



2008

The "Evolution" of Media: The Influence of a Media Literacy Campaign on Self Esteem and Body Image

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Dremonas '08, Vasiliki D., "The "Evolution" of Media: The Influence of a Media Literacy Campaign on Self Esteem and Body Image" (2008). *Honors Projects*. 117.
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Running Head: THE "EVOLUTION" OF MEDIA

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Acknowledgements

This project would not have been possible without the help and support from my esteemed professors and fellow classmates. I would especially like to thank my advisor and mentor, Dr. Natalie Smoak, for her incredible expertise, her continued guidance and support, and most importantly, her faith in me and this project. I simply could not have accomplished what I have without her. This opportunity has been a tremendous learning experience and the perfect capstone to my undergraduate career.

Next, I would like to express my gratitude to Dr. Jason Themanson, Dr. Jim Dougan, and Dr. Tom Gerschick for serving on my defense committee and for contributing to the project design. Also, I would like to acknowledge Dr. Linda Kunce, Dr. Teddy Amoloza, Dr. Jim Sikora, and Dr. Carrie Trimble for providing both psychological and sociological consult as well as marketing advice. I am particularly fortunate that Dr. Gail Walton advised an exploratory directed study that inspired the foundation for this project, and I am grateful for the 102 students who volunteered their time and energy which allowed this study to become a reality.

Abstract

For decades, society has criticized the media for instigating many of the physical, social, and psychological maladies that affect females of all ages. However, recent advertising approaches, namely the Dove Campaign for Real Beauty, endeavor to sell products by responsibly endorsing attainable beauty ideals. The present study seeks to empirically evaluate whether campaign efforts like Dove's are successful at reducing negative female body image, or whether they are instead counterproductive to their goal due to what social psychologists term "sleeper effect" processes. 102 female undergraduates were either exposed to the Dove commercial Evolution in its entirety, Evolution in part, or a control commercial. These women then reported both implicit and explicit body image-related beauty perceptions of both self and others immediately following the commercial and again one week later. Results indicated that the commercial viewed influenced several explicit body-image related attitudes, but that it had no effect on implicit attitudes or perceptions of beauty in others. The "sleeper effect" cannot be attributed to ineffectiveness of Evolution, as the pattern of results remained stable over time.

The "Evolution" of Media:

The Influence of a Media Literacy Campaign on Self Esteem and Body Image

A beautiful, young red-headed girl stares into the camera, with eyes so pure and innocent. She looks peaceful and happy as the corners of her mouth curl to create a soft smile. However, within seconds, the scene suddenly morphs from a calm serenity to a barrage of vivid images. A series of billboards, magazine covers, and commercials parade on screen featuring thin, scantily clad and otherwise perfect images of women. The viewer then hears promises from saleswomen of looking "younger, smaller, lighter, firmer, tighter, thinner, [and] softer" with the help of their products. The next scene exposes the rather disturbing aftermath of diet pills, disordered eating, excessive exercise, and cosmetic surgery. Without warning, the screen flashes back to the red-headed child from the beginning and her school friends, as the viewer is urged to "Talk to your daughter before the beauty industry does."

The above commercial, appropriately titled "Onslaught," is one facet of Dove's Campaign for Real Beauty, which is designed to combat the media's negative influence on women. For decades, society has criticized the media for instigating many of the physical, social, and psychological maladies affecting females of all ages (Cole & Daniel, 2005; Jeffreys, 2005). However, a new approach toward advertising, endeavoring to both sell products and responsibly endorse real, attainable beauty ideals, has taken the market by storm. The current study aims to evaluate the effectiveness of one such advertising campaign.

Pervasiveness of the media and the ideal it promotes

The average American is exposed to over 3,000 advertisements each day and spends about three years watching commercials over the course of a lifetime (Jhally, 2000). The multibillion dollar media industry pervades every cultural and social arena. Radio, television, billboards, bumper stickers, magazines, newspapers, and even the clothes we wear are infected with the media's undeniable goal of selling products and making profits.

However, the media industry sells a great deal more than just products. As one of the most potent communicators of sociocultural standards, it also sells values, images, concepts, and norms (Jhally, 2000). In fact, the media has emerged as a significant social institution (Silverblatt, 2004), for it has a key role in the socialization process (Kelly & Donohew, 1999; Thompson & Heinberg, 1999). Thus, advertising and the media have a great influence on society.

Specifically, advertisements are notorious for creating and promoting the source of idealized imagery by which the American public can compare and evaluate themselves (Frith, Shaw, & Cheng, 2005; Han & Gregorio, 2006). This ideal is flawlessly beautiful, sexually appealing, and utterly unattainable, but it persists because of its success in selling products. Attractive imagery draws the attention of the consumer. For instance, previous studies have indicated that, due to classical conditioning, positive emotional responses are elicited when advertisers pair their products with beautiful stimuli (Weiten, 2001). Thus, it is not surprising that marketers have included beauty, sex appeal, and novelty

since the dawn of advertising (Lin, 1998; Wise, King, & Merenski, 1974).

Origins of the beauty ideal

Although the media industry has a great deal of liberty in constructing these aforementioned ideals, it is important to note that these standards are not entirely arbitrary. In fact, they have deeply rooted origins in human evolutionary history. Marketers use whatever tactics sell most easily and are therefore willing to exploit evolutionary priming (Botting & Botting, 1995; Buss, 1994).

The fundamentals of Darwinism indicate that attributes universally judged as beautiful elicit indications of reproductive worth (Alam & Dover, 2001; Botting & Botting, 1995; Buss, 1994; Etcoff, 1999). For instance, smooth skin, lustrous hair, a good distribution of body fat, and strong teeth indicate health and fertility (Botting & Botting, 1995; Buss, 1989; Buss, 1994; Katz, 1999). Also, symmetrical bilateral features indicate a sign of wellbeing, disease resistance, and overall fitness because parasites can tamper with the normal course of development just as age fosters asymmetrical irregularities (Alam & Dover, 2001; Buss, 1994; Miller & Todd, 1998). A meta-analysis shows that within and across cultures, there is general agreement on attractiveness, and that beauty is advantageous (Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, 2000).

Buss (1994) attested that these beautiful traits have been sexually selected over time because they ensure genetic success. Since there is no direct way of assessing a potential mate's genetic quality, these traits and attributes, known as good genes indicators, correlate with heritable fitness and thereby act as the

proxy for genetic quality (Gangestad, Garver-Apgar, Simpson, & Cousins, 2007).

Although these attractive features are beneficial to both men and women, there is a much higher premium on physical attractiveness and youthfulness on women. This is particularly because women are given the biological responsibility of child bearing and only have until menopause to conceive. Men, on the other hand, do not have the same physical limitations or responsibilities. They are more desirable if they have attractive good genes indicators, but unlike women, they are able to compensate for physical shortcomings with valuable resources like financial or political power (Alam & Dover, 2001; Buss, 1994). Therefore, it is understandable that even though these media images of perfection exist for both men and women, women are traditionally and more stringently held to these standards.

Media's impact on women

Since women's value or desirability is highly dependent upon their corporeal appearance, they are more susceptible to desiring the idealized imagery proselytized by the media. Achieving beauty has become a continuous and consuming goal for women, especially because the prevalent notion indicates that beauty equals success and self-satisfaction (Labre & Walse-Childers, 2003). In one study, women indicated that their lives would change in important, positive ways if they achieved the standards illustrated by the media because they believed that beauty is associated with social, psychological, and practical rewards (Engeln-Maddox, 2006). Thus, women have been notoriously

preoccupied with improving their physical selves in order to achieve these rewards (Buss, 1994). This is partly because they have traditionally regarded, and have been taught to regard, their bodies as a locus of power that has the never-ending potential for enhancement (Morgan, 1998).

To facilitate this cultural understanding, family, peers, teachers, and most importantly, the media provide young girls and women with instructions and models on how to achieve the ideal of femininity and beauty (Frith et al., 2005). For example, Labre and Walsh-Childers (2003) found three themes upon reviewing a series of women's magazines: 1) Beauty is necessary for women; 2) Beauty can be achieved through the purchase of particular products; and 3) this magazine will indicate which products these are.

What these magazines and advertisements will *not* show women is how disparate their images are from reality (Engeln-Maddox, 2006). Not only do the models in these pictures maintain a body type that less than five percent of the female population can naturally attain, but they are enhanced by photographic techniques like airbrushing, soft focus cameras, composite figuring, digital editing, and filters (Clay, Vignoles, & Dittmar, 2005; Thompson & Heinberg, 1999). Thus, the most attractive women in their most attractive poses and with the most attractive retouching are chosen for the final product, and these perfected images are the ones that saturate the culture.

Historical media such as art, music, and literature were no more attainable, but the difference today is that the media does not define the

boundaries of fact and fiction (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Consumers are led to believe what they see in magazines and on billboards are realistic representations of actual people, when really they are carefully manipulated and artificially developed images. As a result, women are held to an omnipresent standard of appearance-related perfection that is impossible to achieve and sustain (Engeln-Maddox, 2006; Gillespie, 1996; Lin, 1998; Thompson & Heinberg, 1996).

Thus, the media and beauty industries have collaboratively created the perfect entrepreneurial condition. Women are bombarded with a standardized image that is controllable, hence profitable, and that image is presented as if it were accessible to everyone (Hagege, 2005). There is little regard for natural diversity or the inevitability of aging as women are constantly made aware of their socially constructed imperfections. But then again, they are alluringly offered products and procedures that will theoretically help them attain this socially constructed ideal. Technological youth and beauty enhancing practices are becoming increasingly normalized, if not an expected requirement of femininity and physical attractiveness (Clarke & Griffin, 2007). Therefore, females often pursue the quest for beauty, but research suggests that this quest may drain resources and create psychological distress (Engeln-Maddox, 2006).

Costs and consequences of chasing perfection

Financial. It is not surprising that women spend tens of billions of dollars annually on products, programs, and procedures, all in an effort to emulate this

media induced ideal (Alam & Dover, 2001). Cosmetologists, aestheticians, manicurists, tanning specialists, hairstylists, dietitians, masseuses, aroma therapists, trainers, dermatologists, and cosmetic surgeons are all gaining a piece of this vast and lucrative industry (Morgan, 1998).

Specifically, the cosmetic industry provides a good example of how the beauty industry has evolved. Since prehistoric times, simple cosmetic tactics have been used to enhance the desirable and mask the unfavorable, thereby providing a falsified illusion of attractiveness (Botting & Botting, 1995). For example, there is a preference for larger than average features, and makeup effectively exaggerates a contrast (Katz, 1999). In addition, because high color can gauge sexual response, blush and lipstick are both applied to mimic the face during sensual arousal, therefore artificially triggering men's attraction (Etcoff, 1999). Finally, particular features, such as skin tone and smoothness convey overall health (Cunningham, Druen, & Barbee, 1997), and moisturizers, astringents, foundation, and concealer can help create that effect.

In sum, cosmetics play a significant role in increasing attractiveness because they manipulate evolutionarily viable traits. Nash and colleagues (2006) indicated that women wearing cosmetics were perceived as healthier and more confident than when they were presented without makeup. The results suggest that women can successfully utilize cosmetics to manipulate how they are assessed, which can be highly advantageous in social situations (Nash, Fieldman, Hussey, Leveque, Pineau, 2006). So, with positive effects such as these, there is

little question as to why the cosmetic industry has succeeded. With a solid foundation in evolutionary principles, cosmetic entrepreneurs have harnessed a guaranteed product on which women are willing to spend vast amounts of money. Most recent estimates in the United Kingdom suggest that women spend £3,000 (approximately \$6,000) a year on cosmetic products and treatments, and it is projected that they will continue contributing financially to the cosmetic industry (Daniells, 2006). Another example illustrates the financial success of an American based cosmetic industry. Avon reports a total revenue growth of 13%, which brings its total earnings to \$9.9 billion in the year 2007 (MSN Money, 2008).

Time and effort. Money is not the only expenditure at the mercy of this idealized pursuit. A great deal of time and effort are also sacrificed. It is estimated that a woman takes ten days a year to get ready for work if she spends 27 minutes each day (Jeffreys, 2005). This number changes when estimating how many days are wasted annually by primping for romantic evenings or nights out with the girls, which take (on average) 59 and 54 minutes respectively (Jeffreys, 2005).

From a feminist perspective, preoccupation with appearance can divert females' monetary and cognitive resources away from more empowering activities (Engeln-Maddox, 2006). In fact, on the micro level, these individual investments women make into their physical capital may contribute to personalized social power, but on the macro level, they may be working to

reinforce the dominant ideologies that oppress them (Gillespie, 1996).

Physical harm. Feminist author Sheila Jeffreys (2005) takes that assertion a step further by contending that beauty practices in Western culture should be understood as harmful cultural practices for women, both collectively *and* individually. She asserts that the benefits do not outweigh the risks, specifically by elucidating the physical harm that everyday grooming practices cause. For instance, this continuum of beauty products and practices ranges from lipstick to depilation to hair dyeing. Unlike the rigorous testing that is required for food and medicine, cosmetics do not undergo similar assessments even though the skin can effectively transmit chemicals into the body (Jeffreys, 2005). Some research has suggested that women may expose themselves to more than 200 synthetic chemicals within a beauty routine (Jeffreys, 2005).

Without a doubt, the most invasive, expensive, painful, and potentially harmful beauty practice is that of cosmetic surgery. As these unattainable media images infiltrate women's minds and shape their personal standards, bodily imperfections are medicalized as illnesses in need of remedy (Gillespie, 1996). Pressure to strive for physical perfection is becoming so overwhelming, cosmetic surgery has become a common, acceptable solution to the desire for self-improvement (Delinsky, 2005). Researchers suggest that eventually women who refuse to submit to beauty enhancement procedures like cosmetic surgery will be considered deviant (Morgan, 1998). However, cosmetic surgery comes with serious risk. There is the danger of infection, bleeding, embolisms, pulmonary

edema, facial nerve damage, unfavorable scar formation, skin loss, blindness, crippling, and even death (Morgan, 1998).

Psychological. The aforementioned costs and risks are becoming increasingly more destructive and prevalent, but the more widely researched, longstanding media effects on women include the damage done to their body image, self esteem, and psychological well-being. I acknowledge the plethora of research already completed regarding these issues; however, due to time constraints the major consequences will be briefly reviewed here.

Exposure to idealized images of thin and perfected models have been shown to increase body dissatisfaction (Groesz, Levine, & Murnen, 2002; Irving & Berel, 2001; Tiggemann & McGill, 2004; Watson & Vaughn, 2006), induce eating disorders (Bessenoff, 2006; Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Wilksch, Tiggemann, & Wade, 2006), fuel depression (Heinberg & Thompson, 1995; Yamamiya, Cash, Melnyk, Posavac, & Posavac, 2005), engender stress (Stice & Shaw, 1994), perpetuate negative stereotypes (Cole & Daniel, 2005), preserve female objectification (Fredrickson & Roberts, 1997), maintain rigid gender roles (Cole & Daniel, 2005; Labre & Walsh-Childers, 2003; Watson & Vaughn, 2006), lower self esteem (Clay et al., 2005), and instill self discrepancy (Engeln-Maddox, 2006). Thompson and Heinberg (1999) and Stice and Shaw (1994) found that even *minimal* exposure to such images can result in transient increases in psychological distress and body image dissatisfaction. Therefore, if short-term exposure can contribute to the aforementioned consequences, daily, long-term

exposure is potentially even more harmful if the effects are cumulative (Yamamiya et al., 2005).

Undoing the damage

Fortunately, individuals do not always experience the media as blank slates and do in fact have the ability to resist the consuming pressures if given the proper tools and training (Arnett, 1995). Research suggests that females should not always be conceptualized as passive casualties of the media, but rather as informed, active participants who can aggressively defy and subvert the media (Coughlin & Kalodner, 2006; Irving, DuPen, & Berel, 1998). Human agency does exist. Females can choose not to view images; they can deconstruct and critically evaluate the standards and messages promoted by the media; and they can join political forces to resist offensive and unattainable representations (Cole & Daniel, 2005; Irving et al., 1998).

However, they often cannot do this on their own. It is possible for women to combat the damaging societal conceptions of female beauty, but they oftentimes need help. Thankfully the media itself is beginning to actively assist in this process.

Since the media created the problem, it is capable of undoing it. This reversal is possible by communicating accurate, deglamorized, and realistic messages and by providing consumers with the tools and techniques necessary to resist harmful consequences. Most active in this battle are the newly emerging media literacy campaigns.

These media literacy campaigns have the common goal of teaching strategies to enable individuals to critically evaluate messages and place media programming into meaningful context (Irving & Berel, 2001; Silverblatt, 2004). Various theoretical perspectives also outline how individuals can and do resist negative media images. For example, Inoculation Theory represents media exposure as a pathological disease and suggests that it is necessary and possible to immunize consumers against its evils by demystifying the way media is constructed (Eagle, 2007). Once individuals can identify and understand the motives, purposes, and perspectives embedded within media messages, they will be less susceptible to its persuasive appeal (Austin, Pinkleton, & Funabiki, 2007). Therefore, by teaching girls and women how to become more active, informed, and critical consumers they will be better prepared to resist the internalization of unattainable beauty standards (Austin et al., 2007; Irving et al., 1998).

Examples of campaigns that try to achieve this goal include Jean Kilbourne's *Killing Us Softly* documentaries, the ARMED program (Coughlin & Kalodner, 2006), and the GoGirls! Intervention (Piran, Levine, & Irving, 2000). Another interesting method intended to combat unrealistic beauty ideals and their unfortunate consequences are efforts put forth by advertising companies themselves. For instance, Nike, Wal-Mart, and Chicken of the Sea feature a broader spectrum of female body types in their advertisements (Howard, 2005). When women have a diverse set of "ideal" images by which to compare themselves, they are less likely to make self denigratory social comparisons

(Shaw & Waller, 1995). Marketers are realizing that this approach resonates with their target audience simply because they can connect more with real women (Howard, 2005).

Dove Evolution

The most recognized and pervasive media literacy effort is the Dove "Campaign for Real Beauty." Not only have its billboards and commercials taken America by storm, but they have also made appearances in Europe and Asia. The most popular and well known commercial within this campaign is "Evolution." This commercial begins with an average-looking woman who is transformed by the efforts and expertise of hair and makeup professionals into a glamorous model. She then poses for the camera, and one of the many photographs is chosen to be featured on a billboard advertisement. However, before this image appears in public, it undergoes a great deal of digital editing, airbrushing, and retouching. By the end of the editing session, the final product bears little resemblance to the woman who was featured at the beginning of the commercial. The screen darkens as the following caption appears: "No wonder our perception of beauty is distorted." This video has created a powerful impact on the American public, as it has won 2 Grand Prix Cannes Advertising Awards. However, despite the growing interest in media literacy campaigning such as this, few investigators have tested its effectiveness empirically (Austin et al., 2007; Coughlin & Kalodner, 2006).

A very legitimate empirical inquiry is whether or not a commercial like

Dove's Evolution is effective. One possibility for consideration is that although the makers of the Dove Evolution video intend for it to be a positive step in the right direction, it is not as effective as it could be. Some researchers have suggested that longer-term, comprehensive interventions may be necessary to offset women's negative, self-related implicit attitudes and internalized thought processes (Gurari, Hetts, & Strube, 2006; Irving & Berel, 2001; Irving et al., 1998), but it is also possible that Dove's Evolution commercial is not as effective as hoped because of fundamental persuasion processes, namely the sleeper effect.

The sleeper effect

The sleeper effect is a fundamental persuasive process characterized by a delayed increase in persuasion when a discounting cue is dissociated from the communication (Kumkale & Albarracin, 2004; Mazursky & Schul, 1988).

Persuasive messages are often paired with strong, discounting cues that suppress immediate attitude change. For instance, recipients of a commercial providing negative images about a political candidate may immediately disregard the message if it comes from a representative of the opposing party because they recognize the source's lack of credibility in that circumstance. Because the source and the message in this case are closely paired together, there is a strong connection between the non-credible source, or the cue that causes the message to be discounted, and the message on immediate judgments (Kumkale & Albarracin, 2004; Mazursky & Schul, 1988). However, as time elapses, research suggests that the association between the message and discounting cue becomes

either inaccessible or unavailable, and the influence of the primary message becomes stronger (Kumkale & Albarracin, 2004; Mazursky & Schul, 1988). In the case of the political commercial described earlier, if sleeper effect processes were occurring, over time, the source of the negative messages about the candidate would be forgotten, and the negative messages may actually carry more weight, such that they influence the future voting behaviors of those who received the message.

In the Dove Evolution commercial, the overwhelming majority of the message (60 seconds out of 74 total seconds) conveys a woman undergoing a mesmerizing transformation from average to flawlessly beautiful, and only 4 seconds (out of 74 total seconds) discount that transformation as unnatural and unnecessary. (The remaining 10 seconds include information about the Dove Campaign for Real Beauty). Thus, the graphic and captivating imagery suggests a process women undergo to achieve the ideal beauty standard. When seen up to this point, the message of the commercial may be discouraging since most women do not have access to a full-time cosmetologist or digital retouching expert, and, by other means, the standard portrayed is relatively unattainable. However, at the end of the commercial, the screen flashes to the phrase "No wonder our perception of beauty is distorted." In this commercial, this phrase serves as the discounting cue in that it negates the credibility or necessity of the message presented before it. In other words, this discounting cue allows women to breathe a sigh of relief when they realize that the message they just received

should be dismissed. Yet, if sleeper effect processes are occurring, it is possible that, over time, the more prominent 60-second message of beauty transformation will be remembered, thereby diminishing the effectiveness of the commercial's true message.

This sleeper effect process is especially likely to happen within the Dove Evolution commercial because a recent meta-analysis indicates that there are stronger, more convincing sleeper effects when the discounting cue is presented last, when the audience has high prior knowledge about the subject, and when the topics were personally relevant (Kumkale & Albarracin, 2004). All of these conditions are likely to be in place as individuals view Dove Evolution. The sleeper effect is one of the many reasons why, in evaluating an advertising campaign, it is important to gauge its effectiveness directly following a viewing in addition to gauging the effects after the passage of time.

Implicit vs. Explicit Attitudes

In evaluating an advertising campaign, it is also important to investigate both implicit and explicit attitudes because they are differentially susceptible to influence. Explicit attitudes are accessible to conscious awareness, whereas implicit attitudes address underlying associations. In a study by Gurari and colleagues (2006), women were much less capable of correcting for and protecting against social comparisons and threats to the self on the implicit level than they were on the explicit level. Explicitly, female participants were consciously able to defend against internalization and were thus unaffected by

the idealized images of beauty. However, as compared to a control group, these participants implicitly reported a reduction in the association between beauty and three primed identities (self, in-group, and gender). This indicates that implicit attitudes are much more sensitive to the impact of unrealistic images (Gurari et al., 2006). Paradoxically, women can criticize a highly unattainable beauty ideal and yet seek to emulate it at the same time (Engeln-Maddox, 2006). Therefore, if a media literacy campaign is to really be effective, it has to change both explicit and implicit attitudes (Gurari et al., 2006).

The current study

Goals and hypotheses. The present study seeks to determine whether campaign efforts like Dove's Evolution commercial are successful at reducing negative female body image that often results from the pervasiveness of unrealistic media images, or whether they are, instead, counterproductive to their apparent goal due to sleeper effect processes. Collegiate women were exposed to either Evolution in its entirety, Evolution without the discounting cue, or a control commercial. After watching the commercial, the women were asked to indicate their perceptions of female beauty in addition to sharing information relating to their own self esteem and body image. One week later, the same participants were asked back to reflect on these same issues in order to determine whether the sleeper effect changed their attitudes over time.

I hypothesize that the women who view the Evolution video in its entirety will be more content with their body image and self esteem and less likely to

internalize the media's standards of beauty than those who see the control commercial. Furthermore, the experimental group exposed to the modified Evolution video will be the least content with their body image and self esteem when compared to the other two groups. However, I expect these differences to be observed only on the explicit level because women may be less capable of adjusting, correcting, and protecting their self-evaluations on the implicit level (Gurari et al., 2006). In fact, I expect there to be no differences on implicit perceptions of beauty among groups. Finally, I anticipate that over time, the explicit improvements in body image observed in the group who sees the full Evolution video will diminish. This is because the discounting cue will dissociate from the more emphasized content of the commercial, therefore causing the sleeper effect to weaken the commercial's immediate persuasiveness.

Sample. College women were chosen as the population of interest because of the elevated rates of body image disturbance and eating problems prevalent on university campuses (Engeln-Maddox, 2006; Irving & Berel, 2001). Even though most discussions and applications of media literacy have focused on children, college age women are an appropriate target population for this particular intervention because they report pressures from the media, but also because they possess the appropriate cognitive skills and life experience to benefit from this particular intervention (Irving & Berel, 2001; Eagle, 2007).

Design. The current study uses a between-subjects design. Some studies have measured body image both before and after exposure to images or media

literacy campaigns (e.g. Heinberg & Thompson, 1995), but this produces demand characteristics (Clay et al., 2005). Therefore, this study implements the between-subjects design, with implicit and explicit measures of body image and perceptions of beauty being measured only after exposure to the media campaigns.

In order to understand and better analyze any potential moderating factors that can affect these implicit and explicit measures, I implemented a series of covariate measures into the methodology. Participants are likely to be multidimensional, thus implementing covariate measures before they view one of the three commercials will allow me to statistically explain some of the systematic variance in the dependent measures. Specifically, I will measure the extent to which a participant internalizes the social pressures regarding prevailing standards of attractiveness that appear in the media. Media internalization has been postulated to be an important variable contributing to body dissatisfaction, disordered eating, and negative affect (Wilksch et al., 2006). Therefore, if necessary, I can use high or low levels of media internalization as a moderator to help explain why certain individuals are more or less affected by the media (Yamamiya et al., 2005).

Also, as mentioned above, research suggests that if a media literacy campaign is to really be effective, it has to change both explicit and implicit attitudes (Gurari et al., 2006). Thus, it is important to integrate a research design that measures both. This way, the results can either confirm or improve the

effectiveness of a current media literacy campaign for helping women resist the internalization of the media's harmful beauty standards.

Finally, in order to assess any influence of the sleeper effect on participants, the administration of the first session and the second session will be spaced approximately one week apart. This one week time difference is arbitrarily chosen for convenience since a meta-analytic review suggested that there are no moderating effects of the length of time between the presentation of the communication and the delayed measures of persuasion (Kumkale & Albarracin, 2004).

Method

Participants

A total of 102 female Illinois Wesleyan students were recruited to participate in the present study. These participants reflected the racial makeup of the Illinois Wesleyan student population and were at least eighteen years of age. They were pooled from general or social psychology courses and volunteer announcements. The general psychology students received three research credits for their time, social psychology students received extra credit, and the student volunteers were placed in a drawing to win one of three \$50 gift certificates to the venue of their choice.

Measures: Covariates

Demographics. Participants were asked to provide general background information about themselves such as their height, weight, year in school, race,

and socioeconomic status (See Appendix A). Height and weight were used to calculate the participants' body mass index (BMI) as detailed on the Centers for Disease Control and Prevention website (www.cdc.gov). BMI has been shown to relate to appearance perceptions and body image (Kennett & Nisbet, 1998; Weaver & Byers, 2006). In addition, socioeconomic status was assessed because it is pertinent to participants' exposure to and attitudes about advertisements and products like those in the current study (Dines & Humez, 1995; Gorn & Goldberg, 1977; Peretti & Lucas, 1975).

Self-rating of Physical Attractiveness. In order to determine if one's own physical attractiveness influences relevant judgments about advertisement appeal, participants were asked to complete a rating of their own physical attractiveness. Using a ten-point Likert scale (where 1 = extremely unattractive and 10 = extremely attractive), participants answered the following question: "From your own perspective, how physically attractive are you?" (See Appendix B for Self-rating of Physical Attractiveness questionnaire).

Sociocultural Attitudes Toward Appearance Questionnaire-3 (SATAQ-3). In order to assess the awareness and internalization of cultural beauty ideals in the media, the SATAQ-3 was employed (Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004; $\alpha=.96$ for both Sessions 1 and 2). Using a 5-point Likert scale (where 1=completely disagree and 5=completely agree), participants were asked to respond to 30-items that address the following four subscales: Information (I; 9 items; $\alpha=.94$ for both Sessions), Pressures (P; 7 items; $\alpha=.93$ and $\alpha=.94$ for

Sessions 1 and 2 respectively), Internalization-General (IG; 9 items; $\alpha=.94$ for both Sessions), and Internalization-Athlete (I-A; 5 items; $\alpha=.87$ and $\alpha=.89$ for Sessions 1 and 2 respectively). Sample items include: "TV programs are an important source of information about fashion and 'being attractive.' (I)" "I've felt pressure from TV or magazines to lose weight. (P)" "I try to look like the people on TV. (IG)" "I try to look like sports athletes (IA)." (See Appendix C for the complete SATAQ-3). Final scores on this scale were obtained by taking the mean of the responses overall and for each subscale, such that higher scores represent a greater internalization of the cultural standard of beauty. No items are reverse-scored in this scale.

Commercial/Movie Recognition. Participants may have already been exposed to and affected by media literacy campaigns, specifically the Dove Evolution video manipulated as an independent variable. Therefore, it was important to verify if participants, particularly those in the control group, had been exposed to such videos prior to the study, as it might have affected their answers to the dependent measures. Thus, participants were asked if they recognized any of a series of five screen shots that reflected two media literacy prevention campaigns (i.e., Dove's Evolution and *Killing Us Softly*) and three filler commercials or movies (See Appendix D for the 5 screen shots). Directly next to each screen shot, the following question appeared: "Do you recognize this movie/commercial?" The participant was then prompted to select one of the following answer choices: A.) Yes B.) No or C.) I am not sure. (See Appendix D for the Commercial/Movie

Recognition Questionnaire).

Measures: Implicit Dependent Measures

Implicit Association Test. The Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) is designed to indirectly measure participants' implicit association between attractiveness and positivity. This was gauged by participants' quick categorization of attractive and unattractive photos and positive and negative words.

The attractive and unattractive women in the photos were selected from a commonly used website, www.hotornot.com, which includes photos of individuals and ratings of attractiveness from 1 to 10 (where 1=not [attractive] and 10=hot [very attractive]). Anyone who enters the site is prompted to rate the photograph on the screen based on the aforementioned Likert scale. Scores for these pictures are averaged to determine the individual's "official rating." Over 32 million photos have been submitted and over 13 billion votes have been cast. For the purposes of this study, I selected ten photos of women (five attractive stimuli and five unattractive stimuli) who are facing forward and have neutral smiles. The five stimuli considered unattractive were of women who received an "official rating" between 1 and 3. Conversely, the five photographs considered attractive were of women who received a mean rating between 8 and 10 (see Appendix E for photos). Positive words used in the IAT were nice, good, loved, superior, and wonderful, whereas the negative words included were mean, bad, hated, inferior, and horrible (Gurari et al., 2006).

In order to give participants categorization practice, during the first phases, called single-category blocks, participants were asked to categorize the women in the photographs as either attractive or unattractive after a training phase in which participants were shown which photographs fit into each category. In addition, there were single-category blocks in which participants categorized words as positive or negative.

Once participants had some practice with the categorization task, they were exposed to a series of dual-category blocks to assess the associative strength between attractiveness and valence. In the dual-category blocks, participants were asked to sort stimuli using two response keys. The logic behind the test is that when two concepts are strongly associated and belong to categories paired on the same response key, the categorization task is easier than when two weakly associated concepts are paired on the same response key.

Since we are interested in the implicit associations between attractive and unattractive women and valence, in the two dual-category blocks, images of attractive and unattractive women and positive or negative words were presented one at a time in random order. In the first of the counterbalanced, dual-category blocks, the participants were prompted to press the 'e' key when *either* an attractive women *or* a positive word was shown and to press the 'i' key when *either* an unattractive woman *or* a negative word was shown. To complete the second dual-category block, participants were asked to press the 'e' key when *either* an unattractive woman *or* a positive word was shown and to press the 'i'

key when *either* an attractive woman *or* a negative word was shown.

If participants implicitly associate attractiveness with positivity, reaction times on the block in which attractive and positive are paired on the same response key should be quicker than responses on the other dual category block. This "IAT effect" is calculated as a difference in the reaction times between the two dual category blocks, with larger values indicating more positive associations with attractive women.

Measures: Explicit Dependent Measures

Advertising Effectiveness. After participants were exposed to the commercial (see procedure section for more details), they were asked to assess the advertisement's overall effectiveness using the scale developed by Smoak, Marsh, and Dovidio (2005; $\alpha=.94$). For each advertisement, participants were asked to rate, on a 7-point Likert scale (where 1 = strongly disagree and 7 = strongly agree), whether they agreed or disagreed with 15 statements such as: "This ad is effective overall." "This ad prompts me to take action." "The topic addressed in this ad is not at all important." (1 item reverse scored; see Appendix F for the complete Advertising Effectiveness Measure.) Participants' final scores on this scale were obtained by taking the mean of their responses to the items, such that higher scores indicate that participants are more satisfied with the advertisement's effectiveness.

General Self Esteem. Participants' overall global self esteem was assessed by the Rosenberg Self Esteem Scale (Rosenberg, 1965; $\alpha=.86$ and $\alpha=.88$ for Sessions 1

and 2 respectively). Using a 4-point Likert scale, participants gauged whether they strongly agreed (1), agreed (2), disagreed (3), or strongly disagreed (4) with 10 statements such as the following: "On the whole, I am satisfied with myself." "I feel that I have a number of good qualities." "All in all, I am inclined to feel that I am a failure" (5 items reverse scored; see Appendix G for the complete Rosenberg Self Esteem Scale). Participants' final scores on this scale were obtained by taking the mean of their responses to the items, such that higher scores indicate that participants have a higher general self-esteem.

Appearance-based Self-esteem. Appearance-based self-esteem was assessed by the 6-item appearance subscale from the Heatherton and Polivy State Self-Esteem Measure (Heatherton & Polivy, 1991; $\alpha=.83$ and $\alpha=.84$ for Sessions 1 and 2 respectively). This measure uses a 5-point Likert scale (where 1 = not at all and 5 =extremely). Sample items include: "I feel satisfied with the way my body looks right now." "I am pleased with my appearance right now." "I feel unattractive." (2 items reverse scored; see Appendix H for the complete appearance-based subscale from the Heatherton and Polivy State Self-Esteem Measure.) Participants' final scores on this scale were obtained by taking the mean of their responses to the items, such that higher scores indicate that participants have higher appearance-based self-esteem.

Self-rating of Physical Attractiveness. To assess whether the commercial seen affected participants' self perception of attractiveness, I asked participants again for their self-rating of attractiveness. This time, in order to remain inconspicuous,

this item was embedded into the Appearance Based Self Esteem Scale mentioned earlier. Thus, participants responded to the question: "How physically attractive do you think you are?" using the same Likert-scale as in the Appearance-based Self Esteem measure (where 1 = not at all and 5 = extremely). (See Appendix I for the Self-Rating of Attractiveness Scale.)

Big Five Personality Inventory. The five traditional domains of personality (openness, conscientiousness, extraversion, agreeableness, and neuroticism) were assessed by the 100 Unipolar Markers Inventory (Goldberg, 1992; $\alpha=.93$). This inventory served to further develop the cover story by assessing another dimension of our sample. By including other measures beyond body image assessment, participants were less likely to guess the main objectives of the study, thus preventing demand characteristics. Participants were asked to indicate on a 9-point Likert scale (where 1=Extremely Inaccurate and 9=Extremely Accurate), whether a list of 100 human traits described them. Sample traits include the following: "innovative" and "uninquisitive" for the openness factor, "organized" and "undependable" for the conscientiousness factor, "bold" and "timid" for the extraversion factor, "pleasant" and "rude" for the agreeableness factor, and "relaxed" and "high-strung" for the neuroticism factor. (See Appendix J for the Big Five Personality Test Inventory.) Participants' final scores on each of the five factors were obtained by calculating the mean of their responses to the items correlated with that particular factor, such that higher scores indicate having more of that personality trait.

Multidimensional Body-Self Relations Questionnaire (MBSRQ). Affective, cognitive, and behavioral components of body image were assessed by the MBSRQ. This self-report inventory consists of 10 subscales with an internal consistency ranging from .73 (for the Body Areas Satisfaction subscale) to .90 (for the Fitness Orientation subscale) for female participants (Cash, 2000). In the present study, I only used the following four appearance-based subscales: Appearance Evaluation (7 items, 2 reverse scored; $\alpha=.89$ for both Sessions 1 and 2), Appearance Orientation (12 items, 4 reverse scored; $\alpha=.83$ and $\alpha=.87$ for Sessions 1 and 2 respectively), Overweight Preoccupation (4 items; $\alpha=.78$ and $\alpha=.77$ for Sessions 1 and 2 respectively), and Self-Classified Weight (2 items; $\alpha=.83$ and $\alpha=.87$ for Sessions 1 and 2 respectively). The Appearance Evaluation (AE), Appearance Orientation (AO), and Overweight Preoccupation (OP) subscales use a 5-point Likert scale (where 1=Definitely Disagree and 5=Definitely Agree). Sample items include the following: "My body is sexually appealing" (AE), "I am careful to buy clothes that will make me look my best" (AO), and "I am very conscious of even small changes in my weight" (OP). The Self-Classified Weight subscale uses a 5-point Likert scale (where 1= Very Underweight and 5=Very Overweight) and includes the two following statements: "I think I am..." and "From looking at me, most other people would think I am..." (See Appendix K for the relevant MBSRQ subscales).

The participants' final scores overall and for each subscale were derived from the means of the aforementioned items after reverse scoring had been

applied. Higher scores for the Appearance Evaluation subscale indicate more positive feelings and satisfaction with appearance. Higher scores for the Appearance Orientation subscale indicate that participants' place greater importance on how they look, pay more attention to their appearance, and engage in extensive grooming behaviors. Participants who score highly on the Overweight Preoccupation subscale have higher fat anxiety, weight vigilance, dieting rituals, and eating restraint. Finally, those with higher Self-Classified Weight scores perceive and label themselves as more overweight.

Shopping Enjoyment Scale. In order to bolster the cover story's believability, we assessed participants' attitude toward shopping by combining two Shopping Enjoyment Scales ($\alpha=.92$). These three-item (O'Guinn & Faber, 1989; $\alpha=.86$) and four-item (Shim & Gehrt, 1996; $\alpha=.87$) questionnaires both use a 5-point Likert scale (where 1=strongly disagree and 5=strongly agree). Sample items include the following: "Shopping is fun" and "Going shopping is one of the enjoyable activities of my life." (2 items are reverse scored; See Appendix L for the complete Shopping Enjoyment Scale.) Participants' final scores on this scale were obtained by calculating the mean of their responses to the items after reverse scoring, such that higher scores indicate a more positive attitude toward shopping.

Body Esteem Scale. In order to measure the multidimensional construct of body esteem, participants were asked to complete the 32-item Body Esteem Scale (Franzoi & Shields, 1984; $\alpha=.91$). When administered to women, this self-report is

divided into three subscales that assess the body esteem dimensions of sexual attractiveness (SA; $\alpha=.81$), weight concern (WC; $\alpha=.89$), and physical condition (PC; $\alpha=.87$). Using a 5-point Likert scale (where 1=Have strong negative feelings and 5=Have strong positive feelings), participants rated how they feel about their own body. Sample body parts and functions include body scent, lips, sex drive, feet, and appearance of stomach (See Appendix M for the complete Body Esteem Scale). The participants' final scores will be obtained by calculating the mean of their responses overall and to the three subscales individually, such that higher scores indicate higher body esteem.

Objectified Body Consciousness Scale. The Objectified Body Consciousness Scale measures body consciousness in women through a series of three scales: surveillance (S), body shame (BS), and control beliefs (CB) (McKinley & Hyde, 1996; $\alpha=.84$ and $\alpha=.83$ for Sessions 1 and 2 respectively). On a 7-point Likert scale (where 1=strongly disagree and 7=strongly agree), participants were asked to answer 24 statements such as the following: "I rarely worry about how I look to other people. (S)" "When I'm not exercising hard enough, I question whether I am a good enough person. (BS)" and "I think a person is pretty much stuck with the looks they are born with. (CB)" (14 items reverse scored; see Appendix N for the complete Objectified Body Scale). For each participant, I calculated one mean score overall and one mean score for each subscale, resulting in a total of four scores. Higher scores on the surveillance, body shame, and control beliefs subscales indicate higher body esteem.

Advertisement Ratings. In order to see if the video manipulation affects ratings of the media (particularly perceptions of models' beauty), participants were asked to rate a series of 20 advertisements presented in random order (See Appendix O for advertisements). There were a total of ten types of products advertised: perfume, bottled water, fast food, accessories, shoes, i-pod, athletic-wear, clothing, cosmetics, and handbags. For each of the ten product types, there were 2 different advertisements - one featuring a beautiful, idealized woman and the other simply featuring the product. Thus, a comparison was not only made between the experimental and control groups, but also between the participant's ratings of two similar products. Participants were allowed to view each advertisement for as long as they liked and then answered a series of questions about each advertisement.

After participants were exposed to each of the 20 advertisements, they were asked to answer three to six questions about each ad, depending upon the absence or presence of a female model. Based on a 7-point Likert scale (where 1=not at all and 7=extremely), participants were asked to answer the following questions for all 20 advertisements: "How effective is this advertisement?" "How willing are you to buy the product advertised here?" and "How appealing is the advertisement?" For the 10 advertisements featuring a female model, the participants were asked to answer the following three questions in addition to the three outlined above: "How beautiful is the model in the ad?" "How attainable is this model's beauty?" and "How much would you like to look like

the model in this ad?" (See Appendix P for Advertisement Ratings Questionnaire). These questions were analyzed separately.

Manipulation Checks

In order to verify that the participants were aware of and can remember the experimental or control videos' content, participants were asked to answer two fill in the blank questions: 1.) Describe the commercial you watched earlier. 2.) Explain why you think this commercial is effective or ineffective (See Appendix Q for the Manipulation Check Questions).

Procedure

Session 1. Potential participants were told that the current study entitled "Advertising Appeal" is designed to investigate various factors that influence what makes advertising appealing. Upon arrival at the lab, participants were greeted by a female experimenter who invited them to take a seat in front of a computer. After welcoming the participants and quickly introducing the study, the experimenter obtained informed consent.

After informed consent was obtained, participants were then asked to follow the instructions on the computer screen and answer the presented questions using the mouse and keyboard. All data was collected via MediaLab and Inquisit software (Jarvis, 2006).

Participants were first asked to complete the first three covariate measures detailed above (Demographics, Self-rating of Attractiveness, and SATAQ-3). Then, participants were randomly assigned to view one of three advertisements.

One third of the participants viewed a 74-second commercial entitled "Evolution," which is a part of the Dove Campaign for Real Beauty. In this advertisement, a woman appears onscreen completely unassisted by beauty products. This natural, moderately attractive woman is shown without makeup and hairstyling. However, within seconds the film elucidates the dramatic transformation a hairdresser and makeup artist can cause with regard to her appearance. The woman's attractiveness improves dramatically as she poses for a photo shoot. Once a photograph of the woman is chosen, the commercial illustrates how a graphic designer and computer software can transform this attractive, cosmetically enhanced woman into a flawless model. The video continues to demonstrate how this unnaturally transformed image becomes the focus of a billboard advertisement. Furthermore, it illustrates how this woman of average attractiveness has transformed into a beautiful model bearing almost no resemblance to the same woman featured at the beginning of the commercial. The screen transitions to a black background with the sentence "No wonder our perception of beauty is distorted," which implies that the media transforms natural images into unnatural images and therefore is responsible for the unrealistic expectations women have regarding their appearance. The final two scenes promote the Dove campaign by stating, "Take part in the Dove Real Beauty Workshop for Girls. Visit campaignforrealbeauty.ca" (second to last scene) and "The Dove Self Esteem Fund" (last scene featuring the Dove trademark).

The second third of the participants viewed this same Dove commercial, but it was modified such that the video ended with the billboard screen shot. Since the commercial no longer contained the statement "No wonder our perception of beauty is distorted" or the Dove Campaign For Real Beauty Advertisement, the message of the commercial now implied that women should continue to pursue the unnatural transformations illustrated in the video in order to be considered attractive and meet the beauty norms held by society.

The last third of the participants were randomly assigned to view a 120-second commercial advertising Honda, a car manufacturer. This commercial featured no people, and participants in this group served as the control. The commercial demonstrates, using a domino effect, how all the pieces of a car work together flawlessly to create the final, working product. In the last ten seconds of the commercial a male voice says, "Isn't it nice when things just work?" as the completed Honda Accord rolls off a platform and into the foreground. This commercial served as the control because it illustrates a process of achieving perfection, much like the Dove video. However, since there were no people in the commercial, participants were not inclined to desire this process as a means of achieving their own perfection.

After they viewed their assigned commercial, participants were informed that the experimenters would like to measure retention of a commercial (and its subsequent appeal) following a distracter task. They were then told that the distracter task is a task in which they will be asked to categorize words and

pictures. The instructions for the IAT appeared on the screen, and participants were asked to follow the instructions to complete the IAT. In summary, they believed that the IAT was a filler task, even though it was analyzed as a dependent measure, as outlined above.

After completing the IAT, the participants returned their focus to the commercial they saw earlier by answering the two-question manipulation check. Directly after completing these questions, participants were asked to complete the Advertisement Effectiveness Scale.

Continuing with the cover story, participants were then told that, in order to ensure a representative sample of participants, they would be asked a few more questions. These questions included the General Self Esteem Scale, the Appearance Based Self Esteem, the Self-Rating of Physical Attractiveness, the Big-Five Personality Inventory, the MBSRQ, the Shopping Enjoyment Scale, the Body Esteem Scale, and the Objectified Body Consciousness Scale (in this order).

Once the participants completed the above measures, they were asked to rate the series of ten advertisements mentioned above (see Appendix N for advertisements). As soon as all ten advertisements were rated, the Commercial/Movie Recognition questionnaire concluded the experiment. After the last screen shot was rated, the experimenter thanked the participants and set up a time for Session 2 about one week later.

Session 2. In order to test the Sleeper Effect hypothesis, all participants were asked back to complete a follow-up study. One week after Session 1, the

participants returned to the lab to answer the General Self Esteem Scale, the Appearance Based Self Esteem Scale, the Self-Rating of Physical Attractiveness Scale, the SATAQ-3, the MBSRQ, and the Objectified Body Consciousness Scale. As soon as they completed the aforementioned measures, they were thanked and debriefed.

Results

Manipulation Checks and Participation Exclusion

First, in order to ensure that the participants were aware of and correctly remembered the experimental and control videos' content, the two manipulation check questions were carefully assessed. Investigation of the responses indicated that all participants included relevant and accurate details in their description of the commercial, and thus the data could be used for further analysis. However, one participant did not return for Session 2. Therefore, Session 1 maintained a total of 102 participants, with 34 females in each of the three commercial conditions, and Session 2 dropped to a total of 101 participants. The participant who did not return saw the modified Dove commercial in Session 1, thereby reducing the number of participants in that condition to 33 for Session 2.

Study Design and Covariates

The current research utilized a between-subjects design with implicit and explicit measures of body image and perceptions of beauty measured both immediately and one week after exposure to the media campaigns. However, before viewing one of the three commercials, participants answered a series of

measures that could serve as potential covariates including socioeconomic status, a self rating of physical attractiveness, and level of media internalization as measured by the Sociocultural Attitudes Toward Appearance Questionnaire (SATAQ-3). An analysis of these measures indicated that participants' self rating of physical attractiveness served as a significant covariate and therefore will be included as a covariate in all subsequent analyses.

Advertisement Effectiveness

The first analysis conducted was a between-subjects, univariate analysis of covariance (ANCOVA), with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and Honda "Cog") serving as a predictor of advertisement effectiveness ratings. Although the difference between the complete Evolution video and the modified version was minimal, the analysis indicated that all three ads were differentially effective ($F(2, 98) = 67.096, p = .000$, see Figure 1). Post-hoc analyses suggested that participants were significantly less convinced of Evolution's effectiveness when it did not conclude with the line "No wonder our perception of beauty is distorted" as indicated by a mean rating of effectiveness of 5.244 (out of 7) for the complete commercial and a mean rating of 4.716 (out of 7) for the modified commercial. Furthermore, both versions of the Evolution commercial were rated as significantly more effective than the Honda "Cog" commercial ($M = 3.096$).

Explicit Self Esteem and Body Esteem Measures: Session 1

It was hypothesized that participants' body esteem and self esteem would

be differentially influenced by the commercial viewed. More specifically, it was hypothesized that those who saw the Dove Evolution commercial in its entirety would score highest on the following explicit dependent measures: General Self Esteem, Appearance Based Self Esteem, the Self-Rating of Attractiveness, the Multidimensional Body-Self Relations Questionnaire (MBSRQ), the Body Esteem Scale, and the Objectified Body Consciousness Scale. I also hypothesized that the lowest scoring group would be the participants exposed to the modified Evolution video because of its omission of the phrase "No wonder our perception of beauty is distorted." In order to assess whether the Evolution video, whether seen in whole or in part, had an immediate effect on participants' perceived self esteem and body image in Session 1, a series of ANCOVAs were again conducted with the commercial viewed serving as the independent variable.

General Self Esteem. A between-subjects, univariate ANCOVA, was conducted, with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and Honda "Cog") serving as a predictor of general self esteem. The ANCOVA indicated a significant main effect of condition ($F(2, 98) = 5.679, p = .005$, see Figure 2). Post-hoc analyses indicated that the mean for the participants who viewed the full commercial was significantly lower than the mean for the participants who viewed the modified commercial ($M_s = 2.941$ and 3.262 , respectively, $p = .005$). No other means were significantly different from one another. Thus, those that saw the modified commercial had the highest self-

esteem overall, followed by the control condition and then the full commercial.

Appearance-Based Self Esteem. A between-subjects, univariate ANCOVA, was conducted, with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and Honda "Cog") serving as a predictor of appearance-based self esteem. The ANCOVA indicated a non-significant main effect of condition for appearance based self esteem ($F(2, 98) = .647, p = .526$, see Figure 3).

Self-Rating of Physical Attractiveness. A between-subjects, univariate ANCOVA, was conducted, with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and Honda "Cog") serving as a predictor of participant's self perceptions of physical attractiveness. The ANCOVA indicated a non-significant main effect of condition ($F(2, 98) = .565, p = .570$, see Figure 4). Furthermore, an additional analysis was completed to determine whether participants' self rating of physical attractiveness changed after being exposed to the respective commercial in their condition. Since I asked participants to indicate their level of self-attractiveness on different scales before and after the commercial, participants' pre-commercial and post-commercial self-ratings of attractiveness were transformed to z-scores and compared. The analysis of variance (ANOVA) suggested no significant main effect of condition ($F(2,99) = .781, p = .461$).

MBSRQ. A series of between-subjects, univariate ANCOVAs, were conducted for the entire MBSRQ measure and then its four subscales, with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and

Honda "Cog") serving as a predictor of body image. The first ANCOVA indicated a significant main effect of condition for the complete MBSRQ measure ($F(2, 98) = 4.712, p = .011$, see Figure 5). Post-hoc analyses indicated that the mean for the participants who viewed the full commercial was significantly lower than the mean for the participants who viewed the control commercial ($M_s = 3.139$ and 3.393 , respectively, $p = .011$). No other means were significantly different from one another. Thus, those who saw the complete commercial had lower body image than those who viewed the control commercial.

A closer look at the MBSRQ subscales indicated that there was a significant main effect of condition on Appearance Orientation ($F(2, 98) = 3.845, p = .025$, see Figure 6). Post-hoc analyses indicated that, consistent with the findings from the complete scale, the mean for the participants who viewed the full commercial was significantly lower than the mean for the participants who viewed the control commercial ($M_s = 3.250$ and 3.613 , respectively, $p = .025$). No other means were significantly different from one another. Thus, those who saw the complete commercial had lower body image in relation to orienting their appearance than those who viewed the control commercial.

There were no significant main effects of condition on the remaining subscales: Appearance Evaluation ($F(2, 98) = 2.280, p = .108$, see Figure 7), Weight Preoccupation ($F(2, 98) = 1.993, p = .142$, see Figure 8), and Self Classified Weight ($F(2, 98) = 1.626, p = .202$, see Figure 9).

Body Esteem Scale. A series of between-subjects, univariate ANCOVAs,

were conducted for the entire Body Esteem Scale and then its three subscales, with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and Honda "Cog") serving as a predictor of body esteem. The first ANCOVA indicated a non-significant main effect of condition for the complete Body Esteem Scale ($F(2, 98) = 2.229, p = .113$, see Figure 10). In addition, a closer analysis of the Body Esteem subscales indicated significant main effects for Sexual Attractiveness ($F(2, 98) = 3.796, p = .026$, see Figure 11) and Physical Condition ($F(2, 98) = 3.552, p = .032$, see Figure 12), but a non-significant main effect of condition on Weight Concern ($F(2, 98) = 1.592, p = .209$, see Figure 13).

Post-hoc analyses indicated that for Sexual Attractiveness, the mean for the participants who viewed the full commercial was significantly lower than the mean for the participants who viewed the modified commercial ($M_s = 3.503$ and 3.797 , respectively, $p = .026$). No other means were significantly different from one another. Thus, those who saw the complete commercial had lower body esteem for body parts and functions related to sexual attractiveness than those who viewed the modified commercial. For Physical Condition, post-hoc analyses indicated that the mean for participants who viewed the modified commercial was significantly lower than the mean for the participants who viewed the control commercial ($M_s = 3.428$ and 3.853 , $p = .032$). No other means were significantly different from one another. Thus, those who saw the modified commercial had lower body esteem for body parts and functions related to physical condition than those who saw the control commercial.

Objectified Body Consciousness Scale. A series of between-subjects, univariate ANCOVAs, were conducted for the entire Objectified Body Consciousness Scale and its three subscales, with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and Honda "Cog") serving as a predictor of body esteem. The first ANCOVA indicated a non-significant main effect of condition for the complete Objectified Body Consciousness Scale ($F(2, 98) = .813, p = .446$, see Figure 14). A closer look at the Objectified Body Consciousness Subscales also indicated a marginally significant main effect for Surveillance ($F(2, 98) = 2.420, p = .094$, see Figure 15), but non-significant main effects of condition for Shame ($F(2, 98) = 1.651, p = .197$, see Figure 16) and Control ($F(2, 98) = 1.618, p = .204$, see Figure 17). Post-hoc analyses indicated that for Surveillance, the mean for the participants who viewed both the full and modified commercials was marginally higher than the mean for the participants who viewed the control commercial ($M_s = 3.776, 3.765$, and 3.313 , respectively, $p = .094$). Thus, those who saw Evolution, either in whole or in part, had higher levels of body surveillance than those who saw the control commercial.

Explicit Self Esteem and Body Esteem Measures: Session 2

It was hypothesized that the participants who were exposed to the full Dove Evolution video would experience a decrease in body esteem and self esteem over time due to forgetting the discounting cue at the end of the video. It was hypothesized that there would be no significant changes over time for the participants exposed to the modified commercial or the control commercial. The

explicit dependent measures tested again in Session 2 were the following:

General Self Esteem, Appearance Based Self Esteem, the Self-Rating of Attractiveness, the MBSRQ, and the Objectified Body Consciousness Scale. In order to assess the self esteem and body esteem constructs as a function of condition, the same ANCOVAs from Session 1 were conducted on the data collected from participants one week later. Furthermore, differences between Session 1 and Session 2 scores were computed for each participant to determine whether there was an overall change in relevant scores over time.

General Self Esteem. A univariate ANCOVA indicated a significant main effect of condition on general self esteem ($F(2, 98) = 3.201, p = .045$, see Figure 2). Post-hoc analyses indicated that the mean for the participants who viewed the full commercial was significantly lower than the mean for the participants who viewed the modified commercial ($M_s = 3.068$ and 3.311 , respectively, $p = .045$). This is the same pattern found in Session 1. No other means were significantly different from one another. Thus, those who saw the modified commercial had the highest self-esteem overall, followed by the control condition and then the full commercial.

Appearance-Based Self Esteem. A between-subjects, univariate ANCOVA, was conducted, with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and Honda "Cog") serving as a predictor of appearance-based self esteem. The ANCOVA indicated a non-significant main effect of condition ($F(2, 98) = .167, p = .847$, see Figure 3).

Self-Rating of Physical Attractiveness. A between-subjects, univariate ANCOVA, was conducted, with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and Honda "Cog") serving as a predictor of participant's self perceptions of physical attractiveness. The ANCOVA indicated a significant main effect of condition ($F(2, 98) = 4.946, p = .009$, see Figure 4). Post-hoc analyses indicated that the means for the participants who viewed both the full commercial and the modified commercial were significantly lower than the mean for the participants who viewed the control commercial ($M_s = 3.215, 3.284, \text{ and } 3.568$, respectively, $p = .009$). This is the same pattern found in Session 1. Thus, those who saw the Dove commercial, either in whole or in part, rated their physical attractiveness lower than those who saw the control commercial.

MBSRQ. A series of between-subjects, univariate ANCOVAs, were conducted for the entire MBSRQ measure and its four subscales, with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and Honda "Cog") serving as a predictor of body image. The first ANCOVA indicated a significant main effect of condition for the complete MBSRQ ($F(2, 98) = 6.114, p = .003$, see Figure 5). Post-hoc analyses indicated that the mean for the participants who viewed the full commercial was significantly lower than the mean for the participants who viewed the control commercial ($M_s = 3.113 \text{ and } 3.398$, respectively, $p = .003$). This is the same pattern found in Session 1. No other means were significantly different from one another. Thus, those who saw the complete commercial had the lowest body image overall, followed by the

modified commercial, and then the control commercial.

A closer look at the MBSRQ subscales indicated that there was a significant main effect of condition for the Appearance Orientation subscale ($F(2, 98) = 4.393, p = .015$, see Figure 6). Post-hoc analyses indicated that the mean for the participants who viewed the full commercial were significantly lower than the mean for the participants who viewed the control commercial ($M_s = 3.182$ and 3.606 , respectively, $p = .015$). This is the same pattern found in Session 1. No other means were significantly different from one another. Thus, those who saw the complete commercial had lower body image in relation to orienting their appearance than those who viewed the control commercial.

There were no significant main effects for the remaining subscales: Appearance Evaluation Subscale ($F(2, 98) = 1.108, p = .335$, see Figure 7), the Weight Preoccupation Subscale ($F(2, 98) = .847, p = .432$, see Figure 8), and the Self Classified Weight Subscale ($F(2, 98) = 1.800, p = .171$, see Figure 9).

Objectified Body Consciousness Scale. A series of between-subjects, univariate ANCOVAs, were conducted for the entire Objectified Body Consciousness Scale and its three subscales, with commercial viewed (3 levels: full Dove Evolution, modified Dove Evolution, and Honda “Cog”) serving as a predictor of body esteem. The first ANCOVA indicated a non-significant main effect of condition for the complete Objectified Body Consciousness Scale ($F(2, 98) = 1.243, p = .293$, see Figure 14).

A closer look at the Objectified Body Consciousness Subscales also

indicated marginal main effects for the Surveillance Subscale ($F(2, 98) = 2.502, p = .087$, see Figure 15), but non-significant main effects of condition for the Shame ($F(2, 98) = 1.231, p = .297$, see Figure 16) and Control Subscales ($F(2, 98) = .788, p = .458$, see Figure 17). Post-hoc analyses indicated that for the Surveillance subscale, the mean for participants who viewed both the full and modified commercials were marginally higher than the mean for the participants who viewed the control commercial ($M_s = 3.923, 3.782$, and 3.458 , respectively, $p = .094$). This is the same pattern found in Session 1. Thus, those who saw Evolution, either in whole or in part, had higher levels of body surveillance than those who saw the control commercial.

Change Over Time. As seen by Session 1 analyses, the commercial viewed influenced a number of explicit dependent measures of body image and self esteem. Session 2 analyses confirmed that many of the effects remained one week later. In order to doubly ensure that patterns were the same across time and not statistically significant, but in a different order, for example, analyses of the difference scores were conducted. Difference scores were created by subtracting Session 1 from Session 2 for all the aforementioned measures, and then a series of ANCOVAs were conducted as before. These analyses indicated whether patterns of means changed significantly across the one week time period.

Results suggested that most of the trends remained stable across the one week time period, as evidenced by non-significant main effects of condition for General Self Esteem, Appearance Based Self Esteem, Self-Rating of Physical

Attractiveness, MBSRQ (complete), MBSRQ Appearance Orientation, MBSRQ Weight Preoccupation, Objectified Body Consciousness (complete), Objectified Body Consciousness Surveillance, and Objectified Body Consciousness Shame.

However, not all the trends remained stable over that one week period. Analyses indicated that there were two significant and one marginal change in difference scores. A univariate ANCOVA indicated a significant main effect of condition on the difference score for the MBSRQ Self Classified Weight ($F(2, 98) = 3.096, p = .050$) and the Objectified Body Consciousness Control ($F(2, 98) = 3.452, p = .036$). Post-hoc analyses on Self Classified Weight indicated that the mean difference for the participants who viewed the full commercial was significantly lower than the mean difference for the participants who viewed the control commercial ($M_s = -.0882$ and $.0441$, respectively, $p = .050$). Thus, those who saw the full Dove commercial reported that they were significantly less overweight one week later when compared to those who saw the control commercial.

Post-hoc analyses for the Objectified Body Consciousness Control indicated that the mean difference for the participants who viewed the full commercial was significantly higher than the mean difference for the participants who viewed both the modified commercial and control commercial ($M_s = .183, -.139$, and $-.122$, respectively, $p = .036$). Thus, those who saw the full Dove commercial reported significantly stronger control beliefs a week later when compared to those who saw both the modified commercial and the control

commercial.

A univariate ANCOVA indicated a marginal main effect of condition on MBSRQ Appearance Evaluation ($F(2, 98) = 2.523, p = .085$). Post-hoc analyses indicated that the mean difference for the participants who viewed the modified commercial was significantly lower than the mean differences for the participants who viewed the control commercial ($M_s = -.075$ and $.097$, respectively, $p = .085$). Thus, those who saw the modified commercial reported marginally less satisfaction with their appearance one week later when compared to those who saw the control commercial.

Perceptions and Judgments of Beauty in the Media

I also examined whether participants' perceptions and judgments of beauty in the media would be differentially influenced by the commercial condition to which they were randomly assigned. More specifically, I hypothesized that the commercial would not only change their self perceptions of beauty, but it would also extend to perceptions about beauty for other women, particularly those in the media limelight. I predicted that those who saw the Dove Evolution commercial in its entirety would be the most critical of the models in advertisements. These concepts were analyzed with repeated measures ANCOVAs and between-subjects univariate ANCOVAs.

Effectiveness of advertisements with model vs. no model. In order to assess whether the commercial viewed had an effect on participants' evaluations of advertisements featuring female models, a 2 (advertisement type: model, no

model) \times 3 (commercial viewed: full Dove Evolution, modified Dove Evolution, or Honda "Cog") repeated measures ANCOVA was conducted with condition as a between subjects factor and advertisement type as the within subjects factor. The analysis indicated a non-significant main effect of condition ($F(2, 98) = .539$, $p = .585$, see Figure 18).

Judgment of beauty in models. In order to assess whether commercial viewed had an effect on participants' judgment of beauty in models, mean responses to the question "How beautiful is the model in the ad?" for the 10 advertisements featuring female models were analyzed using a between-subjects univariate ANCOVA. The analysis indicated a non-significant main effect of condition ($F(2, 98) = .310$, $p = .734$, see Figure 19).

Perceptions of beauty attainability in advertising. In order to assess whether commercial viewed had an effect on participants' perceptions of beauty attainability for models in advertisements, mean responses to the question "How attainable is this model's beauty?" were analyzed using a between-subjects univariate ANCOVA. The analysis indicated a non-significant main effect of condition ($F(2, 98) = .748$, $p = .476$, see Figure 20).

Desire to look like models in advertising. In order to assess whether commercial viewed had an effect on participants' judgment of beauty in models, mean responses to the question "How much would you like to look like the model in this ad?" were analyzed using a between-subjects univariate ANCOVA. The analysis indicated a non-significant main effect of condition ($F(2, 98) = 1.040$,

$p = .357$, see Figure 21).

Implicit Associations

Data preparation. In order to properly analyze the Implicit Association Test (IAT) data, a series of steps recommended by Greenwald et al. (1998) were implemented. First, trials where participants responded more quickly than 300 milliseconds or more slowly than 5000 milliseconds were recoded. In all, there were 3 trials (out of 20,200 trials) where participants responded more quickly than 300 milliseconds, and these were recoded to 300 milliseconds. In addition, there were 70 trials where participants responded more slowly than 5000 milliseconds, and these were recoded to 5000 milliseconds. Second, the three participants who had more than 15% error in their responses were removed from the data set. Finally, the mean latencies for the beautiful-positive block and the beautiful-negative block were calculated.

IAT. Though I recognized it is somewhat unconventional to hypothesize null results (and that null results may be due to many factors), it was hypothesized that the differences among condition would only be seen on the explicit level, thus creating no significant difference for IAT responses based on the commercial previously seen. This hypothesis was tested using a series of three univariate ANCOVAs.

Analysis indicated that there was no significant difference for the categorization of the beautiful-positive trials as a function of condition ($F(2, 95) = 1.600$, $p = .207$, see Figure 22). There was also no significant difference for the

categorization of the beautiful-negative trials as a function of condition ($F(2, 95) = 1.131, p = .327$, see Figure 23). Then, difference scores were calculated by subtracting the mean latencies for the beautiful-positive trials from the mean latencies for the beautiful-negative trials. Finally, an ANCOVA was conducted using these difference scores as the dependent variable, and that analysis was also non-significant ($F(2, 95) = .143, p = .867$, see Figure 24). As noted above, it is difficult to interpret null results, but it is important to note that these findings are consistent with the observation that the Dove Evolution video had a limited influence on implicit associations between beauty and positivity or negativity.

Discussion

Dove's Campaign for Real Beauty is responsible for promoting the business both nationally and internationally as well as exponentially improving its sales. The company's stated mission is to "make women feel more beautiful everyday" because they believe "women with strong confidence and positive self esteem are beautiful" (www.campaignforrealbeauty.com). However, to date, there has been no empirical assessment of the campaign. Therefore, the goals of the current study were to evaluate whether Dove's media literacy campaign, namely its popular commercial Evolution, is successful at reducing the negative female body image and low self esteem that often results from the pervasiveness of unrealistic media images.

Initially, the theoretical perspective on which I based the hypotheses was the sleeper effect. More specifically, I hypothesized that sleeper effect processes

would be responsible for limiting the potential success of the Evolution video over time, but I also hypothesized that Evolution would, at the very least, improve explicit ratings of self esteem and body image in the short term. However, the current results are not consistent with the sleeper effect rationale. First, the patterns found in the current data indicate that the complete Evolution video significantly *decreased* women's general self esteem and body image. Moreover, the patterns found remained stable over a one week time frame, suggesting that the influence of Evolution is not just a momentary, fleeting influence, but rather one that lasts at least a week.

Despite the negative influence that the Dove Evolution video had on participants' self esteem and body image, participants rated both the complete and the modified Evolution commercial as more effective than the control commercial. More importantly, even though there were minimal content differences between the two versions of the experimental video, participants significantly favored the unmodified version originally released by Dove.

In examining these results, there is sufficient reason to believe that the ending sentence "No wonder our perception of beauty is distorted," which was the sole difference between the two experimental videos, is responsible for some of the effects noted. When the phrase "No wonder our perception of beauty is distorted" was removed from the original video, participants reported higher self esteem and body image. This could perhaps be because, when this sentence is removed, participants have a more optimistic outlook toward achieving beauty.

Without the caveat at the end, the commercial may inspire the hope that it is feasible to transform from an average-looking woman to a gorgeous supermodel. In addition, it might be possible that the sentence acknowledges unrealistic expectations for women, but at the same time, it may remind them that they still do not, and cannot, live up to these standards.

Another potential explanation for the ending sentence's significant impact could be attributed to cognitive dissonance processes. Perhaps the women exposed to the complete commercial experienced a relative decrease in self esteem because they came to the disheartening realization that they are guilty of buying into this distorted perception of beauty. It seems that if this were the case, however, the participants would have tried to relieve their dissonance by rating the advertisements that featured scantily clad, thin, beautiful women at the end of the study more negatively. In other words, since Evolution elucidates the complicated process by which an average looking person can be morphed into a perfected model, I would suspect that the women viewing advertisements featuring this type of model shortly after seeing Evolution would be highly critical of other models' beauty, attest to the inability of attaining their crafted look, and report that they did not, in fact, desire that look for themselves. However, results indicated no such difference in the advertisement ratings occurring at the end of the study. All participants were equally likely to positively evaluate and desire the beauty reflected in the advertisements occurring at the end of the study.

These advertisement ratings are consistent with the implicit associations between beauty and positivity that were assessed within the current study. As hypothesized, analysis of responses to the Implicit Association Task (IAT) indicated that participants who saw Evolution, either in whole or in part, were just as likely as a control group to implicitly associate beautiful women with positive words. This is likely due to the fact that these associations are so entrenched in our culture and socialization that a short commercial would be expected to have limited success in actually altering these underlying associations. However, it is important to note once more that it is precarious to predict and interpret null results because they may occur for many reasons, including methodological errors. Nonetheless, the implicit patterns demonstrated in the current study were consistent with hypotheses and thus can lend tentative support to the notion that viewing Evolution is not sufficient to change implicit associations between beauty and positivity.

It is also important to note that some of the hypothesized patterns were not supported. Specifically, the commercial viewed had no effect on appearance based self esteem or participants' self perceptions of physical attractiveness. This could be, at least in part, due to the same rationale discussed above. Self perceptions of physical attractiveness are fairly thoroughly ingrained within a person and may be more aligned with a state variable rather than a trait variable. It is interesting, however, that Evolution did not significantly increase appearance-based self esteem, as this is one of the stated goals of their campaign.

Furthermore, results indicated that the commercial viewed had no effect on objectified body consciousness. This is perhaps because Evolution does not explicitly address female objectification; the woman in the Evolution video is not objectified nearly as much as women in other advertisements, for example, beer advertisements, are (Jhally, 2000). Lastly, it is not surprising that there were nonsignificant effects of the commercial viewed on the three measures related to body weight. Evolution only shows the transformation of a woman from the neck up and pays little, if any, attention to body size.

Implications

The current results have many implications. Theoretically, media literacy campaigns are designed with the intention of teaching strategies that will enable females to critically evaluate media messages and thus become better prepared to resist the internalization of unattainable beauty standards (Austin et al., 2007; Irving & Berel, 2001; Irving et al., 1998; Silverblatt, 2004). However, in this particular case, female participants reported experiences that were sufficiently in opposition to these goals after viewing the Evolution commercial.

As such, these findings implicate the importance of empirically evaluating media literacy campaigns, especially those connected to an entrepreneurial company whose primary intention is to improve sales. In order for Dove to sell beauty products, it would not be very cost effective to encourage its clientele to believe they are perfect as is. Feelings of inadequacy and imperfection need to be perpetuated in order to encourage the buying of beauty-enhancing products.

Therefore, one recommendation for a truly successful media literacy campaign is that it not be associated with capitalistic ventures.

According to past research, the hope is that effective media literacy interventions will eventually have a butterfly effect that will positively influence future generations (Irving et al., 1998). If young women of today learn to resist and critically examine unattainable images of beauty, they may be less likely to become mothers who encourage these same unattainable ideals for their daughters. However, research such as this reveals the difficulties in developing truly effective programs. The Dove Campaign for Real Beauty has received an abundance of praise for its efforts in challenging the narrow range of beauty accepted in the media and celebrating real women with real curves, and yet this highly acclaimed movement may be leaving women with feelings of inadequacy.

Therefore, this research underscores the importance of implementing other resources in conjunction with media literacy campaigns in order to create positive social change. For example, young girls and women need to receive a positive message about their appearance in order to improve feelings of self efficacy and fortunately, the media is not the only place they can receive this message (Field, 2002). Family members, teachers, and peers are vital socializing agents who have the ability to empower women and protect them from the physical, social, and psychological problems that are oftentimes associated with media induced negative body image. Thus, the power of these relationships should not be undermined or neglected.

Limitations and Future Directions

This study had a few limitations that future research should take into consideration. One potential limitation involves the placement of the Implicit Association Task. Since the particular stimuli used in the IAT were arbitrarily labeled as attractive and unattractive, exposure to these images could have primed perceptions and attitudes about beauty and thus affected future responses to dependent measures. Although the error variance that this may have caused was constant across conditions, the study could be replicated with the IAT presented after the explicit dependent measures. Replicating the study would also be recommended since the findings were counter to hypotheses.

Future research could also address these issues in a broader sample in order to help generalize the current results. Since the present study investigated predominantly Caucasian students from a small Midwestern university, the next step would be to include more diversity in age and race. For example, adolescent women could be included, perhaps not only within the Western world, but cross-culturally as well. Current research suggests that adolescence is a particularly vulnerable period for identity formation and that there is a consistent and significant drop in self esteem and body image as young girls enter puberty (Irving et al., 1998; Jhally, 2000; Wilksch et al., 2006). Also, extension of this study to cross-cultural venues would prove beneficial, not only because Dove avidly pushes its campaign internationally, but also because it could provide insight on how different cultures perceive and internalize the media's standards.

Furthermore, it would be interesting to extend the study to a male population. This way, constructs like sexual attraction and objectification of women could be observed. In the current study, women did not report different levels of self-objectification as a result of seeing either the entire or partial Evolution commercial or the control commercial, but it would be interesting to know if men are more likely to see women as objects upon viewing the Evolution video, thereby causing indirect objectification of women as a whole. In addition, the inclusion of male participants may provide information about how media literacy campaigns affect male perceptions of female beauty as well as their interactions with women. More importantly, their inclusion could provide insight into how men perceive themselves after viewing these campaigns. For example, it would be interesting to note whether men feel pressure to be particularly thin yet muscular in order to attract the ideal women they see continually portrayed in the media. Recent research has shown that men are increasingly sensitive to idealized media images (Cohane & Pope, 2001; Pope, Phillips, & Olivardia, 2000). Although women are the population predominantly targeted by the media, they are no longer the sole focus of media images and campaigns.

Finally, since all the measures in the present study are of a cognitive, perceptual nature, another future direction would be to assess the behaviors resulting from media literacy campaigns. As previously noted, this route of investigation could potentially lead to discoveries about eating disorders,

relationship patterns, and consumer expenditure.

Conclusion

In sum, it is surprising that Evolution does not entirely meet the goals of Dove's media literacy campaign, the Campaign for Real Beauty. Though it seems counterintuitive that a movement publicly claiming to promote positive self esteem and value healthy body image in women would release a commercial that actually lowered both of those constructs, the data in this study indicate that that is exactly the outcome. In short, this study suggests that Dove may not be accomplishing the goals they publicly advocate. However, it is important to note that whether Dove deliberately intended this result or not, Evolution makes for a very effective marketing strategy. Explicitly, women embrace its effectiveness, but underlying mechanisms target their insecurities, thus encouraging the sale of its advertised beauty products. If Dove is legitimately interested in improving the self esteem and body image of its customers, new marketing tactics should be employed.

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Figure Captions

Figure 1: Mean ratings of advertising effectiveness

Figure 2: The influence of commercial on general self esteem across session

Figure 3: The influence of commercial on appearance based self esteem across session

Figure 4: The influence of commercial on participants' self rating of physical attractiveness across session

Figure 5: The influence of commercial on the multidimensional body-self relations questionnaire (MBSRQ) across session

Figure 6: The influence of commercial on the MBSRQ-appearance orientation subscale across session

Figure 7: The influence of commercial on the MBSRQ-appearance evaluation subscale across session

Figure 8: The influence of commercial on the MBSRQ-weight preoccupation subscale across session

Figure 9: The influence of commercial on the MBSRQ-self-classified weight subscale across session

Figure 10: The influence of commercial on body esteem

Figure 11: The influence of commercial on body esteem-sexual attractiveness subscale

Figure 12: The influence of commercial on body esteem-physical condition subscale

Figure 13: The influence of commercial on body esteem-weight concern subscale

Figure 14: The influence of commercial on the objectified body consciousness scale across session

Figure 15: The influence of commercial on the objectified body consciousness-surveillance subscale across session

Figure 16: The influence of commercial on the objectified body consciousness-shame subscale across session

Figure 17: The influence of commercial on the objectified body consciousness-control beliefs subscale across session

Figure 18: The influence of commercial on ratings of advertisements featuring models and no models

Figure 19: The influence of commercial on perceptions of models' beauty in advertisements

Figure 20: The influence of commercial on perceptions of attainability of models' beauty in advertisements

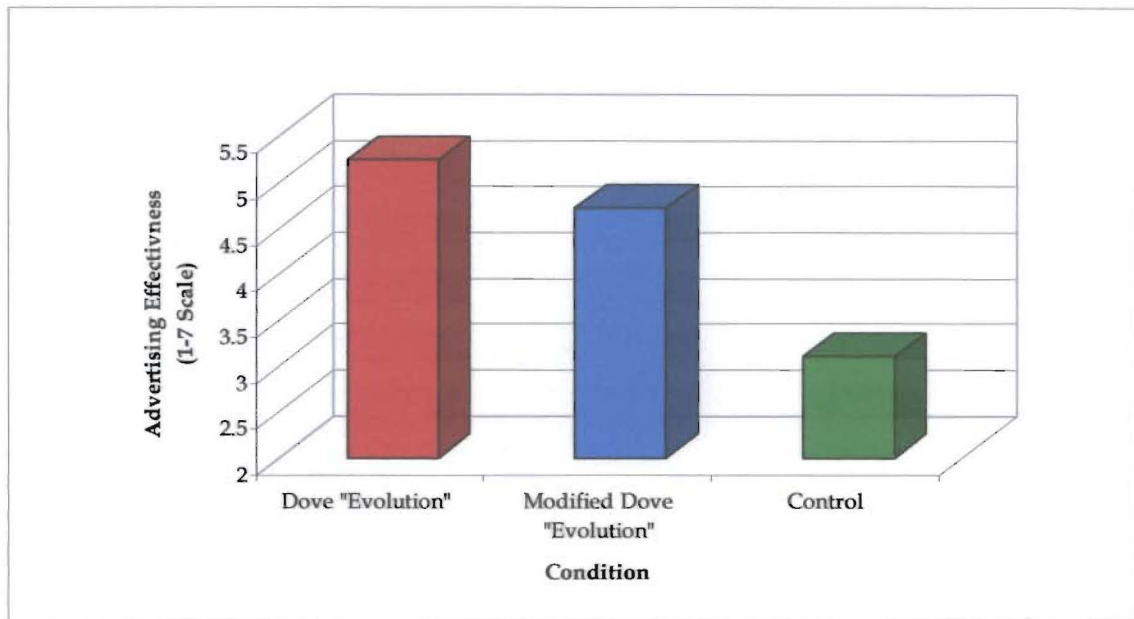
Figure 21: The influence of commercial on subsequent desire to look like models in advertisements

Figure 22: The influence of commercial on implicit pairing of beautiful women and positive words

Figure 23: The influence of commercial on implicit pairing of beautiful women and negative words

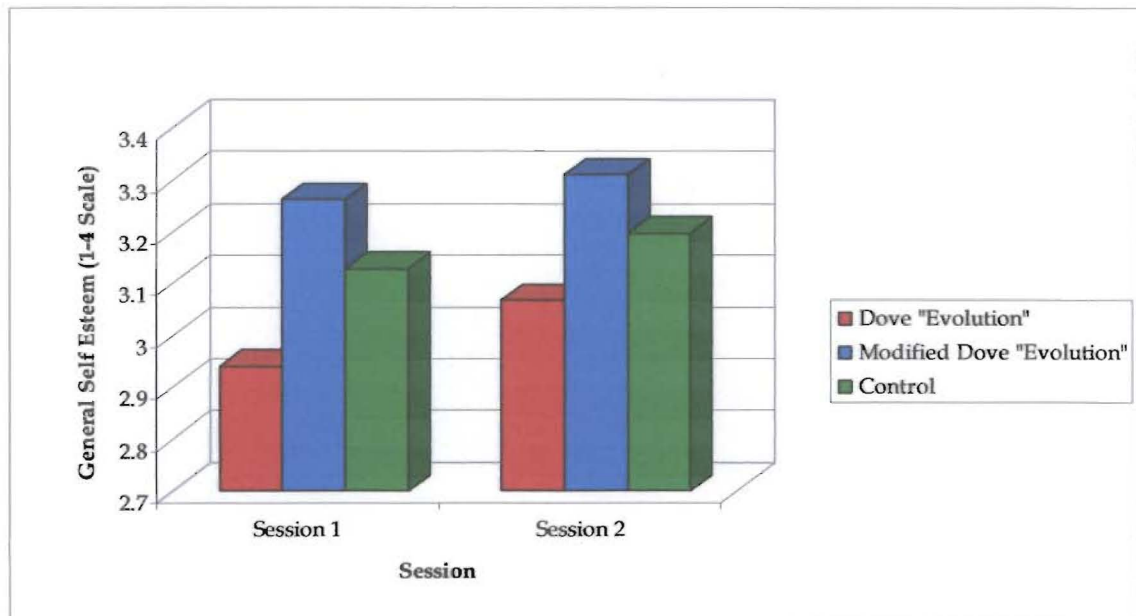
Figure 24: The influence of commercial on mean latency differences of implicit associations for beautiful women and negative words and beautiful women and positive words

Figure 1: Mean ratings of advertising effectiveness



Note. $F(2, 98) = 67.096, p = .000$

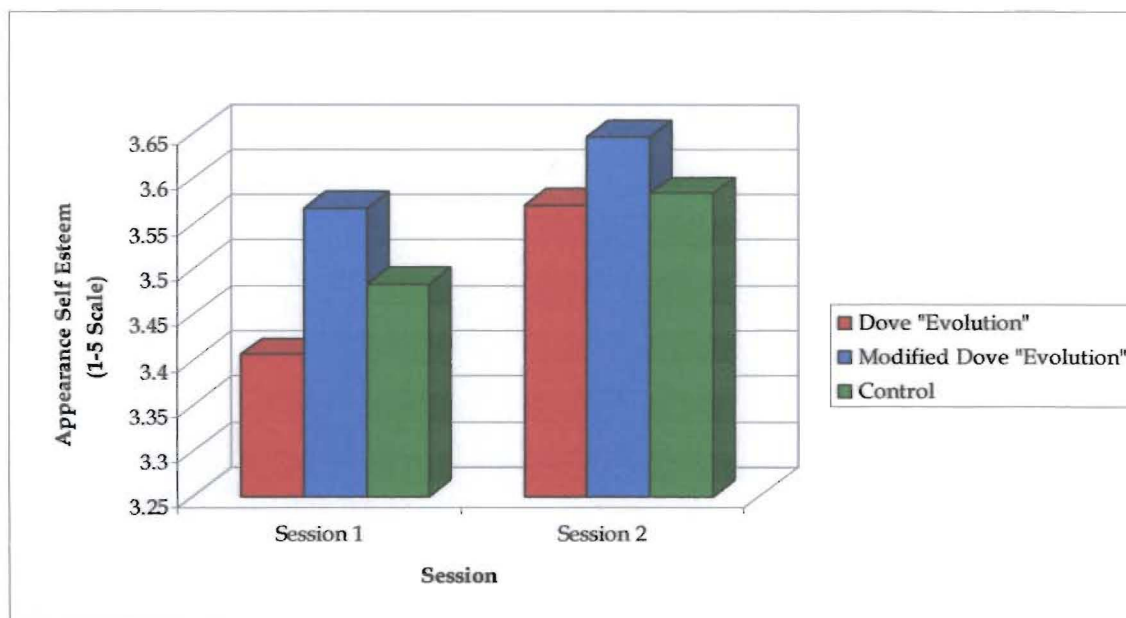
Figure 2: The influence of commercial on general self esteem across session



Note. Session 1: $F(2, 98) = 5.679, p = .005$

Session 2: $F(2, 98) = 3.201, p = .045$

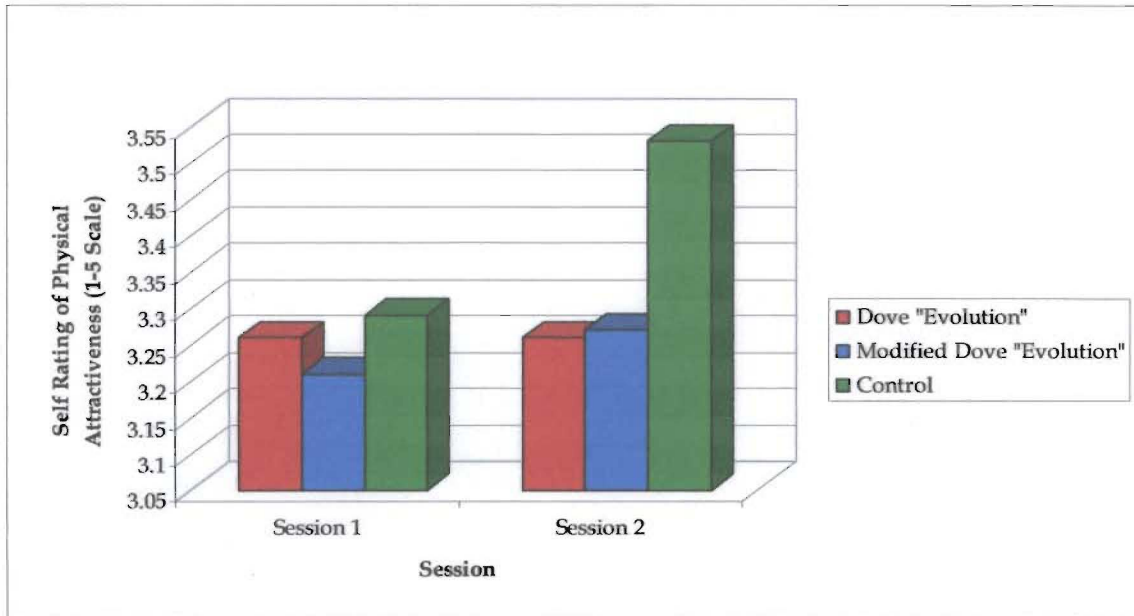
Figure 3: The influence of commercial on appearance based self esteem across session



Note. Session 1: $F(2, 98) = .647, p = .526$

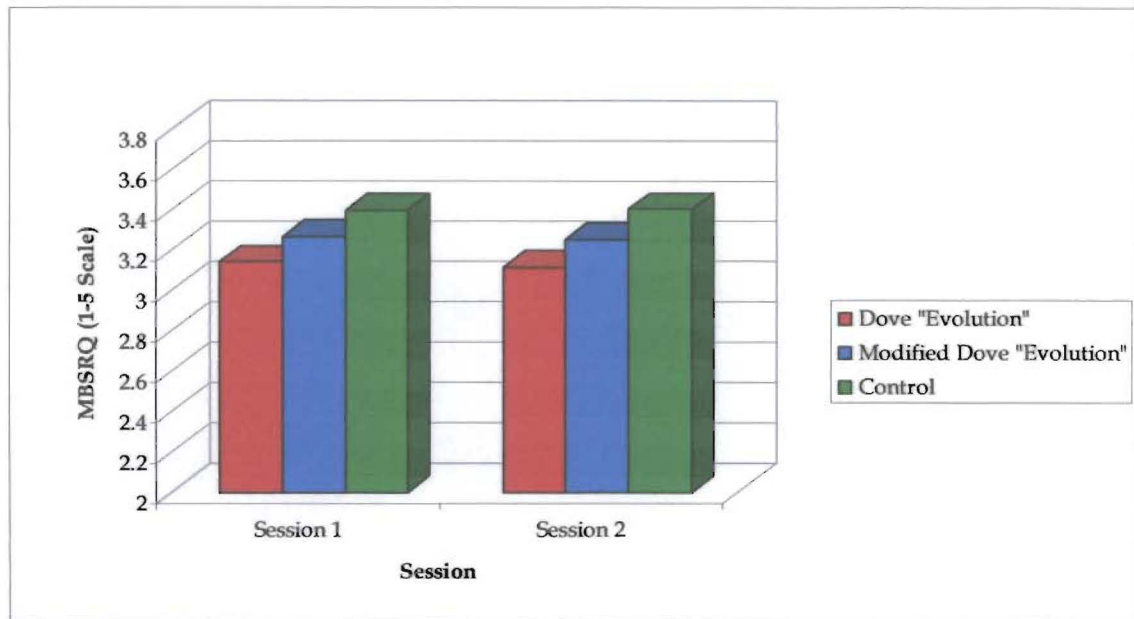
Session 2: $F(2, 98) = .167, p = .847$

Figure 4: The influence of commercial on participants' self rating of physical attractiveness across session



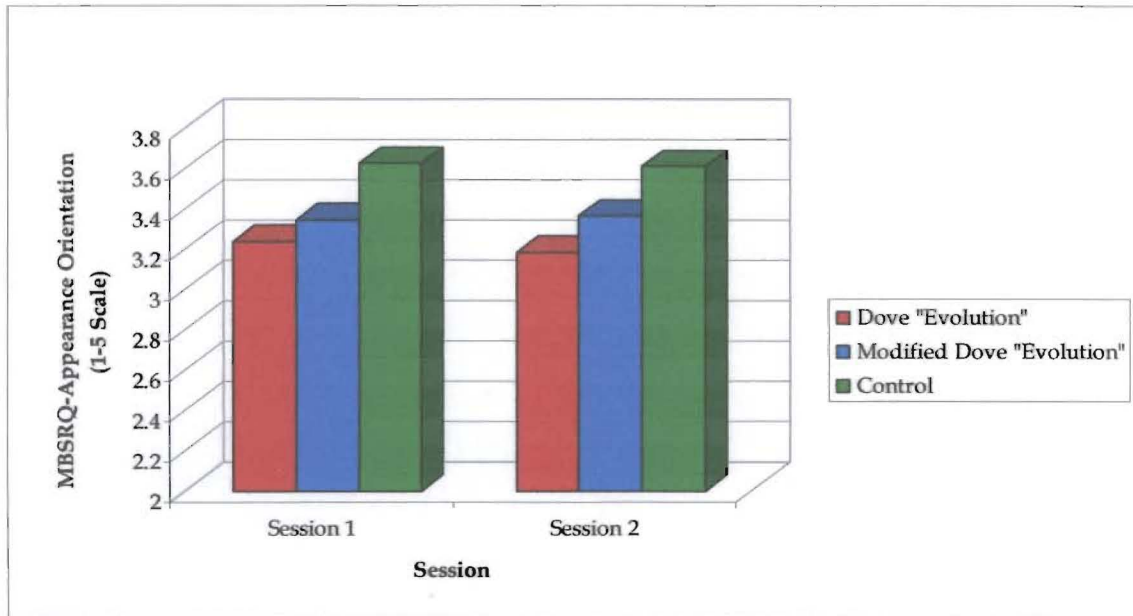
Note. Session 1: $F(2, 98) = .565, p = .570$
 Session 2: $F(2, 98) = 4.946, p = .009$

Figure 5: The influence of commercial on the multidimensional body-self relations questionnaire (MBSRQ) across session



Note. Session 1: $F(2, 98) = 4.712, p = .011$
 Session 2: $F(2, 98) = 6.114, p = .003$

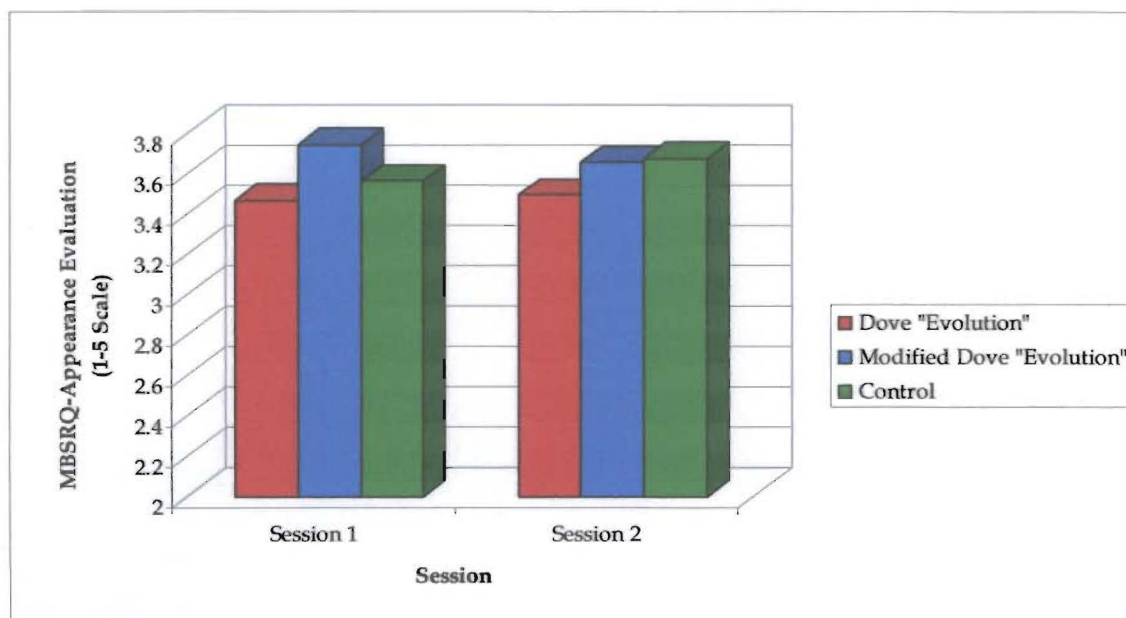
Figure 6: The influence of commercial on the MBSRQ-appearance orientation subscale across session



Note. Session 1: $F(2, 98) = 3.845, p = .025$

Session 2: $F(2, 98) = 4.393, p = .015$

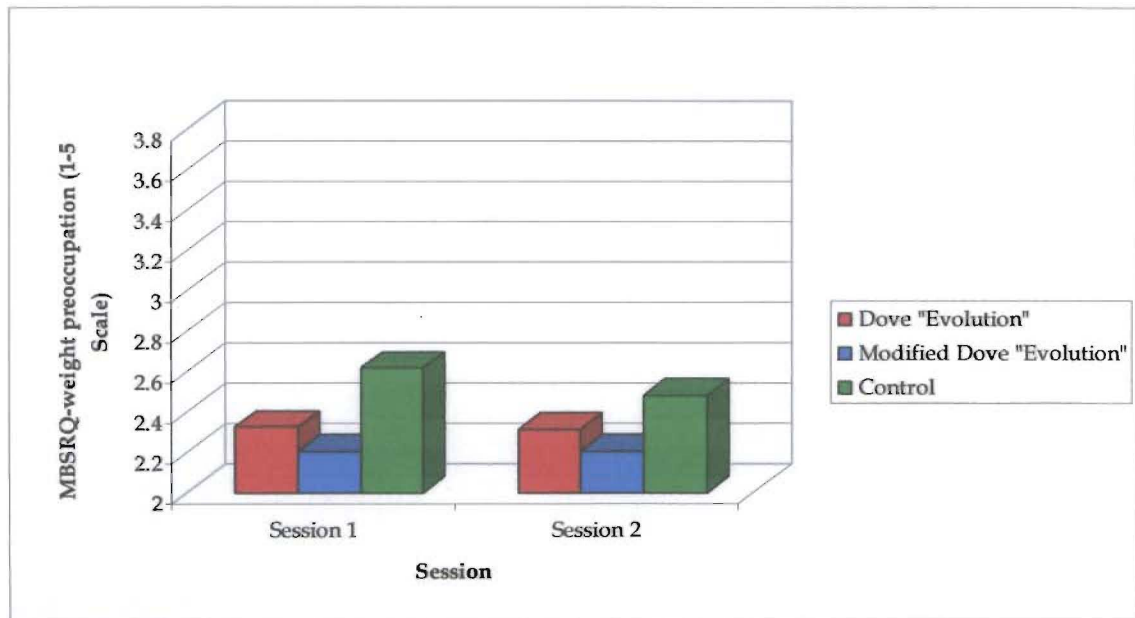
Figure 7: The influence of commercial on the MBSRQ-appearance evaluation subscale across session



Note. Session 1: $F(2, 98) = 2.280, p = .108$

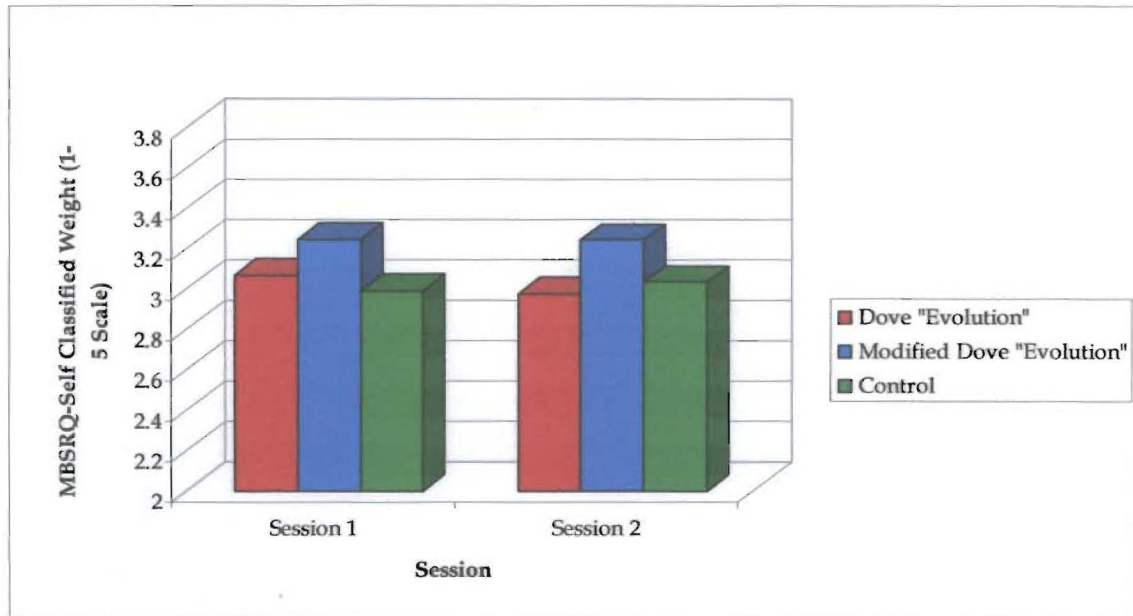
Session 2: $F(2, 98) = 1.108, p = .335$

Figure 8: The influence of commercial on the MBSRQ-weight preoccupation subscale across session



Note. Session 1: $F(2, 98) = 1.993, p = .142$
 Session 2: $F(2, 98) = .847, p = .432$

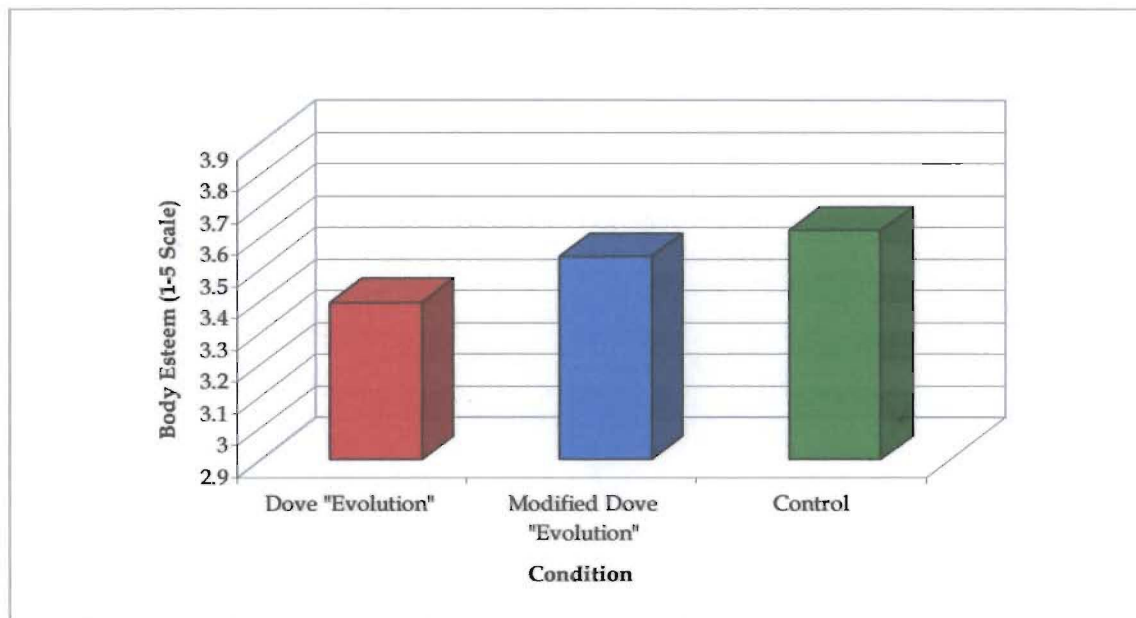
Figure 9: The influence of commercial on the MBSRQ-self-classified weight subscale across session



Note. Session 1: $F(2, 98) = 1.626, p = .202$

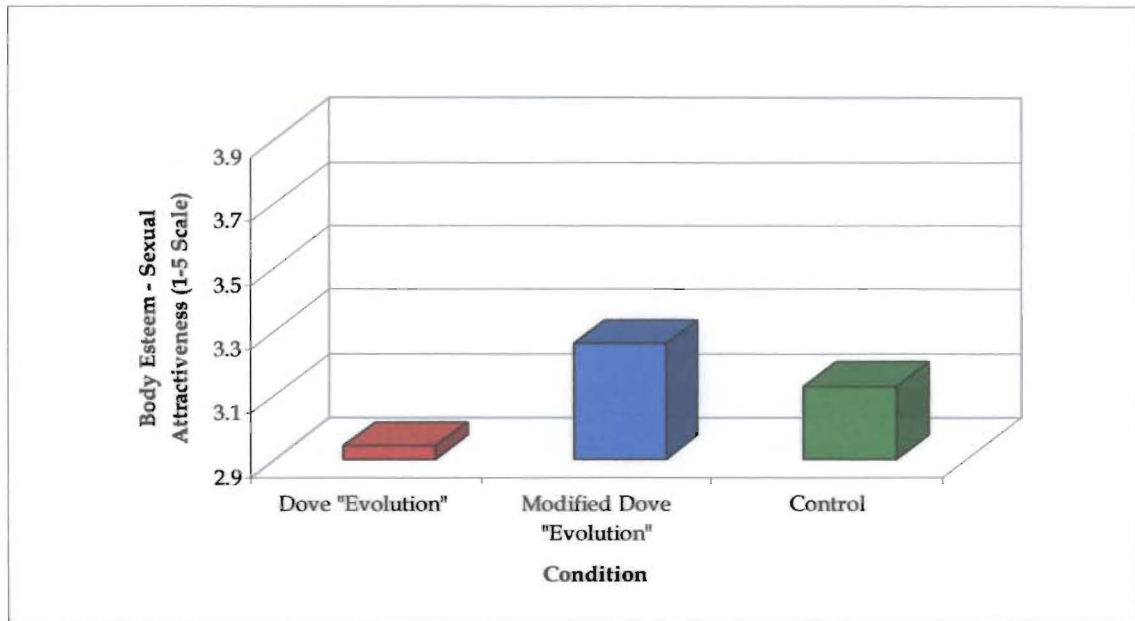
Session 2: $F(2, 98) = 1.800, p = .171$

Figure 10: The influence of commercial on body esteem



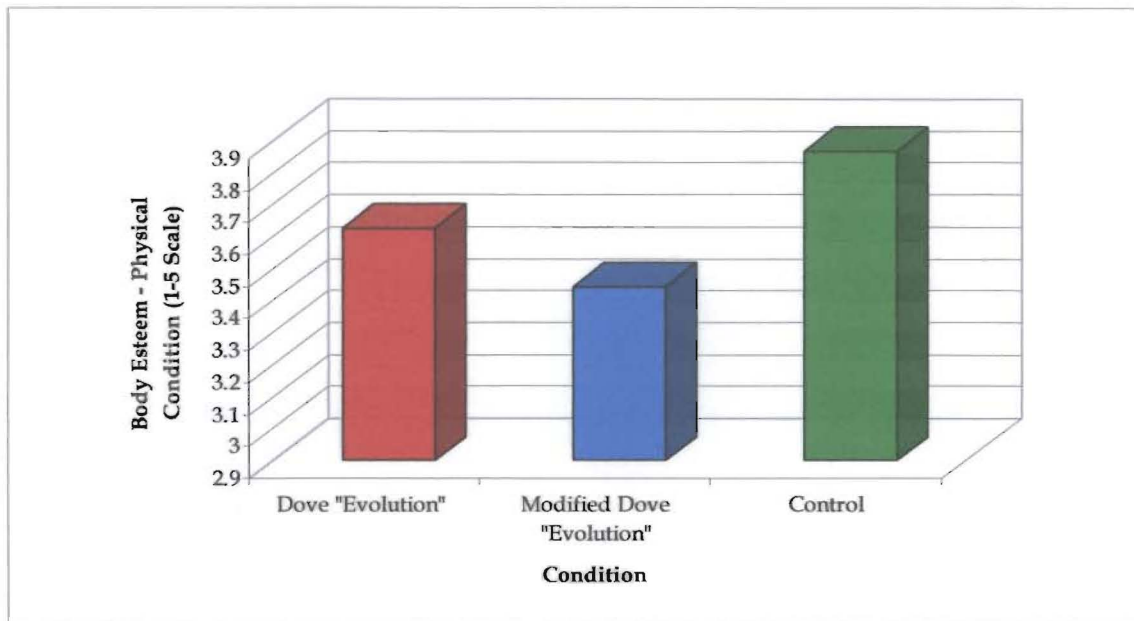
Note. $F(2, 98) = 2.229, p = .113$

Figure 11: The influence of commercial on the body esteem-sexual attractiveness subscale



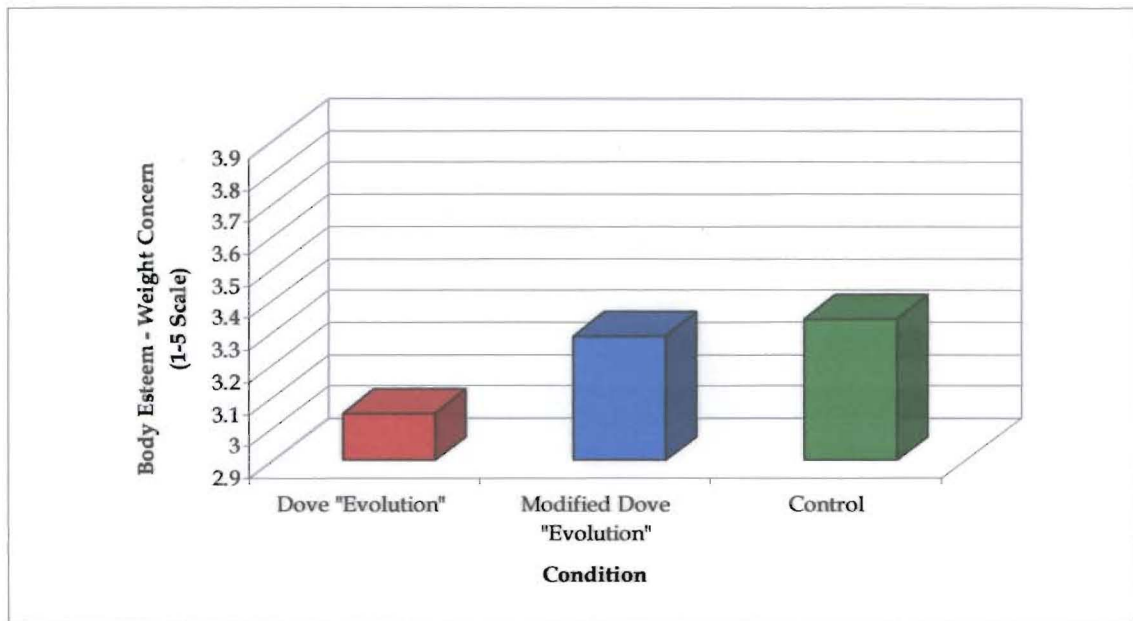
Note. $F(2, 98) = 3.796, p = .026$

Figure 12: The influence of commercial on the body esteem-physical condition subscale



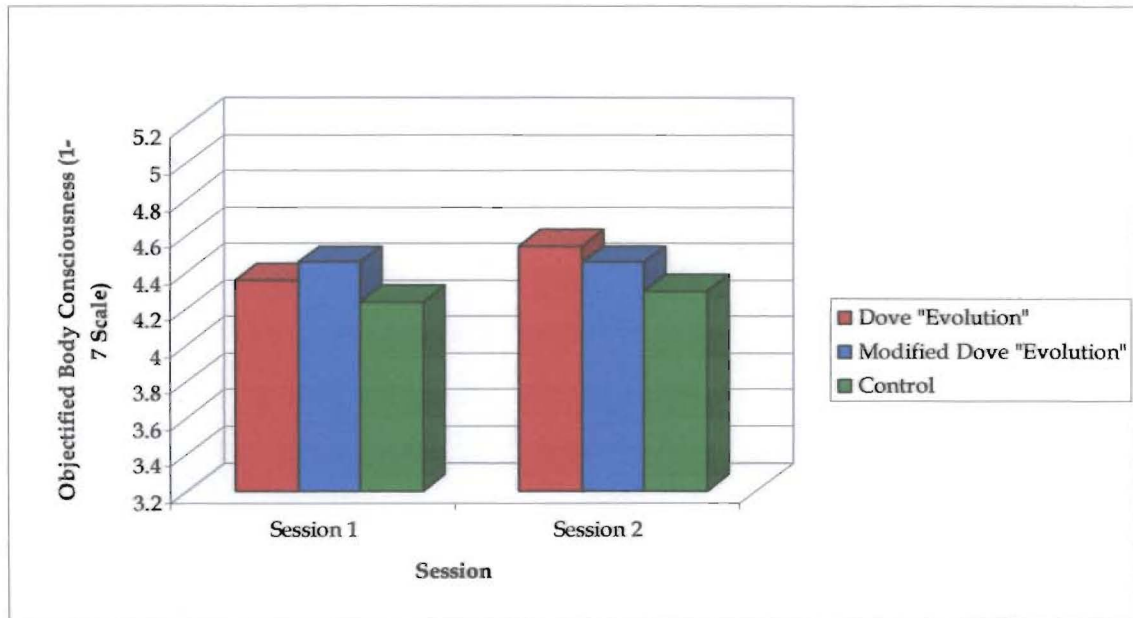
Note. $F(2, 98) = 3.552, p = .032$

Figure 13: The influence of commercial on the body esteem-weight concern subscale



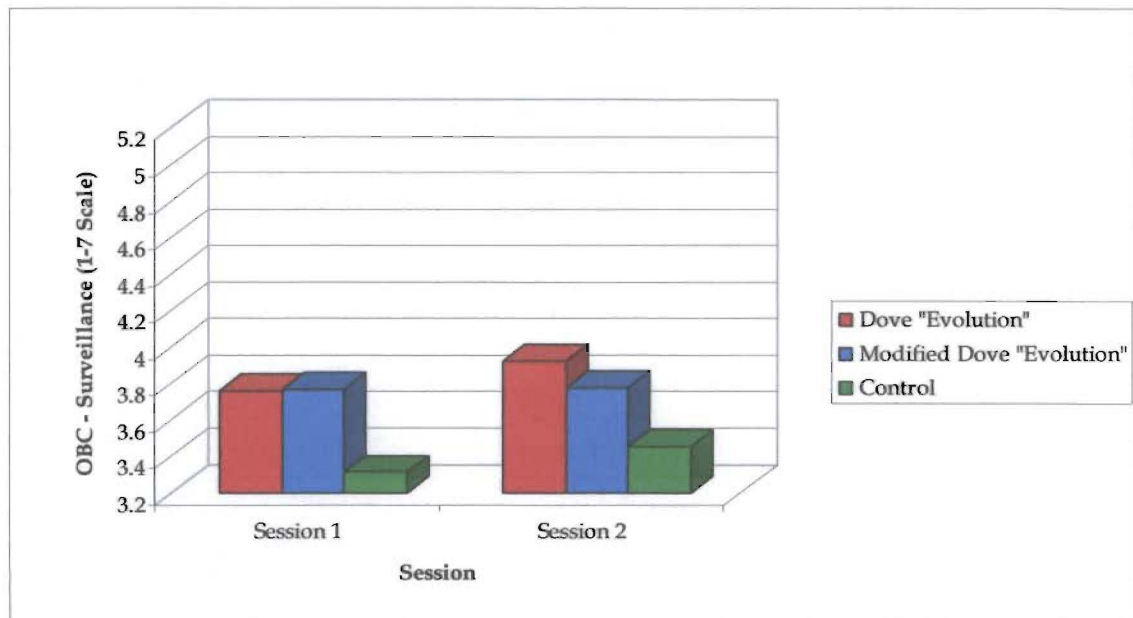
Note. $F(2, 98) = 1.592, p = .209$

Figure 14: The influence of commercial on the objectified body consciousness scale across session



Note. Session 1: $F(2, 98) = 2.420, p = .094$
 Session 2: $F(2, 98) = 1.243, p = .293$

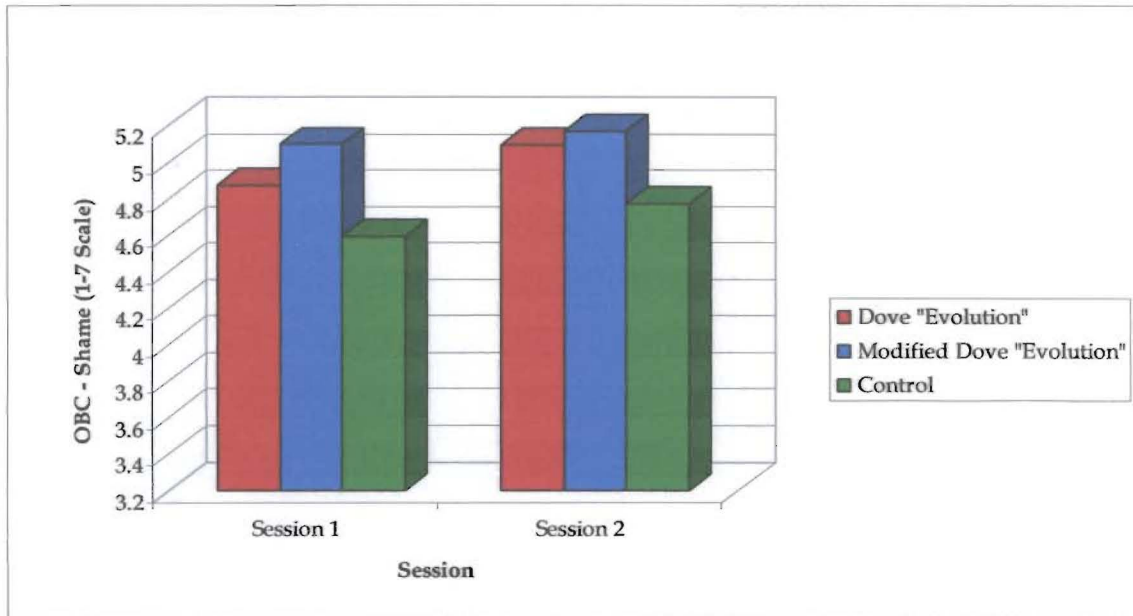
Figure 15: The influence of commercial on the objectified body consciousness-surveillance subscale across session



Note. Session 1: $F(2, 98) = 2.420, p = .094$

Session 2: $F(2, 98) = 2.502, p = .087$

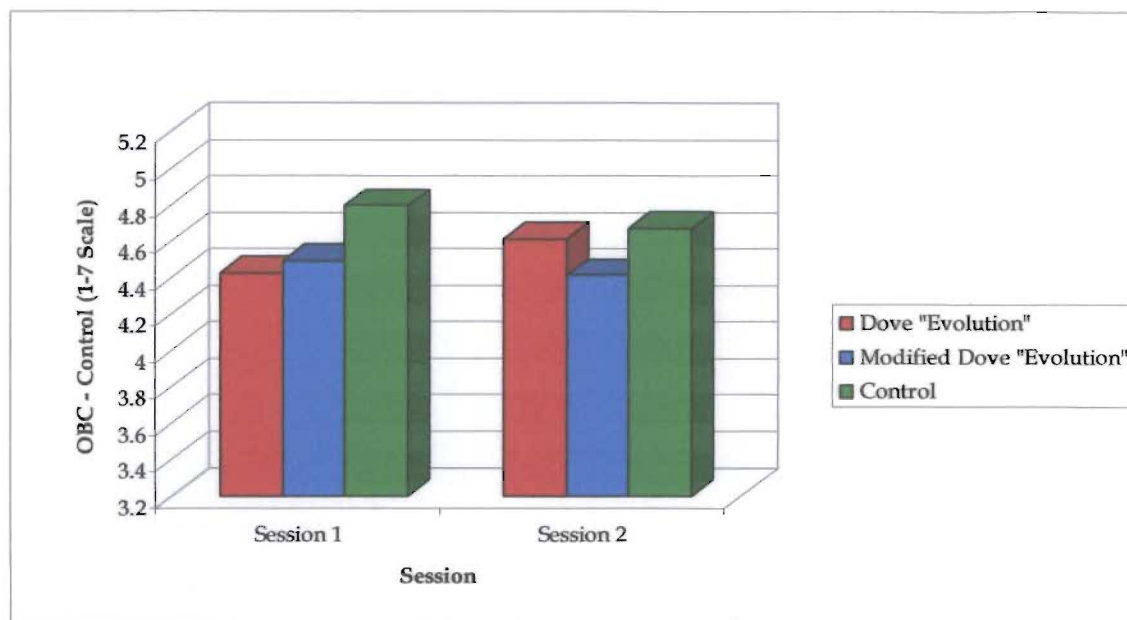
Figure 16: The influence of commercial on the objectified body consciousness-shame subscale across session



Note. Session 1: $F(2, 98) = 1.651, p = .197$

Session 2: $F(2, 98) = 1.231, p = .297$

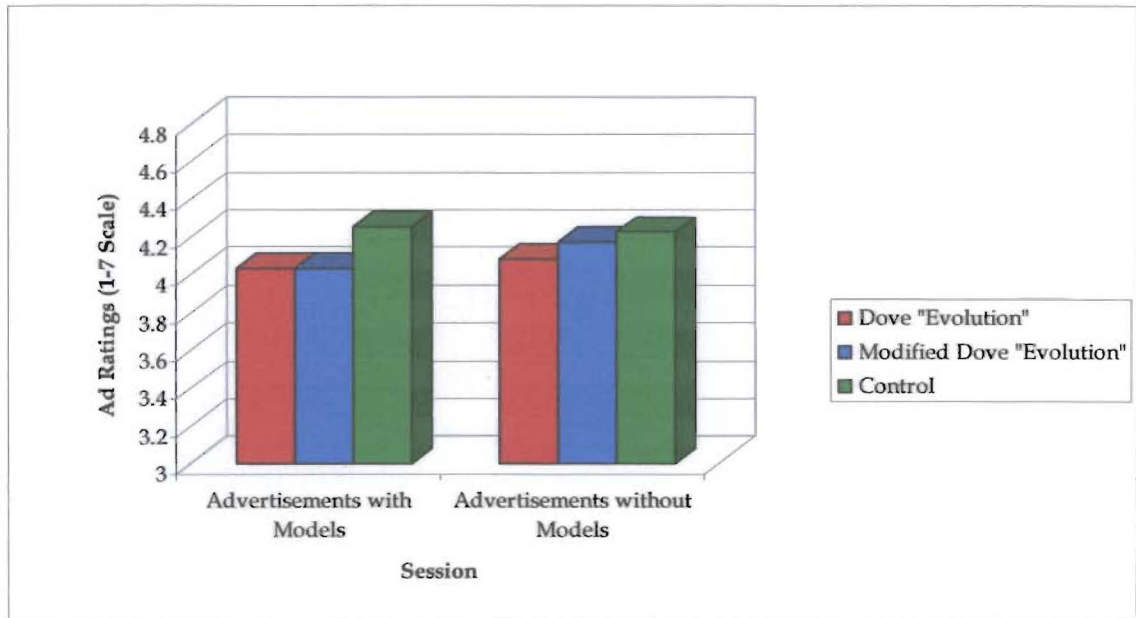
Figure 17: The influence of commercial on the objectified body consciousness-control beliefs subscale across session



Note. Session 1: $F(2, 98) = 1.618, p = .204$

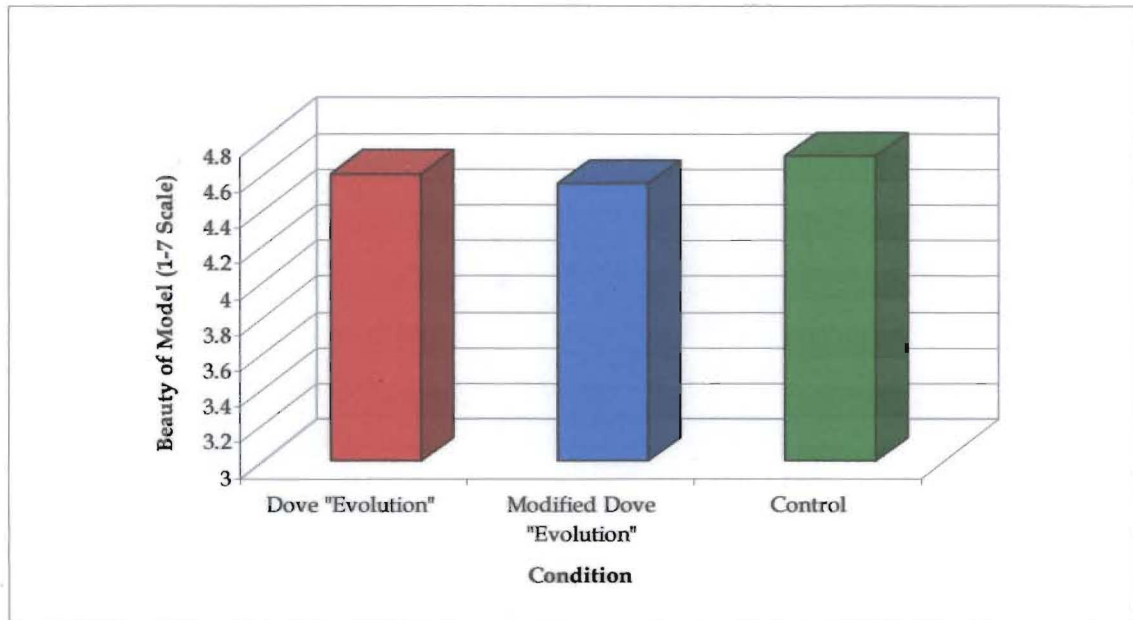
Session 2: $F(2, 98) = .788, p = .458$

Figure 18: The influence of commercial on ratings of advertisements featuring models and no models



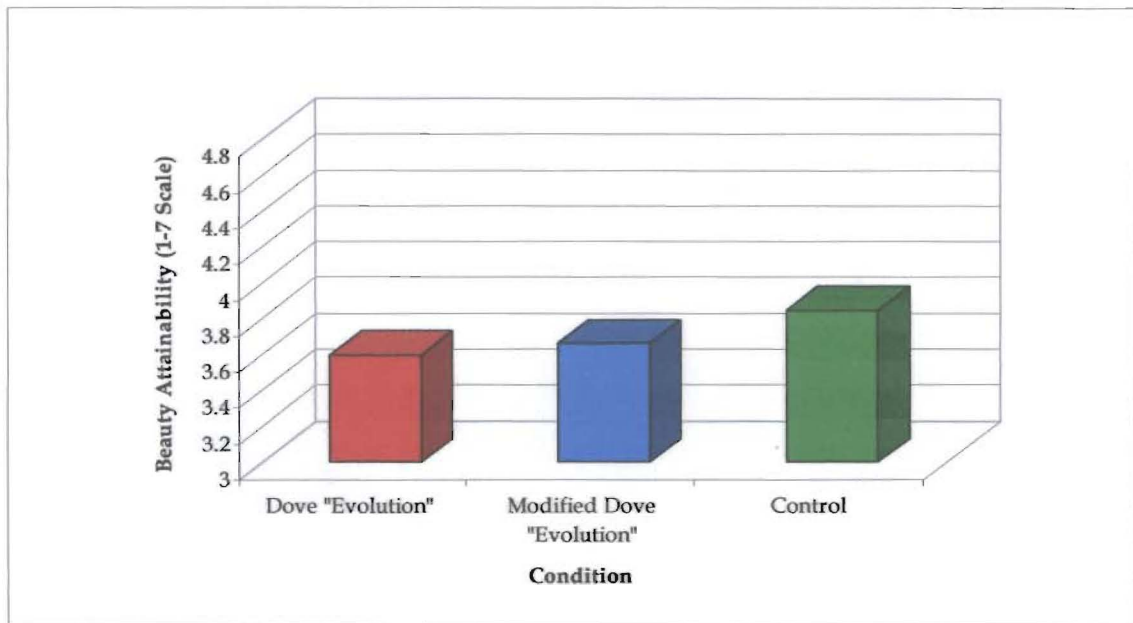
Note. $F(2, 98) = .539, p = .585$

Figure 19: The influence of commercial on perceptions of models' beauty in advertisements



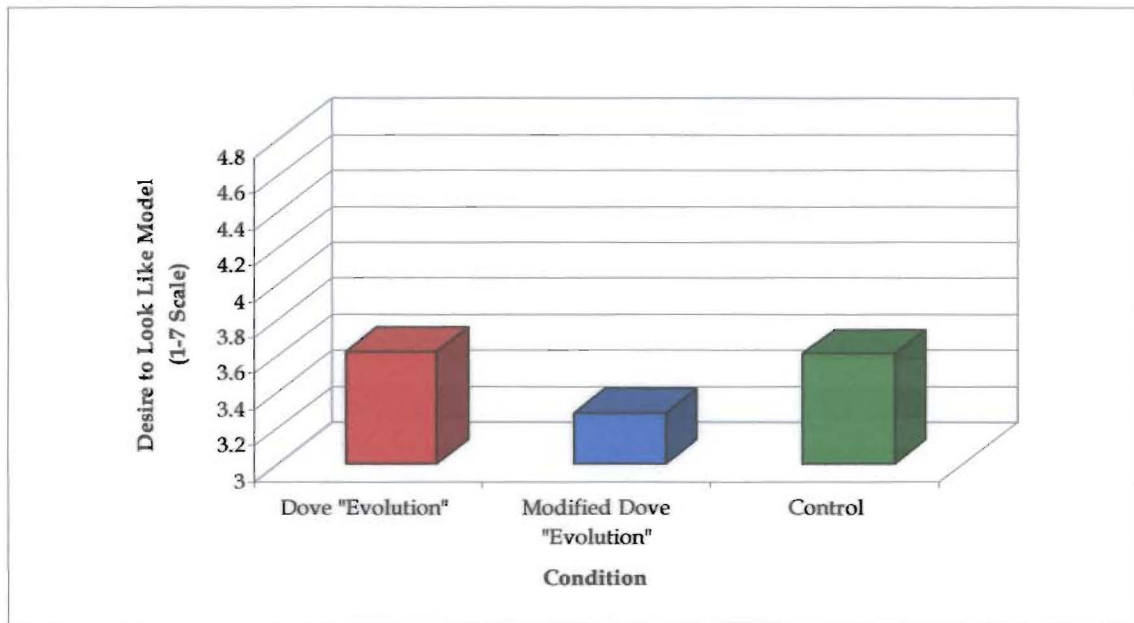
Note. $F(2, 98) = .310, p = .734$

Figure 20: The influence of commercial on perceptions of attainability of models' beauty in advertisements



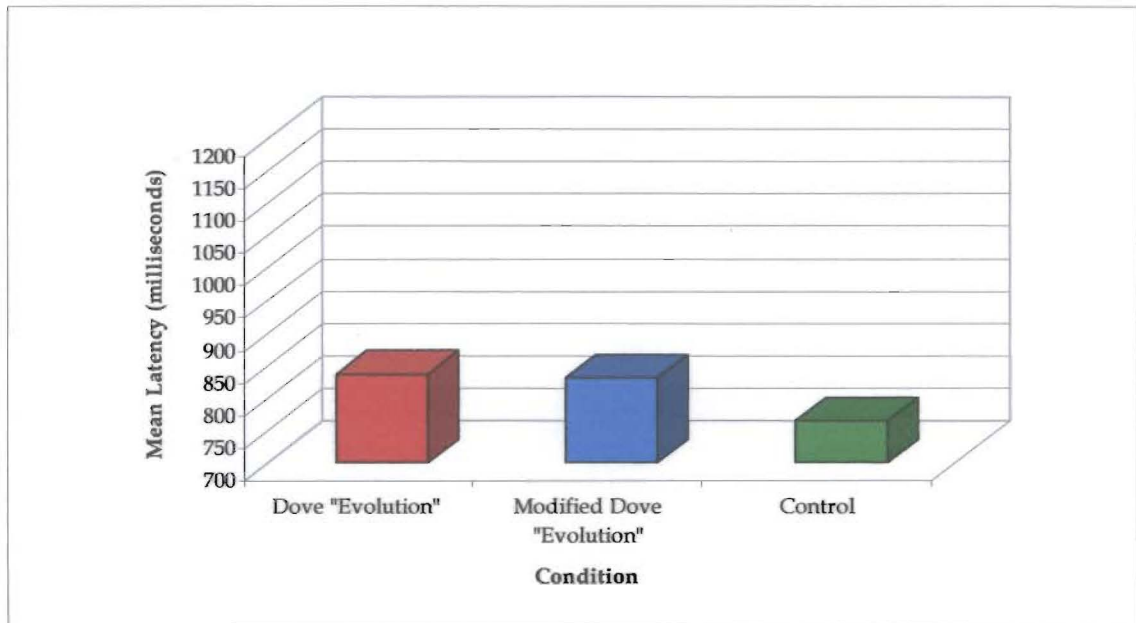
Note. $F(2, 98) = .748, p = .476$

Figure 21: The influence of commercial on subsequent desire to look like models in advertisements



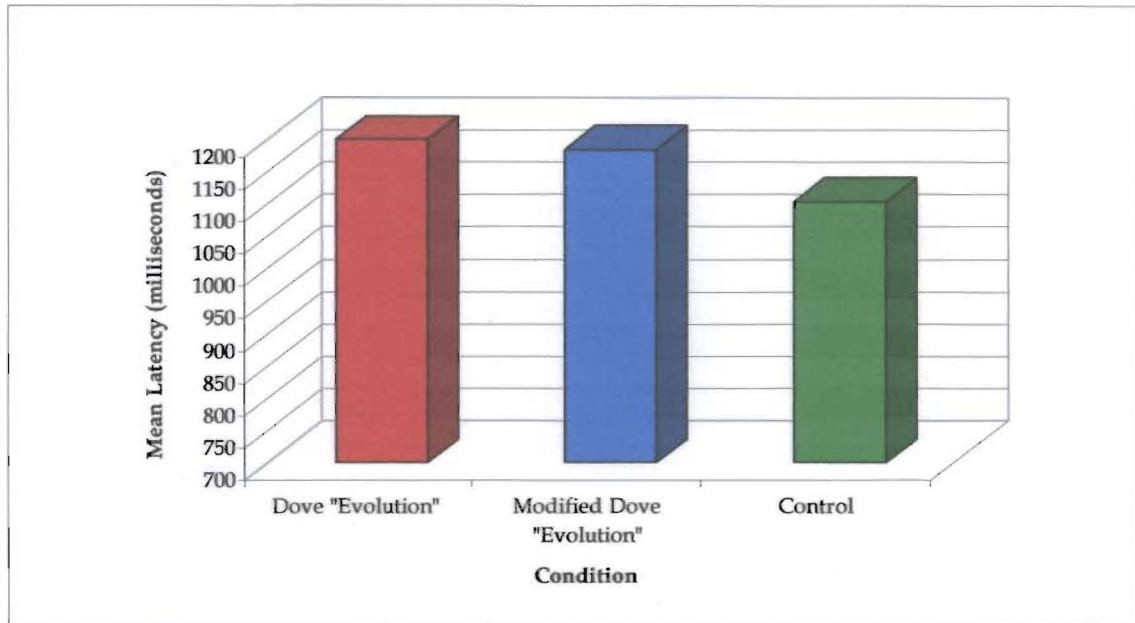
Note. $F(2, 98) = 1.040, p = .357$

Figure 22: The influence of commercial on implicit pairing of beautiful women and positive words



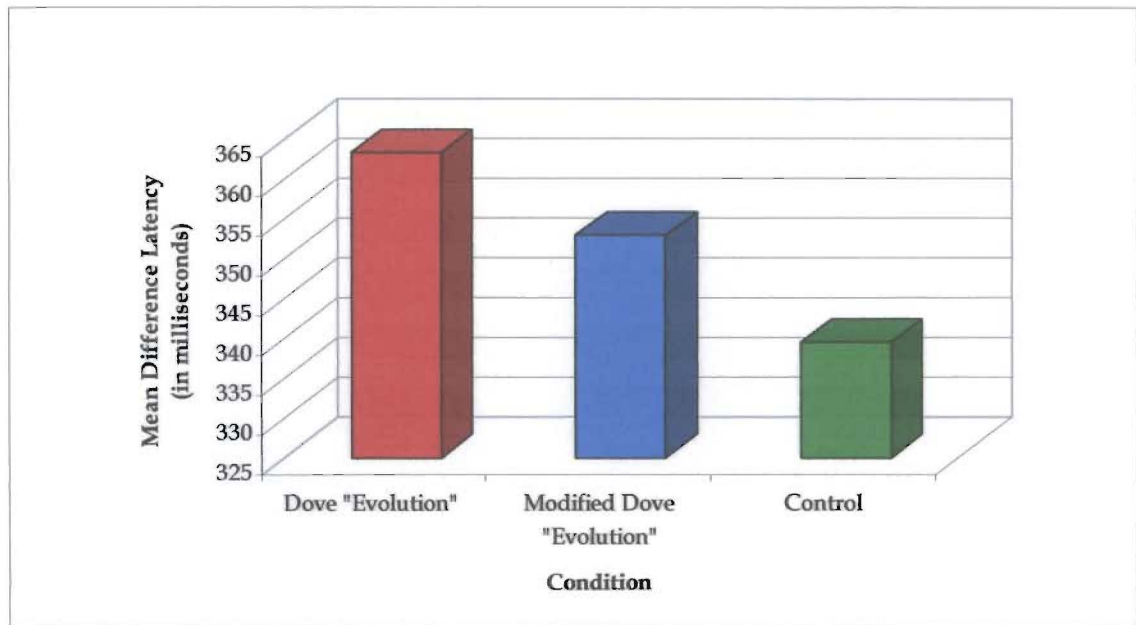
Note. $F(2, 95) = 1.600, p = .207$

Figure 23: The influence of commercial on implicit pairing of beautiful women and negative words



Note. $F(2, 95) = 1.131, p = .327$

Figure 24: The influence of commercial on mean latency differences of implicit associations for beautiful women and negative words and beautiful women and positive words



Note. $F(2, 95) = .143, p = .867$

Appendix A
Demographics

Please answer the following demographic questions:

1. What is your height in inches? (NOTE: 5 feet is 60 inches, so if you are 5 feet, 5 inches, please enter 65.) _____inches
2. What is your weight? _____pounds
3. What is your year in school? Freshman Sophomore Junior Senior
4. What is your race? Caucasian, Black/African American, Asian, Native American, Latino/Hispanic, Pacific Islander, Native American, Mixed, Other (please specify) _____
5. What is your socioeconomic status? Lower Class, Working Class, Middle Class, Upper Middle Class, Upper Class

Appendix B
Self-Rating of Physical Attractiveness

Please answer the following question on a scale from 1 to 10.

From your own perspective, how physically attractive are you?

1	2	3	4	5	6	7	8	9	10
Extremely Unattractive									Extremely Attractive

Appendix C
Sociocultural Attitudes Toward Appearance Questionnaire-3
SATAQ-3

Please read each of the following items and indicate the number that best reflects your agreement with the statement.

Completely Disagree 1 2 3 4 5 Completely Agree

1. TV programs are an important source of information about fashion and "being attractive."
2. I've felt pressure from TV or magazines to lose weight.
3. I would like my body to look like the people who are on TV.
4. I compare my body to the bodies of TV and movie stars.
5. TV commercials are an important source of information about fashion and "being attractive."
6. I've felt pressure from TV or magazines to look pretty.
7. I would like my body to look like the models who appear in magazines.
8. I compare my appearance to the appearance of TV and movie stars.
9. Music videos on TV are an important source of information about fashion and "being attractive."
10. I've felt pressure from TV and magazines to be thin.
11. I would like my body to look like the people who are in the movies.
12. I compare my body to the bodies of people who appear in magazines.
13. Magazine articles are an important source of information about fashion and "being attractive."
14. I've felt pressure from TV or magazines to have a perfect body.
15. I wish I looked like the models in music videos.
16. I compare my appearance to the appearance of people in magazines.
17. Magazine advertisements are an important source of information about fashion and being "attractive."
18. I've felt pressure from TV or magazines to diet.
19. I wish I looked as athletic as the people in magazines.
20. I compare my body to that of people in "good shape."
21. Pictures in magazines are an important source of information about fashion and "being attractive."
22. I've felt pressure from TV or magazines to exercise.
23. I wish I looked as athletic as sports stars.
24. I compare my body to that of people who are athletic.
25. Movies are an important source of information about fashion and "being attractive."
26. I've felt pressure from TV or magazines to change my appearance.
27. I try to look like the people on TV.

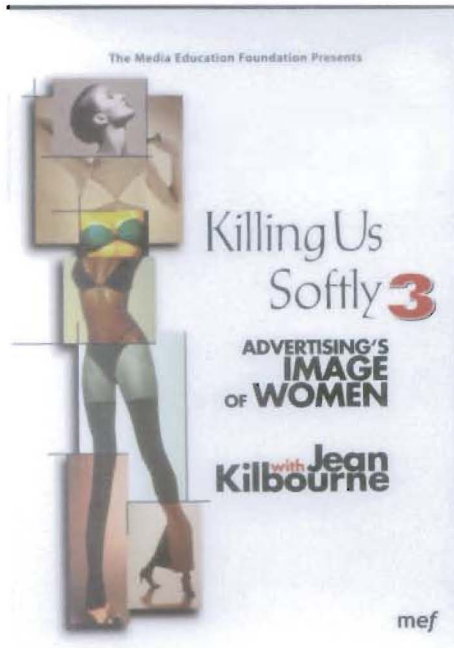
28. Movies stars are an important source of information about fashion and "being attractive."
29. Famous people are an important source of information about fashion and "being attractive."
30. I try to look like sports athletes.

Item Numbers for Subscales of the SATAQ

Information	1	5	9	13	17	21	25	28	29
Pressures	2	6	10	14	18	22	26		
Internalization-General	3	4	7	8	11	12	15	16	27
Internalization-Athlete	19	20	23	24	30				

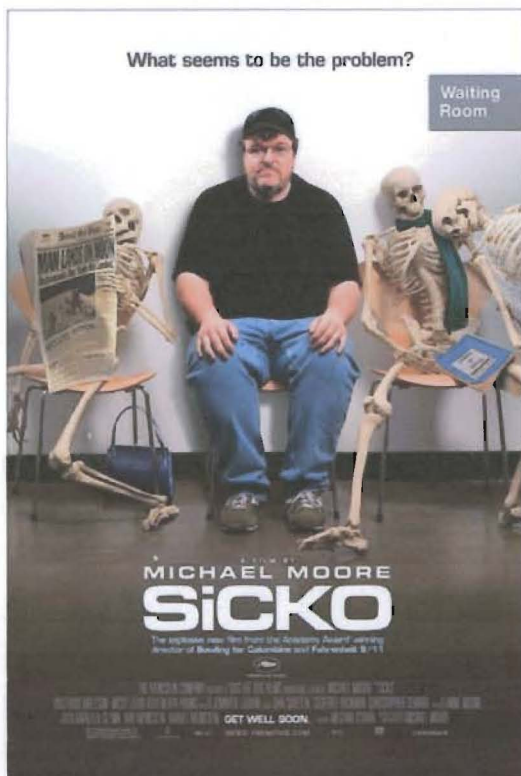
Appendix D
Screen Shots and Commercial/Movie Recognition Questionnaire

Please answer the question next to the advertisement or screen shot.



"Do you recognize this movie?"

- A.) Yes
- B.) No
- C.) I am not sure.



"Do you recognize this movie?"

- A.) Yes
- B.) No
- C.) I am not sure.



Do you recognize the screen shots
from this video?

- A.) Yes
- B.) No
- C.) I am not sure.



Do you recognize the screen shots
from this commercial?

- A.) Yes
- B.) No
- C.) I am not sure.

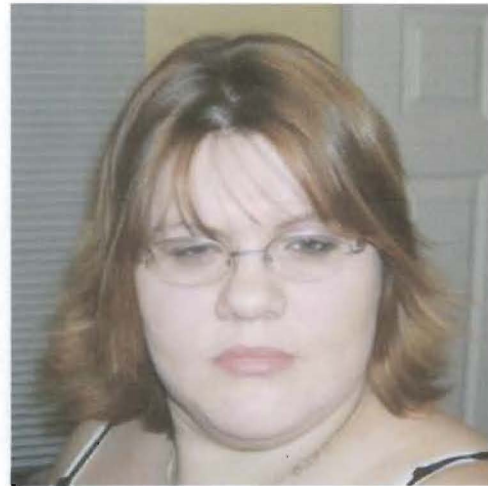


Do you recognize the screen shots
from this commercial?

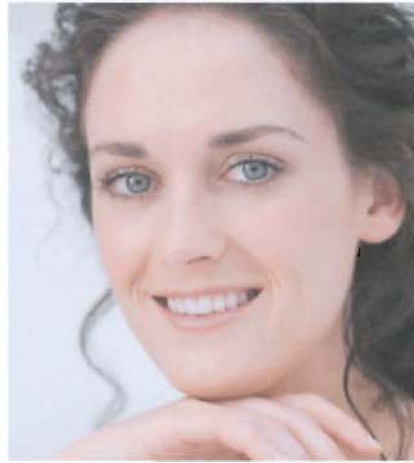
- A.) Yes
- B.) No
- C.) I am not sure.

Appendix E
Stimuli for Implicit Association Task

Unattractive Photos



Attractive Photos



Appendix F
Advertising Effectiveness Measure

The following statements refer to the commercial you saw earlier. Please rate them using the scale provided.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
----------------------	---	---	---	---	---	---	---	-------------------

1. This ad is effective overall.
2. The images in this ad are vivid.
3. This ad prompts me to take action.
4. This ad prompts most college students to take action.
5. This ad is motivating.
6. This ad prompts me to change my attitudes.
7. This ad motivates me to change my behavior.
8. This ad prompts most college students to change their attitudes.
9. This ad motivates most college students to change their behavior.
10. The topic addressed in this ad is not at all important. *
11. This ad addresses a timely issue.
12. The statements made in this ad are believable.
13. This ad is clear.
14. This ad addresses a critical topic.
15. I believe the topic addressed in this ad is essential to consider.

*Item is reversed scored.

Appendix G
General Self Esteem Scale

Below is a list of statements dealing with your general feelings about yourself. If you strongly disagree, select SD. If you disagree, select D. If you agree with the statement, select A. If you strongly agree, select SA.

SD	D	A	SA
Strongly Disagree	Disagree	Agree	Strongly Disagree

1. On the whole, I am satisfied with myself.
2. At times, I think I am no good at all.*
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.*
6. I certainly feel useless at times.*
7. I feel that I'm a person of worth, at least on an equal plane with others.
8. I wish I could have more respect for myself.*
9. All in all, I am inclined to feel that I am a failure.*
10. I take a positive attitude toward myself.

* Items are reverse scored.

Appendix H
Appearance Based Self Esteem Scale

This questionnaire is designed to measure what you are thinking at this moment. There is, of course, no right answer for any statement. The best answer is what you feel is true of yourself at this moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you RIGHT NOW.

1	2	3	4	5
Not at all	A little bit	Somewhat	Very Much	Extremely

1. I feel satisfied with the way my body looks right now.
2. I feel that others respect and admire me.
3. I am dissatisfied with my weight. *
4. I feel good about myself.
5. I am pleased with my appearance right now.
6. I feel unattractive. *

* Items are reverse scored.

Appendix I
Self-Rating of Attractiveness

The following question will be embedded into the previous scale to avoid conspicuousness.

1	2	3	4	5
Not at all	A little bit	Somewhat	Very Much	Extremely

1. How physically attractive do you think you are?

Appendix J
Big-Five Factor Markers
The 100 Unipolar Markers

How accurately can you describe yourself?

Please use this list of common human traits to describe yourself as accurately as possible. Describe yourself as you see yourself at the present time, not as you wish to be in the future. Describe yourself as you are generally or typically, as compared with other persons you know of the same sex and of roughly your same age.

Next to each trait, please choose a number indicating how accurately that trait describes you, using the following rating scale:

Inaccurate					Accurate				
Extremely	Very	Quite	Slightly	Neither	Slightly	Quite	Very	Extremely	
1	2	3	4	5	6	7	8	9	
Active		Extraverted		Negligent		Trustful			
Agreeable		Fearful		Nervous		Unadventurous			
Anxious		Fretful		Organized		Uncharitable			
Artistic		Generous		Philosophical		Uncooperative			
Assertive		Haphazard		Pleasant		Uncreative			
Bashful		Harsh		Practical		Undemanding			
Bold		Helpful		Prompt		Undependable			
Bright		High-strung		Quiet		Unemotional			
Careful		Imaginative		Relaxed		Unenvious			
Careless		Imperceptive		Reserved		Unexcitable			
Cold		Imperturbable		Rude		Unimaginative			
Complex		Impractical		Self-pitying		Uninquisitive			
Conscientious		Inconsistent		Selfish		Unintellectual			
Considerate		Inefficient		Shallow		Unintelligent			
Cooperative		Inhibited		Shy		Unkind			
Creative		Innovative		Simple		Unreflective			
Daring		Insecure		Sloppy		Unrestrained			
Deep		Intellectual		Steady		Unsophisticated			
Demanding		Introspective		Sympathetic		Unsympathetic			
Disorganized		Introverted		Systematic		Unsystematic			
Distrustful		Irritable		Talkative		Untalkative			
Efficient		Jealous		Temperamental		Verbal			
Emotional		Kind		Thorough		Vigorous			
Energetic		Moody		Timid		Warm			
Envious		Neat		Touchy		Withdrawn			

Appendix K
Multidimensional Body-Self Relations Questionnaire – Appearance Subscales
MBSRQ-AS

The following is a series of statements about how people might think, feel, or behave. You are asked to indicate the extent to which each statement pertains to you personally.

In order to complete this questionnaire, read each statement carefully and decide how much it pertains to you personally. There are no right or wrong answers. Just give the answer that is most accurate for you. Remember, your responses are confidential, so please be completely honest and answer all items.

Using the scale below, indicate your answer for numbers 1-22.

1	2	3	4	5
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

1. Before going out in public, I always notice how I look.
2. I am careful to buy clothes that will make me look my best.
3. My body is sexually appealing.
4. I constantly worry about being or becoming fat.
5. I like my looks just the way they are.
6. I check my appearance in a mirror whenever I can.
7. Before going out, I usually spend a lot of time getting ready.
8. I am very conscious of even small changes in my weight.
9. Most people would consider me good-looking.
10. It is important that I always look good.
11. I use very few grooming products.
12. I like the way I look without my clothes on.
13. I am self-conscious if my grooming isn't right.
14. I usually wear whatever is handy without caring how it looks.
15. I like the way my clothes fit me.
16. I don't care what people think about my appearance.
17. I take special care with hair grooming.
18. I dislike my physique.
19. I am physically unattractive.
20. I never think about my appearance.
21. I am always trying to improve my physical appearance.
22. I am on a weight-loss diet.

Please choose the best answer using the scales provided for numbers 23-25.

23. I have tried to lose weight by fasting or going on crash diets.

1. Never
2. Rarely
3. Sometimes
4. Often
5. Very Often

24. I think I am:

1. Very Underweight
2. Somewhat Underweight
3. Normal Weight
4. Somewhat Overweight
5. Very Overweight

25. From looking at me, most other people would think I am:

1. Very Underweight
2. Somewhat Underweight
3. Normal Weight
4. Somewhat Overweight
5. Very Overweight

Item Numbers for Subscales of the MBSRQ-AS (*Reverse-scored items)

Appearance Evaluation	3	5	9	12	15	18*	19*
Appearance Orientation	1	2	6	7	10	11*	13
	14*	16*	17	20*	21		
Overweight Preoccupation	4	8	22	23			
Self-classified Weight	24	25					

Appendix L
Shopping Enjoyment Scale

The following statements refer to your shopping enjoyment. Please rate them using the scale provided.

Strongly Disagree	1	2	3	4	5	Strongly Agree
----------------------	---	---	---	---	---	-------------------

1. I shop because buying things makes me happy.
2. Shopping is fun.
3. I get a real "high" from shopping.
4. Shopping is not a pleasant activity to me. *
5. Going shopping is one of the enjoyable activities of my life.
6. Shopping the stores wastes my time. *
7. I enjoy shopping just for the fun of it.

*Items are reverse scored.

Appendix M
Body Esteem Scale

On this page are listed a number of body parts and function. Please read each item and indicate how you feel about this part or function of your own body using the following scale:

- 1= Have strong negative feelings
- 2= Have moderate negative feelings
- 3= Have no feelings one way or the other
- 4= Have moderate positive feelings
- 5= Have strong positive feelings

- | | |
|------------------------|---------------------------|
| 1. body scent | 17. agility |
| 2. appetite | 18. breasts |
| 3. nose | 19. appearance of eyes |
| 4. physical stamina | 20. cheeks/cheekbones |
| 5. reflexes | 21. hips |
| 6. lips | 22. legs |
| 7. muscular strength | 23. figure of physique |
| 8. waist | 24. sex drive |
| 9. energy level | 25. sex organs |
| 10. thighs | 26. appearance of stomach |
| 11. ears | 27. health |
| 12. biceps | 28. sex activities |
| 13. chin | 29. body hair |
| 14. body build | 30. physical condition |
| 15. physical condition | 31. face |
| 16. buttocks | 32. weight |

Subscales for women:

Sexual Attractiveness (SA) 1,3,6,11,13,18,19,20,24,25,28,29,31

Weight Concern (WC) 2,8,10,14,16,21,22,23,26,32

Physical Condition (PC) 4,5,7,9,12,15,17,27,30

Appendix N
Objectified Body Consciousness Scale

Please rate how strongly you agree or disagree with each of the following statements using the given scale.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Surveillance Scale

1. I rarely think about how I look.
2. I think it is more important that my clothes are comfortable than whether they look good on me.
3. I think more about how my body feels than how my body looks.
4. I rarely compare how I look with how other people look.
5. During the day, I think about how I look many times.*
6. I often worry about whether the clothes I am wearing make me look good.*
7. I rarely worry about how I look to other people.
8. I am more concerned with what my body can do than how it looks.

Body Shame Scale

9. When I can't control my weight, I feel like something must be wrong with me.*
10. I feel ashamed of myself when I haven't made the effort to look my best.*
11. I feel like I must be a bad person when I don't look as good as I could.*
12. I would be ashamed for people to know what I really weigh.*
13. I never worry that something is wrong with me when I am not exercising as much as I should.
14. When I'm not exercising enough, I question whether I am a good enough person.*
15. Even when I can't control my weight, I think I'm an okay person.
16. When I'm not the size I think I should be, I feel ashamed.*

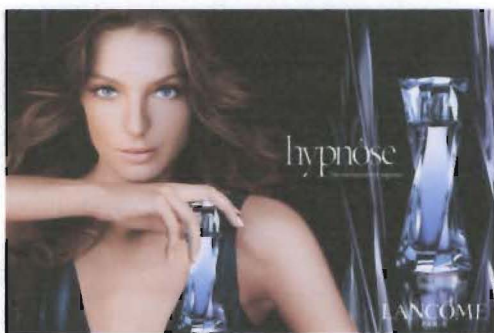
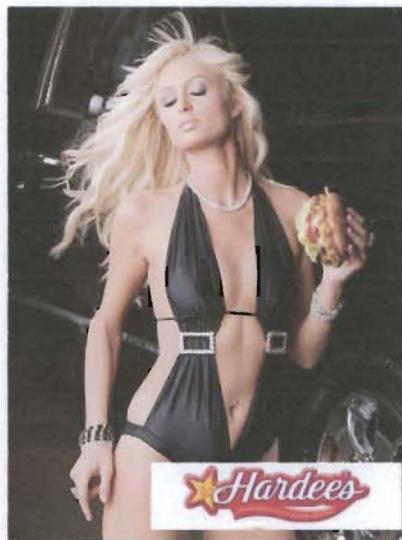
Control Scale

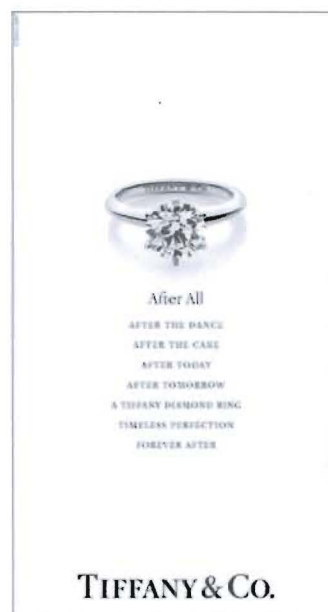
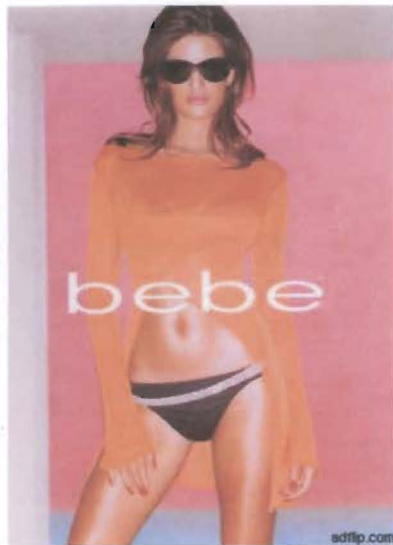
17. I think a person is pretty much stuck with the looks they are born with.*
18. A large part of being in shape is having that kind of body in the first place.*
19. I think a person can look pretty much how they want to if they are willing to work at it.
20. I really don't think I have much control over how my body looks.*
21. I think a person's weight is mostly determined by the genes they are born with.*
22. It doesn't matter how hard I try to change my weight, it's probably always going to be about the same.*
23. I can weigh what I'm supposed to when I try hard enough.
24. The shape you are in depends mostly on your genes.*

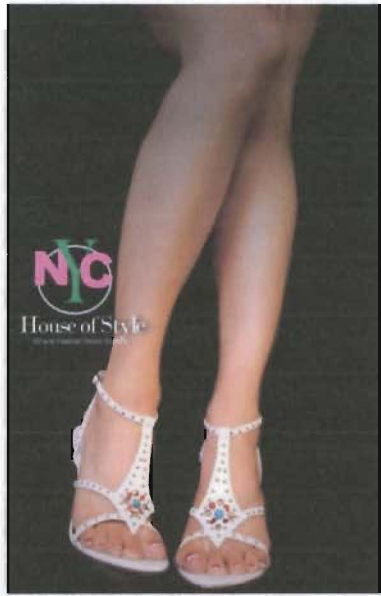
* Items are reverse scored

Appendix O

Advertisements









Appendix P
Advertisement Ratings Questionnaire

For each of the following advertisements, please answer the given questions using the scale provided.

Not at all 1 2 3 4 5 6 7 Extremely

1. How effective is this advertisement?
2. How willing are you to buy the product advertised here?
3. How appealing is the advertisement?
- (If there is a woman in the ad)*
4. How beautiful is the model in the ad?
5. How attainable is this model's beauty?
6. How much would you like to look like the model in this ad?

Appendix Q
Manipulation Check

Please answer the following two questions in the space provided about the commercial you saw earlier.

1. Describe the commercial you watched earlier.
2. Explain why you think this commercial is effective or ineffective.