheses, for the dependent variable measuring realism, there was the predicted significant size by setting interaction $F(2,176)=4.2$; $p<.05$, partial $\eta^2=.05$ and an unpredicted size by sex interaction $F(2,176)=3.14$; $p<.05$, partial $\eta^2=.03$. No other main effects or interactions were significant. To examine and interpret the predicted interaction between size and setting, planned paired-sample t tests for each setting were run testing the mean difference between each size. These planned comparisons allowed us to test whether the overall significant interaction followed the directions predicted in the hypotheses. For the kitchen setting, there were no significant differences between the sizes. For the professional setting, large women were rated as significantly less realistic than the medium women $t=2.6$, $p<.05$, $df=45$ (See Table 1). Because the simple main effects

tests were planned comparisons intended to explore the meaning of a statistically significant interaction, they were not corrected for study-wise error. Hypothesis 1 was supported. Hypothesis 2 was not. A post-hoc pairwise exploration of the unpredicted size by sex interaction, using a Bonferroni correction for multiple comparisons, showed no significant difference between the three sizes among women participants. Men, however, thought that small models were significantly less realistic than the medium models, $p<.05$ (See Table 2).

Getting the Role

Hypothesis 3 stated that thin women would be judged the most likely to get the role in the professional setting whereas Hypothesis 4 stated that large women would be the most likely to get the role in the domestic setting. For the dependent variable measuring the likelihood of getting the role, there was indeed a significant size by setting interaction $F(2,176)=3.08$; $p<.05$, partial $\eta^2=.03$, and also a size by sex interaction $F(2,176)=5.06$; $p<.01$, partial $\eta^2=.05$. No other main effects or interactions were significant. To examine the interaction between size and setting, planned paired-sample t tests for each setting were run testing the mean difference between each size. For the kitchen setting, there were no significant differences between the sizes. For the professional setting, large women were rated significantly less likely to get the role than the medium women $t=2.5$, $p<.05$, $df=45$ or small women $t=2.3$, $p<.05$, $df=45$ (See Table 1). Hypothesis 3 was supported. Hypothesis 4 was not. Again, when the size by setting interaction was tested using multiple pairwise comparisons with Bonferroni corrections, the significant results were maintained: large sized women were evaluated significantly more likely to get the role than medium and small sized women ($p<0.05$). For the size by sex interaction, post-hoc pairwise comparisons (Bonferroni corrected) showed that there was little difference between the three sizes for women participants. Men, however, thought the small models were less likely to get the role than the medium models $p<.05$ (See Table 2).

Table 1 Mean values likelihood of getting the role and perceived realism by setting.

Experiment 1	Kitchen			Professional		
	Small	Medium	Large	Small	Medium	Large
Likely to get the role	2.8	3.1	3.0	3.1 ^a	3.2 ^b	2.8 ^{ab}
Realism	2.7	3.0	3.0	3.0	3.1 ^b	2.7 ^b

Judgments were made on 6-point scales. The higher the score the greater the rated likelihood of getting the role, and the greater the rated realism. Items that have the same superscript letter are significantly different at $p<.05$.

Table 2 Mean values likelihood of getting the role and perceived realism by participant gender.

Experiment 1	Female			Male		
	Small	Medium	Large	Small	Medium	Large
Likely to get the role	3.2 ^c	3.0	2.9 ^c	2.8 ^c	3.3 ^c	2.9
Realism	3.0	2.9	2.9	2.6 ^d	3.1 ^d	2.8

Judgments were made on 6-point scales. The higher the score the greater the rated likelihood of getting the role and the greater the rated realism. Items that have the same superscript letter are significantly different $p < .05$.

Attractiveness

Hypothesis 5 stated that thin women would be rated as the most attractive in both contexts. For the dependent variable measuring attractiveness the only significant effect was size $F(2,176)=6.8$; $p < .001$, partial $\eta^2=.07$. The small model was perceived as the most attractive and the large model as the least attractive (small=4.2, medium=3.9, large=3.7). Hypothesis 5 was supported.

ASI and AWS Scales

There was a significant point-biserial correlation between the AWS scale and gender ($r_b=.53$, $p < .001$, $N=92$). Women rated more egalitarian (and less stereotyped) than men. The point-biserial correlation between gender and the ASI scale was near zero.

To analyze the impact of the AWS and ASI scales on the evaluations of realism, likelihood to get the role and attractiveness, the SPSS General Linear Model was used with the three levels of size as a within-subjects variable, setting as a between-subjects variable and the two scales entered as continuous variables.

For perceived realism as a dependent variable, only the size by setting interaction approached significance $F(2,176)=2.9$; $p < .06$, partial $\eta^2=.03$; paralleling the interaction reported above. No other main effects or interactions were significant.

For the likelihood of getting the role the main effect for size was significant $F(2,176)=4.2$; $p < .05$, partial $\eta^2=.04$ and the size by setting interaction was significant $F(2,176)=4.4$; $p < .05$, partial $\eta^2=.05$. The size by AWS scale interaction also approached significance $F(2,176)=3.0$; $p < .06$, partial $\eta^2=.03$. The size by setting interaction paralleled that reported earlier. The main effect for size reflected that, overall, large women were seen as less likely to get the roles. To assess the size by AWS interaction, correlations were run between the AWS scale and the likelihood of getting the role for each size. For small women, there was a significant correlation between the AWS scale and the likelihood of getting the role ($r=.20$, $p < .05$, $N=92$). Research Question 1 asked about the relationship between egalitarian beliefs and

evaluations of differently sized women in different media roles. As egalitarian beliefs increased, thin women were rated as more likely to get the role. For the medium and large women the correlations were near zero. No main effects or interactions were significant regarding realism. For attractiveness there were no significant main effects or interactions either. However, the main effect of the AWS scale approached significance $F(1,88)=3.6$; $p < .06$, partial $\eta^2=.04$. As egalitarian beliefs increased, all women were rated as more attractive.

Research Question 2 asked about the relationship between investment in physical appearance, as measured by the ASI scale, and evaluations of differently sized women in different media roles. The results showed no significant effect of investment in physical appearance on the evaluations of realism, likelihood to get a role, or attractiveness of the models.

Discussion

Whether talking about judgments of realism or judgments about how likely an actress is to get a role, body size does not seem to make much difference in a domestic traditional setting. Body size does make a difference in the professional setting. The difference seems to be that larger women in the professional context are considered the least real and least likely to get the role. There is not much difference between the smaller and the medium sizes. The parallel results for realism and likelihood to get the role may indicate that people perceive the roles to be assigned on the basis of realism, rather than on the basis of, for example, attractiveness. Even though thinner women were found to be the most attractive across all settings and conditions, they were not always considered to be the best for the roles. The design of this study does not establish the causal direction of these associations, but it seems likely that judging a model as more realistic leads to higher perceived probability of getting the role.

The relevant question arises from the size by context interaction: why would a larger sized woman be considered as realistic as a smaller sized woman in a domestic setting, but not in a professional setting? One possibility is that

women have to compensate for the supposed “loss of femininity” that comes from participating in a traditionally masculine space, the workplace, by being more thin, weak, passive, powerless or otherwise adhering to some traditional standard of feminine “weakness”. A different possibility that has been suggested is that thinness in our culture may be associated with discipline, activity and power, which are considered appropriate in the workplace. Experiment 2 explores these two possibilities. In the future, it may also be of interest to test whether there are similar effects for male models, such that larger male characters are also perceived as unrealistic in the workplace.

The results showed a few gender differences. Male participants were less likely than female participants to believe that small sized actresses were either realistic or likely to get the TV role. It seems plausible that this gender difference in the results stems from a different approach to the comparisons: men may be making judgments based on their observation of real life women, whereas women may be including idealized body types as realistic (smaller women were considered more attractive overall), or making judgments based on what is expected from them. Some studies suggest that young women can look critically at thin images in the media, but also feel pressure to comply with the social ideal they believe the images represent (Milkie 1999; Park 2005). Males were less likely than women to hold egalitarian values. This difference was not surprising, since gender egalitarianism is possibly more personally relevant to women, particularly to college undergraduates who aspire to a role in the professional world.

One of the most intriguing results was that as egalitarian beliefs increased, judgment that the smaller women would get the roles increased too. This is counterintuitive: we would expect that believers in equality between the sexes would also think that women of any body size could be acceptable for any role. This finding lends some support to the idea that, even for people with egalitarian beliefs, body size becomes important as a cue for immersion in the workplace. It may be relevant to note that the participants were college students who expect to join the professional workforce. It is hard to believe that egalitarian participants would endorse body discrimination, but there seems to be a belief or expectation that this discrimination will exist in the workplace. Actually, from this result, it seems as if this belief or expectation is present especially in those with egalitarian beliefs. Again, highly egalitarian participants (who in this study tended to be female) from the college population may be more interested in the presence of women in the workplace, and more aware of perceived or real obstacles in the ‘real world’. Another possibility is that these young women are in the very group that may reject the thin ideal as ideal, but at the same time feel pressured to comply with the ideal. Experiment 2 attempts to explore

this question further by examining a more diverse population in terms of experience, age, ethnicity and occupation.

Experiment 2

The second experiment was designed to explore two issues. First, one possible challenge to the results in Experiment 1 is that they are unique to college undergraduates. To test the results beyond that group, Experiment 2 used shopping mall patrons as participants. College undergraduates have little experience in the professional world and may base their realism judgments on future expectations. Mall participants may vary more in their levels of professional and domestic experiences, and their evaluations of realism may come from direct experience. Second, Experiment 2 explores the notion that thinness is a surrogate for femininity, so it incorporates scales to measure perceived femininity of the models as well as perceived power, activity and dominance. We expect these scales to predict how much thin women are preferred in a professional context. If thinness is a surrogate or compensation for femininity lost by entering the professional world, then we expect that women who are judged as more powerful or active (traditionally masculine traits) would have to be thinner to be considered attractive and acceptable in the professional world, and the same for women that are judged to look less feminine. Experiment 2 includes measures to evaluate the different women on these aspects. In all other aspects, it is a replication of Experiment 1. Basically, Experiment 2 addresses the same hypotheses and research questions of Experiment 1, plus an additional third research question:

RQ3

What is the relationship between perceived characteristics of the models (masculinity/femininity, dominance, activity, power) and evaluations of differently sized women in different media roles?

Method

Participants

Participants were 69 adults (25 male, 44 female) recruited at a mall in central New York State, during the Summer of 2005. The participants received a coupon for a free ice cream cone in exchange for their participation. Of the participants, 52.2% identified themselves as ethnic Caucasian; approximately 17.4% identified themselves as Hispanic/Latino, 11.6% as African American, 10.1% as Asian/Pacific Islander, 2.9% as Native American, and 5.8% as

“other ethnicity”. The average age of the participants was 24 years ($SD=9.7$). Participants’ ages ranged from 18 to 64.

Materials

The materials used were exactly the same as the ones described for Experiment 1, except that after seeing each image participants were asked to rate the women on twelve additional semantic differential items intended to measure differences in masculinity/femininity among the models.

Procedure

Participants were randomly assigned to the between-subjects condition (traditional context vs. non-traditional context) and to an order of presentation of the images they were to evaluate. Participants were asked to sit down at the table, and given special instructions to concentrate and avoid distractions that were present in the mall context. Participants could sit behind cardboard screens to facilitate concentration. Other than this, the experimental procedure was identical to Experiment 1. After completing the study participants read a brief statement explaining the real purpose of the study, were asked not to share this information with other potential participants, were thanked for their participation, and were given a coupon for an ice cream cone.

Dependent Measures and Covariates

Measures for attractiveness, likelihood to get the role and realism were the same as in Experiment 1. Reliability for the three-item scale measuring realism was $\alpha=.94$; reliability for the two-item scale measuring likelihood to get the role was $r=.87$. The only new measures in Experiment 2 were the 12 semantic differential items intended to measure judgments on power, femininity and activity dimensions for the models. As described above, there were seven intervals in each scale anchored by one of the following pairs of words: helpful/not helpful, strong/weak, very feminine/not feminine, unkind/kind, passive/active, pleasant/unpleasant, dominant/dominated, quiet/noisy, sad/happy, powerful/powerless, slow/fast,

hard/soft. A confirmatory factor analysis was run to see if the items clustered together according to the three expected dimensions of power, femininity and activity. The semantic differential item hard/soft did not fit into the expected scheme and was eliminated from the analysis. Factor analysis of the remaining 11 items made the most sense in a four factors solution. These were power (items: powerful/not powerful, strong/weak, dominant/dominated), femininity (items: feminine/not feminine, pleasant/unpleasant, helpful/not helpful), activity (items: active/passive, fast/slow, noisy/quiet) and an unexpected factor we called “nice” (items: kind/unkind, happy/unhappy). The items corresponding to each factor were combined to create four different scales. Reliability was assessed for the three scales that had more than three items: Cronbach’s α was .87 for the power scale, .79 for the activity scale and .76 for the femininity scale. The two items in the “nice” scale had a correlation of $r=.5$ ($p<0.01$).

As in study 1, the AWS scale items were reversed when necessary and a reliability procedure was run. Again, three items fell below a .2 corrected item to total scale correlation and were dropped from the scale. The items dropped from the scale were “economic and social freedom are worth far more to women than acceptance of the ideal of femininity which has been set up by men”, “the husband should not be favored by law over the wife in the disposal of family property and income” and “swearing and obscenity are equally more repulsive in the speech of a woman than a man.”

The reliability (Cronbach’s α) of the remaining 20 item scale was .90. A similar procedure was used for the ASI scale. One item (“attractive people have it all”) fell below a .2 corrected item to total scale correlation and was dropped from the scale. The reliability of the remaining 12 item scale was .79.

All other dependent measures were the same as the ones described for “Experiment 1”.

Results

For each dependent variable, a 3 (size of model: small, medium, large) \times 2 (setting: domestic, professional) \times 2 (sex of respondent: male, female) mixed analysis of variance

Table 3 Mean values likelihood of getting the role and perceived realism by setting.

Experiment 2	Kitchen			Professional		
	Small	Medium	Large	Small	Medium	Large
Likely to get the role	3.4	3.2	3.2	4.0 ^{ab}	3.5 ^{ac}	3.0 ^{bc}
Realism	2.8	3.1	3.1	3.6 ^{ab}	3.3 ^a	3.2 ^b

Judgments were made on 6-point scales. The higher the score the greater the rated likelihood of getting the role, and the greater the rated realism. Items that have the same superscript letter are significantly different $p<.05$.

was run using the repeated measures procedure of the SPSS General Linear Model. Size of model was a within subject factor. The others were between-subjects factors.

Realism

For the dependent variable measuring realism, there was a significant size by setting interaction $F(2,130)=3.8; p<.05$, partial $\eta^2=.06$. No other main effects or interactions were significant. To examine the interaction, planned paired-sample t tests for each setting were run testing the mean difference between each size. For the kitchen setting, there were no significant differences between the sizes. For the professional setting, small women were rated as significantly more realistic than the medium $t=2.2, p<.05, df=32$ or large women $t=2.3, p<.05, df=32$ (see Table 3). Again, when the size by setting interaction was tested using multiple pairwise comparisons with Bonferroni corrections, the significant results were maintained: large sized women were evaluated significantly more likely to get the role than medium and small sized women ($p<0.05$). Hypothesis 1, that thin women are seen as more real in a professional setting, was supported. Hypothesis 2, that larger women would be perceived as more real in a domestic setting, was not.

Getting the Role

For the dependent variable measuring the likelihood of getting the role, there was a main effect of size $F(2,130)=8.2; p<.01$, partial $\eta^2=.11$. Smaller women were seen as more likely to get the role ($M=3.72, SD=.109$), and larger women as less likely to get the role ($M=3.1, SD=.138$). However, there was also a significant size by setting interaction $F(2,130)=4.2; p<.05$, partial $\eta^2=.06$. To examine the interaction, planned paired-sample t tests for each setting were run testing the mean difference between each size. For the kitchen setting, there were no significant differences between the sizes. For the professional setting, large women were rated significantly less likely ($M=3.0, SD=.16$) to get the role than the medium women ($M=3.5, SD=.2$) $t=2.9, p<.01, df=32$ or small women ($M=4.0, SD=.21$) $t=5.5, p<.001, df=32$. Following the same pattern, medium sized women were rated significantly less likely to obtain the role than smaller women $t=2.7, p<.05, df=32$ (see Table 3). When the interaction was analyzed using multiple pairwise comparisons with Bonferroni corrections, these significant results were maintained: in a professional setting, smaller sized women were evaluated as significantly more realistic than medium ($p<.05$) and larger sized women ($p<.001$), and medium women were evaluated as significantly more realistic than larger women ($p<.05$). Hypothesis 3, that thinner women would be perceived as more likely to get the role in a professional setting, was

supported. Hypothesis 4, that larger women would be perceived as more likely to get the role for a domestic setting, was not.

Attractiveness

For the dependent variable measuring attractiveness there was a significant main effect of size $F(2,130)=14.8; p<.001$, partial $\eta^2=.19$. Overall, the small model was perceived most attractive and the large model the least attractive (small $M=4.5, SD=.12$; medium $M=3.9, SD=.15$; large $M=3.6, SD=.14$). This main effect must be interpreted in the light of an unexpected significant size by sex interaction $F(2,130)=4.1; p<.05$, partial $\eta^2=.06$. To examine this interaction, post-hoc pairwise comparisons for each sex were run testing the mean difference between each size (using Bonferroni correction for multiple comparisons). For female respondents there were no significant differences in attractiveness. For males, however, smaller women ($M=4.6, SD=.19$) appeared to be significantly more attractive than medium ($M=3.8, SD=.24$), $p<.01$, and larger women ($M=3.3, SD=.22$) $p<.001$. Hypothesis 5, that thinner women would be found the most attractive, was supported, but in this second experiment, the difference seemed to stem mostly from male participant responses.

ASI and AWS Scales

There was a significant point-biserial correlation between the AWS scale and gender ($r_b=-.49, p<.001, N=69$). Women were rated more egalitarian (and less stereotyped) than men. The point-biserial correlation between gender and the ASI scale was near zero.

To analyze the impact of the AWS and ASI scales on the ratings the SPSS General Linear Model was used with the three levels of size as a within-subjects variable, setting as a between-subjects variable and the two scales entered as continuous variables.

For perceived realism as a dependent variable, there were main effects of setting $F(1,65)=5; p<.05$, partial $\eta^2=.07$ and the AWS scale $F(1,65)=4.3; p<.05$, partial $\eta^2=.06$. Professional women were seen as more real than those in the domestic setting (professional=3.36, domestic=2.98). To assess the effects of the egalitarian attitudes as measured by the AWS scale, correlations were run between the AWS scale and the perceived realism for each woman size. For the small sized women there was a significant negative correlation between realism and egalitarian beliefs. The more egalitarian the attitudes towards women, the less real the small women were perceived to be ($r=-.29, p<.05, N=69$). There was also a significant size by setting interaction $F(2,130)=4.6; p<.05$, partial $\eta^2=.07$ paralleling the interaction reported above.

For the likelihood of getting the role only the size by setting interaction was significant $F(2,130)=4.7$; $p<.05$, partial $\eta^2=.07$. This size by setting interaction paralleled the one reported earlier for this variable.

For attractiveness there were a significant main effect of the AWS scale $F(1,65)=5.1$; $p<.05$, partial $\eta^2=.07$. As egalitarian beliefs increased, all women were rated as more attractive.

Femininity, Power and Activity Scales

We were particularly interested in whether perceptions of femininity could account for some of the differences that the interaction between size and setting produces in realism perceptions and likelihood to get the role. We were also interested in whether perceptions of powerfulness, activity or niceness could account for these differences.

Point-biserial correlations between realism and setting were only significant for small sized women ($r_b=.34$, $p<0.01$, $N=69$), whereas for medium and large size women there seemed to be no point-biserial correlation between realism and setting (medium=.09, $p<.48$, $N=69$; large=.06, $p<.65$, $N=69$). The same pattern emerged for point-biserial correlations between likelihood of getting the role and setting: realism and setting were correlated only for small size women ($r_b=.26$, $p<0.05$, $N=69$), whereas there was no significant correlation for medium and large women (medium=.16, $p<.18$, $N=69$; large=-.18, $p<.14$, $N=69$). Because of this, the possible effect of the femininity, power, activity and niceness scales was only examined for the small sized models.

To examine whether the power, femininity, activity and nicety scales had any influence on this effect of setting on realism for small sized women, a linear regression including the four scales for small size, and setting was run using the SPSS Regression procedure. Results showed that even after controlling for power, femininity, activity and nicety judgments, setting still significantly predicted differences in realism for small women ($F_{inc}(1, 62)=9.91$, $p<.01$, $R^2_{inc}=.13$). A similar procedure was used to examine the influence of these variables on likelihood to get the role. Again, even after controlling for judgments of power, femininity, and activity, setting significantly predicted differences in likelihood to get the role for small sized women ($F_{inc}(1, 62)=6.51$, $p<.05$, $R^2_{inc}=.09$). Thus, regarding Research Question 3, the results point to the conclusion that these variables do not explain the interactions detected between body size and setting.

Discussion

Overall, the pattern of results of Experiment 2 replicated the findings of Experiment 1. If anything, the patterns seemed

to emerge even more clearly with non-student participants. Again, we found that body size influences judgments of realism and likelihood to get a TV role, mostly within a professional setting, and not for a domestic setting. However, unlike the case with Experiment 1, not all the differences came from judgments on the larger women: smaller women were found to be significantly more realistic in a professional setting. As in Experiment 1, larger women were found to be the least likely to get the role in the professional setting, and in this case the smaller women were also found to be significantly more likely to get the role. In general, the most interesting result seems to be that body size plays a role in realism of women in professional roles, but not in domestic roles, where women of any size would be equally acceptable.

The main difference between the experiments appeared in the relationship between realism and the AWS scale. In the case of the mall patrons, the more egalitarian beliefs they held, the less real they found the small women to be. In Experiment 1 the opposite was true. The more egalitarian the beliefs, the more likely smaller women were to get the role. This difference may stem from differences in age, experience and/or ethnicities. In older participants, egalitarian views may stem from life experiences in which differences in body size have been directly observed to be irrelevant to performance in life's duties, or egalitarian beliefs may make them more observant of the variation in body sizes throughout different contexts. In younger college participants, egalitarian values may be more future oriented. The college students may want an egalitarian world, but may have, out of lack of experience, the belief that body size is more relevant to performance contexts than they would want it to be. Ethnicity may be a factor too. Our mall sample had a much higher percentage of African American and Hispanic participants, and there is evidence that at least African American women have lower levels of body image dissatisfaction (e.g., Altabe 1998; Story et al. 1995) and consider it less relevant to happiness (Hebl and Heatherton 1998). They may be less likely to consider or accept body size as a relevant cue to professional success and equal opportunities, something that may have influenced the pattern of results found here.

Men were more likely than women to think smaller women were more attractive, a difference that did not arise in our previous experiment. Participants in this study were older in average, and women may either have given up on thinness as an ideal of beauty, or refuse to endorse it by evaluating small women as more attractive.

Experiment 2 did not support the notion that thinness is a surrogate for femininity/masculinity. The power, femininity and activity scales did not account for the difference in judgments across context. This may be due to lack of enough variation between the models in terms of these

scales. We believe, however, that the phenomenon of body size having these differential effects on social judgments of realism is interesting enough to merit further exploration.

General Discussion

Participants in this study found women most attractive in their thinnest form. While they found a variety of body types realistic for a domestic role, large women weren't as realistic in professional settings. Men found medium sized women most realistic and most likely to get the role, while women thought the thinnest women most likely to get the role. Overall, perceived realism and likelihood of getting the role followed the same pattern of results, one that was different from the pattern for attractiveness. In some cases it makes abundant sense that certain body types would seem more realistic than others in certain roles. We don't expect to see extremely large people as competitive runners, to take an extreme example. But in the case presented here the association of a particular body type with a particular profession seems more interesting and perhaps disturbing. It may indicate that the pressure on women to be thin encompasses both sexual and professional success and may indicate a barrier to professional success for larger women. Although it would be easy to read too much into these results, it is interesting that the bias toward thinner women in professional settings seemed more pronounced for those with egalitarian gender beliefs, particularly in the younger college undergraduate population, this is, precisely the population aspiring to professional success. The ideals that advocate sexual equality in the workplace may be associated with increasing pressure for young women in those professional roles to be thin. It also seems possible that college students who have larger bodies may believe their chances for professional success are smaller. Other studies present evidence that women associate thinness with happiness and life success—including job success (Evans 2003; Hebl and Heatherton 1998), although this may be more true for White than Black women (Hebl and Heatherton 1998).

Where do the standards that associate thinness, professional occupations and equality come from? The relationship between standards of equality, standards of beauty, professional achievement and the effects of media images of women is likely to be complex. It seems likely that changing social standards influence media depictions and that media depictions influence social standards.

This study also adds to our knowledge about the effect of context on perceived realism. It appears that in some circumstances the same story (Shapiro and Chock 2004) or the same person (this study) can seem more or less real depending on the context. However, some context effects

may be more general than others. The principle that atypical news stories from exotic places may be seen as more real than atypical stories from familiar places is probably robust (Shapiro and Chock 2004). However, the effect of context and body size on realism is probably more complex. Other contextual influences on realism should be explored. These studies used still images and a brief scenario that suggested a narrative context. It may be that narrative contexts make a difference too. Different narrated circumstances might make it more or less believable for a woman of a certain body type to be in one context than another. For example, a female character may be portrayed in a professional setting, but the storyline could still focus on her success at romantic relationships or her frustration at not having a family. We may expect such a storyline to have different effects than one where the plot is mostly about the character's professional success. Other contextual variations such as show genre, kind of profession or character demographics and age should be explored. Individual differences between participants may be important too. For example, subjects who have no experience in professional settings may make different judgments of realism than those who do. This variation may explain some of the differences found between the college students and the mall patrons: although college students aspire to the professional world, they have less direct experience in it.

One of the advantages of these studies is that the comparison between thin, medium and large women was made by putting the same women in all three conditions controlling for other differences between the women. Putting these women in different roles put the same women in different contexts. Digital manipulation of this kind exists in the "real world" and it contributes to the universe of images we are exposed to daily. It showed up, for example, in the slenderized images of Katie Couric that emerged prior to her shift in professional role, from a morning show host to the prime time news anchor at CBS. The thinness and setting manipulations use in the experiments here seem to do a pretty good job of capturing the intended social meaning.

The realism questions have been used in several studies before. The single attractiveness question seems straightforward. Although measurement reliability could have been increased by having other items measuring attractiveness, this option was abandoned as it increased overall experiment length, which is particularly problematic in the context of an experiment run in the shopping mall.

What exactly the likelihood of the 'getting the role' question measures is open to some debate. For some it may mean that this is who TV producers would choose and reflects perceived standards of television's inner workings and criteria. For others it may refer to some connection to beliefs or knowledge regarding what kind of person plays

this role in the 'real world'. The fact that the pattern of results for the likelihood questions parallels the perceived realism questions in both studies inclines us toward the latter interpretation. The pattern of responses indicates that participants thought TV producers were likely to choose those that they (participants) considered realistic. The fact that results were similar for a college undergraduate sample and for a general population of mall shoppers also acts as an advantage in this case, as it tends to give us more confidence that the pattern of results is not limited to a certain age or education group.

Does perceived realism mediate between the images of women in the media and belief, attitudes and behavior? It probably does, in complex ways. Participants in our studies appear to believe that producers are making casting decisions based on realism rather than mere attractiveness. It may well be that preexisting incorrect or undesirable beliefs about "the real world", for example, that larger women are rare and not credible in professional settings, are fostered or maintained by media images consistent with a distorted idea of reality. It seems an issue worth exploring further, to understand both how women are perceived in the media and how we make judgments about realism. Future research should further examine the relationship between media depiction of women, media contexts (genre of show, professional roles, demographics of characters), and beliefs about standards of beauty and professional success for women, both real and ideal.

Our results are consistent with content analyses and other research connecting changes in standards of beauty with changes in gender roles. Our results show that the bias toward thinness may be greatest when women enter the professional world—particularly among those who most favor women in those roles. Professional women with families may be feeling pressure to not only advance careers and to care for a family, but to also do all that while maintaining what is for many of them an impossibly thin body.

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