

How Did the Sport Make You Feel? Looking at the Three Dimensions of Emotion through a Gendered Lens

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Abstract Emotional responses to mediated messages are dependent on the viewer and the content of the message. In this experiment, self-reported emotional responses of undergraduate females ($N=43$) to gendered sports portrayals featuring male and female athletes were measured on the self-assessment manikin. Female viewers felt more positive, aroused and dominant while watching sports broadcasts featuring female athletes rather than broadcasts featuring male athletes. These findings suggest that female viewers have these emotional responses due to the fact that these female athletes are surpassing the expectations their participation held in a traditionally masculine area. Also, feelings of positivity and arousal toward male athletes participating in feminine sports shows an acceptance of male athletes exhibiting characteristics traditionally thought exclusive to females.

Keywords Televised sports · Emotion · Memory · Gender

Introduction

The primary goal of this research project is to further explore the often unused dimension of emotion: dominance. Past research has shown dominance to be less reliable than valence and arousal, the other dimensions of emotion (Bradley and Lang 1994). Many researchers focus on valence and arousal because dominance is believed to only be a very small part of an individual's entire emotional

state (Mehrabian and Russell 1974; Russell 1980). It is for this reason that much research focuses on examination of valence and arousal but allows for a three dimensional theory of emotion (Bolls et al. 2001; Lang et al. 1995).

It is possible, however, that the contribution of the dominance dimension to an individual's total emotional state could be dependent on the content of the stimulus; content that taps into the differing societal beliefs about distinct groups, such as gender, race, or sexual orientation, may elicit greater feelings of dominance that would contribute to an individual's total emotional state. Social role theory states that the stereotypical social roles of men and women are a part of different gendered behaviors. These stereotyped behaviors are based upon societal expectations about what is appropriate actions for men and women due to beliefs about the physical attributes and capabilities of males and females (Eagly 1987; Eagly and Wood 1999; Eagly et al. 2000; Suh et al. 2004). Exposure to mediated messages that both reinforce and contradict these stereotypical portrayals may have an emotional impact on the viewing audience, particularly on those who typically identify with the social roles that are being presented.

The goal of this experiment is to show that the emotional dimension of dominance can play an important role in the viewing of certain mediated messages. Stimulus messages that either utilize societal stereotypes or attempt to dispel them can possibly cause the dominance dimension of emotion to be a larger contributor to an individual's total emotional state during exposure to the message. Sports messages are mediated messages that can employ specific stereotypical gender roles in the form of assumed appropriate behavior for male and female athletes; males are expected to be aggressive and dominant while females are expected to be unassertive yet charismatic (Banet-Weiser

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2002; Halbert and Latimer 1994; Spender 1980). This translates into specific sports being labeled masculine or feminine, depending on what is deemed appropriate behavior for the athlete when participating in them (Daddario 1994; Koivula 2001). It is through exposure to these messages in an experimental setting, where the viewer's total emotional state can be measured, that a more practical application of the dominance dimension of emotion is hoped to be shown. In this study specifically, the impact of portrayals of gender on viewers' self-reported feelings of valence, arousal, and dominance will be tested, including when viewing sports broadcasts where the gender of the athlete does not match the perceived gender of the sport. This will give a framework for future research that examines both the three-dimensions of emotion but also explores how stereotypical media portrayals of gender influence an individual's construction of gender.

Review of Literature

Sports are an arena of today's society in which societal beliefs about gender roles are at the forefront. Often, women's sports are treated as "the other" while men's sports are treated as the standard (Kane 1995; Kane and Greendorfer 1994; Kane and Parks 1992; Messner et al. 1996). These beliefs become evident when examining the differences between sports broadcasts that feature male athletes and those that feature female athletes. These differences are demonstrated in the way sporting events are labeled, how sports commentators discuss male and female athletes, and production techniques used for men's and women's sports. Some have suggested that gender roles can then be reinforced through their assimilation during the viewing of televised sporting events, and this can furthermore lead to an individual's increased belief in these stereotypes outside of sports (Stice et al. 1994). These beliefs in the differences between men and women, and in this context between masculine and feminine sports, are constructs of social reality that reinforce societal inequities between genders, which include the concepts of masculine dominance and feminine inferiority (Eastman and Billings 2000; Halbert and Latimer 1994; Spender 1980); in sports, men's events are considered a "must see" and women's sports are often considered "nonevents" (Messner et al. 1996).

This accepted form of societal sexism is demonstrated in many ways when watching televised sports. First, there are differences in how men's and women's sports are named. An event such as the NCAA Basketball Championships is a prime example. The championship tournament for the men's basketball is typically designated as the 'NCAA Basketball Championship Game' or the 'NCAA Final Four.' The very same tournament, but for women's basketball, is labeled as the 'NCAA Women's Basketball

Championship Game' or the 'NCAA Women's Final Four' (Hallmark and Armstrong 1999). This gendered identification of women's sports occurs during many different sporting events (Messner et al. 1993). It occurs in women's sports on average 25.7 times per sporting event compared to zero times for men's sports (Messner et al. 1993). This example reinforces the idea that these perceived societal differences exist between the sexes, which in turn lends itself to a perception of an overall hierarchy of within the general public, with men being considered superior to women (Holtzman 2000).

The way sports announcers talk about athletes during their commentaries also demonstrates a difference in how male and female athletes are portrayed. When a specific athlete is talked about, female athletes are more often referred to by their first names while male athletes are referred to by their surnames (Messner et al. 1993). Calling female athletes by their first names further demonstrates the perceived societal dominance of men over women (Messner et al. 1993), while the use of surnames in reference to male athletes is seen as a sign of respect to the men both as athletes and as individuals.

Announcers have also been shown to use descriptors with demeaning connotations in the commentary of female sports. Use of the terms 'girl' and 'lady' in sports with adult women is demeaning to the participants as well as disrespectful to their accomplishments. It is incredibly rare to hear a male athlete referred to as a 'boy.' In the sport of tennis, terms such as 'girl' have been showed to be used in 52.7% of the commentating, while only 7.8% of the coverage referred to the male athletes as 'boys' (Halbert and Latimer 1994; Messner et al. 1993).

The proportion of praise vs. criticism is much different between male and female athletes. Male athletes are more often praised than criticized while female athletes are more often criticized than praised (Billings 2003; Billings and Eastman 2002, 2003). Topics a commentator uses to praise male athletes include their athletic skills; their overall dedication to their sport, team, or game; and their overall courage (Eastman and Billings 1999). Female athletes' achievements, however, are more often attributed to luck or the guidance of a strong male influence (Eastman and Billings 2000; Hallmark and Armstrong 1999). Female athletes are also compared to their male counterparts instead of allowing their achievements to stand on their own (Eastman and Billings 2000; Halbert and Latimer 1994). Male athletes are also described as stronger and more adept at athletic competition with the use of words such as 'powerful,' 'strong,' and 'big' in connection with their performance (Eastman and Billings 1999; Messner et al. 1993); this also includes a number of comments about the size and athletic appearance of specific body parts (Billings and Eastman 2002). This sets up female athletes as inferior

to male athletes, both physically and mentally, with less commitment to the sport and with successes attributable more to luck than to skill.

It is often interesting to examine how athletes are criticized to see if there is a stereotypical superiority exhibited there. The failures of male athletes are often attributed to the successes of their opponents, while female athletes are presented as having a lack of concentration, experience, aggression, or skill (Billings and Eastman 2002, 2003; Eastman and Billings 1999, 2000; Halbert and Latimer 1994; Messner et al. 1993). Comments made about female athletes include “[She’s] just not ready for this kind of competition” (Eastman and Billings 2000, p. 208) and “No girl would ever have [got] that” (Halbert and Latimer 1994, p. 305). This detraction from female athletes’ levels of competitiveness, and an overall lack of confidence in their skills, again demonstrate this gendered hierarchy within sports.

Production techniques, such as camera angles and the use of on-screen graphics, also demonstrate the differences between how men’s and women’s sports are broadcast. A content analysis by Hallmark and Armstrong (1999) explored both the men’s and women’s NCAA Basketball Championship Broadcasts from 1991 to 1995. The women’s games had more full-screen graphics than men’s games, thereby taking the viewer away from the action of the game more often. It has been theorized that the implication of such a detraction from the playing of the sport is that the action of the women’s game is not as exciting as that of the men’s game, therefore making it more acceptable to interrupt the broadcast with full screen graphics describing statistics from the game or advertising for future television broadcasts (Hallmark and Armstrong 1999). The greater number of full-court camera shots broadcast during men’s games than women’s games suggests that the networks believe viewers want to see the action of the men’s games more than that of the women’s games (Hallmark and Armstrong 1999). The duration of close-ups, peripheral shots and partial court shots were longer for women’s games than for men’s games, again taking parts, or all, of the game out of the sight of the viewer (Hallmark and Armstrong 1999). Close-ups during women’s games are most often focused on the team’s coach. It is interesting to note that women’s teams are more often coached by males than females (Hallmark and Armstrong 1999); during the 2001–2002 academic year, 54% of all head coaches for women’s sports teams in the NCAA were men (NCAA 2003). During these close-ups, the camera is looking toward the coach for explanation of the team’s actions; these close-ups have been interpreted as leaving the audience with the belief that the successes of the female team was only made possible by the efforts of a male coach (Hallmark and Armstrong 1999). Though these differences may not be noticeable taken on their own,

together they show how sports featuring female athletes are treated differently, and in an inferior manner, to sports featuring male athletes.

These methods employed by television networks in broadcasting sports reflect some of the same stereotypical ideals that lead to specific sports being labeled masculine or feminine, and therefore only perceived as appropriate for male or female participants. The women’s sports that tend to receive the most airtime are those considered to be feminine activities, due to their focus the overall attractiveness of the participant as well as the participant’s actions; these sports include gymnastics and figure skating (Koivula 2001). Athletes in these sports are often described as elegant, enchanting, and beautiful (Daddario 1994). Athletes in masculine sports, such as football and wrestling, are believed to have personality characteristics not appropriate for women; these characteristics include “aggressiveness, competitive spirit, discipline, and stamina” (Koivula 2001, p.235).

Using theoretical approaches such as Social Cognitive Theory (Bandura 1977, 2001; Baranowski et al. 2002) and Social Identity Theory (Tajfel 1978; Tajfel and Turner 1979, 1986), it is reasonable to believe that exposure to such portrayals of female athletes would have an impact on viewers’ overall beliefs about the societal roles of women. Social Cognitive Theory has an observational learning component: watching television can influence an individual’s beliefs about that topic. Negative beliefs about the societal roles of women may be formed by watching female athletes who are not treated in the same fashion as their male counterparts. The frequent use of such disparate techniques in subsequent airing of women’s sports may only serve to reinforce the negative beliefs that an individual has formed (Bandura 1977, 2001). Such an affect on an individual’s opinions about gender roles has been shown in previous research; participants watched women’s sports featuring the production and commentary styles inherent in televised men’s sports and this exposure to nontraditional (positive) representations of female athletes led to more equitable beliefs about the overall societal roles of women and men (Angelini 2003). Social Identity Theory can come into play here; this theory discusses how being exposed to stereotypical portrayals of a group will only reinforce an individual’s previously held stereotyped beliefs, and how members of the stereotyped group can begin to believe the stereotypes (Tajfel 1978; Tajfel and Turner 1979, 1986). It is then not farfetched to predict, under the auspices of Social Identity Theory, that continued exposure to traditional portrayals of female athletes would reinforce the stereotypical societal opinions toward women, and can lead women to identify and relate to the female athletes that they are seeing.

This reinforcement of stereotypical gender opinions though media portrayals is further explained by Cultivation

Theory. Under the constructs of cultivation theory, an individual who is a heavy television watcher will have a distorted perception of social reality that will conform more so to the mediated world than to the actual real world (Gerbner et al. 1980; Gerbner et al. 1979). In the case of the stereotypical content of televised sports, continued exposure to these traditional gender stereotypes over time, particularly by heavy television viewers, can contribute to the viewer's perceptions of social reality by shaping and reinforcing them to reflect these media portrayals (Gerbner et al. 1986). It is these perceptions of social reality, and specifically the perceived hierarchy of gender in society, that in conjunction with Social Identity Theory allows for closer identification by female viewers with female athletes.

It is from this foundation of identifying in some way with an athlete that this study hopes to test reactions to portrayals of athletes participating in sports that are considered not to be gender-appropriate, particularly among audiences that are typically believed to not be sports fans: women. Studies conducted using social role theory demonstrate that situations in which the gender hierarchy is shown further demonstrate the traditional gender differences, while situations in which the gender hierarchy is changed often confuse and force individuals to question their perceptions of gender roles (Eagly et al. 2000; Moskowitz et al. 1994; Suh et al. 2004). Previous research focusing on sports has demonstrated that viewers' arousal states were affected by the sex of the athlete in the sports that they watched. Female participants report a higher level of arousal for sports featuring female athletes than for sports featuring male athletes (Angelini 2003). Also, feelings of dominance have been affected by both the sex of the athlete and the perceived gender of the sport. Female participants felt more dominant when watching sports featuring female athletes than male athletes (Angelini 2005). Also, female participants felt more dominant when watching females participate in traditionally feminine sports than when watching females participating in traditionally masculine sports or watching males participating in traditionally feminine sports (Angelini 2005). There is a significant difference in dominance when examining how individuals reacted to athletes that were participating in sports appropriate for their sex rather than sports that are perceived as gender-inappropriate.

The first goal of this study, therefore, is to replicate these results. Therefore, the following hypotheses are posed:

H₁: Women participants will self-report higher levels of dominance for sports featuring female athletes than for sports featuring male athletes.

H₂: Women participants will self-report higher levels of dominance for sports featuring athletes participating in sports that are gender-appropriate than for sports

featuring athletes participating in sports that are gender-inappropriate.

It is believed that this trend in emotional response will continue for the other two dimensions of emotion, valence and arousal; this was previously shown to hold true with the arousal dimension of emotion (Angelini 2005). It is believed that sports viewers will better identify with athletes that match the viewer's sex. Identification is a basic ability that allows a viewer to vicariously experience the same things as a character in media, such as a television program or a book, with whom they identify (Bettelheim 1976; Erikson 1968). In addition, past research has shown that identification leads to an increase in positive emotion, particularly an increase in valence (Cohen 2001; Schneider et al. 2004). These positive feelings stemming from identification are possible with identification with an athlete. Therefore, taking into consideration the all female sample, the following hypotheses predict:

H₃: Women participants will self-report higher levels of arousal for sports featuring female athletes than for sports featuring male athletes.

H₄: Women participants will self-report higher levels of arousal for sports featuring athletes participating in sports that are gender-appropriate than for sports featuring athletes participating in sports that are gender-inappropriate.

H₅: Women participants will self-report feeling more positive after watching sports featuring female athletes than for sports featuring male athletes.

H₆: Women participants will self-report higher feeling more positive after watching sports featuring athletes participating in sports that are gender-appropriate than for sports featuring athletes participating in sports that are gender-inappropriate.

An increased level of arousal should cause an increased number of resources to be delegated to the encoding of the message's content (Lang 2000). The encoding of the message's content is measured by a signal detection task. A signal detection task measures the decisions an individual makes about whether or not they recognize something based on the perceived familiarity of the item; in addition, it's not just how familiar the item seems, but also the individual has a set criterion about how familiar an item actually has to seem before he/she is willing to say that they have been exposed to it before (Shapiro 1994). In conjunction with the predictions that about the reported levels of arousal, the following hypotheses about encoding are proposed:

H₇: Women participants will have an increased level of encoding for sports featuring female athletes, as indexed through signal detection, than for sports featuring male athletes.

H₃: Women participants will have an increased level of encoding for sports featuring athletes participating in sports that are gender-appropriate, as indexed through signal detection, than for sports featuring athletes participating in sports that are gender-inappropriate.

Method

Participants

Forty-three female undergraduate students who were enrolled in a Telecommunications course at a large Midwestern university were recruited to participate in this experiment. The mean age of all participants was 20.6 years.

Design

The design of the experiment is a Sport Gender (3) X Athlete Sex (2) X Sports (4) X Repetition (2) X Order of Presentation (4) mixed ANOVA design. Sport Gender, Athlete Sex, Sports, and Repetition are within-subjects factors; Order of Presentation is a between-subjects factor. The Athlete Sex factor has two levels (male and female). The Sport Gender factor has three levels: masculine, feminine, and gender-neutral. For each masculine, feminine, and gender-neutral sport factor, four sports were chosen to be presented; this is represented in the Sports experimental factor. The repetition factor represents the items within each Sport Gender X Athlete Sex condition; two clips from each of the four different masculine and feminine sports were used. In order to control a possible order effect, four different orders of presentation were created. Each televised clip was presented in a different position and placed between differing clips in each of the four orders. Particular care was taken not to place two or more clips featuring the same sport together. Each study participant was randomly assigned to one of the four orders.

Stimuli

Forty-eight, 30-s sports were recorded from off-air and cable television networks for this experiment. Masculine sports that were represented in the clips were boxing, ice hockey, rugby, and weightlifting. Feminine sports that were represented in the clips were figure skating, gymnastics, volleyball, and equestrian. Gender neutral sports that were represented in the clips were downhill skiing, speed skating, soccer, and golf. Clips were recorded from broadcast (i.e., ABC, NBC, FOX) and cable network (i.e., ESPN, ESPN2, College Sports Television, FOX Sports World) broadcasts.

Independent Variables

Sports and Sports Gender

Sports Gender is conceptualized as the perceived inherent masculinity or femininity of a particular sport. This has been gauged previously through a survey in which individuals rated forty-one NCAA and Olympic Sports on a five-point scale ranging from “For Women Only” to “For Men Only” (Angelini 2005). Approximately 245 college students rated these sports. It is from these ratings that the sports for each of the three sports gender factors were chosen.

The feminine sports presented were figure skating ($M=2.43$), gymnastics ($M=2.46$), volleyball ($M=2.52$), and equestrian ($M=2.86$). The gender neutral sports were downhill skiing ($M=3.09$), speed skating ($M=3.10$), soccer ($M=3.13$), and golf ($M=3.20$). The masculine sports were ice hockey ($M=4.08$), rugby ($M=4.12$), boxing ($M=4.13$), and wrestling ($M=4.18$). The sports ranked most feminine, synchronized swimming ($M=2.01$) and softball ($M=2.23$), and the one ranked most masculine, football ($M=4.38$), were not used because of the lack of televised broadcast and overall participation in the sport by both male and female athletes.

Dependent Variables

The Three Dimensions of Emotion

Dominance, arousal, and valence were measured via the use of the self-assessment manikin (Bradley et al. 1992; Bradley and Lang 1994; Lang 1980). The self-assessment manikin (SAM) scales measure the three dimensions of emotions, using a single pictorial scale for each (Bradley et al. 1992; Bradley and Lang 1994; Lang 1980). Each scale consists of five figures. A study participant can place a mark on any of the five figures, or between any two figures, resulting in a nine-point scale for each dimension. The SAM scale for valence ranges from a figure with a smile to a figure with a frown. Participants were instructed that the figure with the smile represents their feeling completely happy, pleased, or satisfied while viewing and that the figure with the frown represents their feeling completely unhappy, annoyed, or unsatisfied. For arousal, the SAM scale ranges from an excited, wide-eyed figure with an explosion in its middle to a relaxed, sleepy figure. The excited, wide-eyed figure represented that the participant felt completely aroused, stimulated, or excited while viewing; the relaxed, sleepy figure was to be used when the participant felt completely unaroused, calm, or relaxed while viewing. Finally, the SAM scale for dominance ranges from a small figure to a large figure that fills up its

entire frame. Participants were told that the small figure represents their feeling completely controlled, influenced, or submissive while viewing and that the extremely large figure represents their feeling completely dominant, controlling, or influential.

Encoding In order to assess encoding of the information in the messages, a signal detection measure was used to test memory of the messages' visual content. Two audio clips, 3 s in duration each, was taken from each 30 s clip and shown to the participants: one from the first 15 s and one from the final 15 s. In addition, two foils from clips that the participants did not see were presented. The total number of foils equaled the total number of targets. Each question asked if the study participant heard the audio clip in one of the video clips they viewed, and participants were forced to answer yes or no.

Procedure

Following the reading and signing of the informed consent, participants were sat in front of a laptop computer. Experiments were run in groups up to five participants. The experimenter then started the MediaLab program (Jarvis 2004) for the study participant; all sports clips and self-report scales were presented with this software. Prior to any sports clips playing, instructions were presented about how to respond on the SAM scales, and examples were given so that the participants could further understand how to use them. The participants were not told of the memory task in advance. This was done in order for participants to watch the clips similarly to how they would watch them at home. After the example questions the participants were told to continue and watch the sports clips. In order to control for any order effects, the three SAM scales were randomly presented to the participants to answer after each clip.

After completion of the self-report measures for the last stimulus sports clip, participants answered demographic questions. A distraction task followed during which participants listened to music clips and answered questions about the music. Following the distraction task, MediaLab was started in order for the participants to begin the signal detection questions. The questions were presented to the participants in random order in an effort to control for participant fatigue.

Data Analysis

For the SAM scales, an average score was calculated for each of the emotions. Following the calculation of the average scores, repeated measure ANOVAs were calculated in order to analyze the effect the experimental factors have on the participants' emotional state after viewing each clip.

Signal detection answers were used to compute four scores for each participant: hits, misses, false alarms, and correct rejections. These scores can be used to determine how well a participant was about to detect the correct answer (recognition sensitivity) from how likely they are to even make the decision (Shapiro 1994). How likely they are to make the decision that fits their criteria in detecting the signal is called criterion bias. The non-parametric measure D' and criterion bias c was calculated in an effort to measure recognition sensitivity (Macmillan and Creelman 1991; Wickens 2002).

Effect size for all significant statistics tests is reported as ϵ^2 , which is akin to, yet more conservative than, the adjusted R^2 (Keppel 1982).

Results

Hypothesis one stated that participants would self-report higher levels of dominance for sports featuring female athletes than for sports featuring male athletes. Analysis showed that there was a significant effect of athlete sex on the participants' self-reported dominance scores, $F(1, 42)=4.70$, $p=.036$, $\epsilon^2=.08$. In addition the means further support the hypothesis by demonstrating that participants self-reported higher levels of dominance for sports featuring female athletes ($M=5.06$, $SD=1.31$) as compared to sports featuring male athletes ($M=4.86$, $SD=1.30$). See Fig. 1.

Hypothesis two postulated that participants would self-report higher levels of dominance for sports featuring athletes participating in gender-appropriate sports as compared to athletes competing in sports that could be perceived as gender-inappropriate. While there was a main effect of athlete sex, $F(1, 42)=4.70$, $p=.036$, $\epsilon^2=.08$, and perceived sport gender, $F(2, 84)=7.32$, $p=.001$, $\epsilon^2=.13$, on the dominance scores, there was no significant interaction between the two, $F(2, 84)=.209$, $p=.92$. Therefore this hypothesis was not supported.

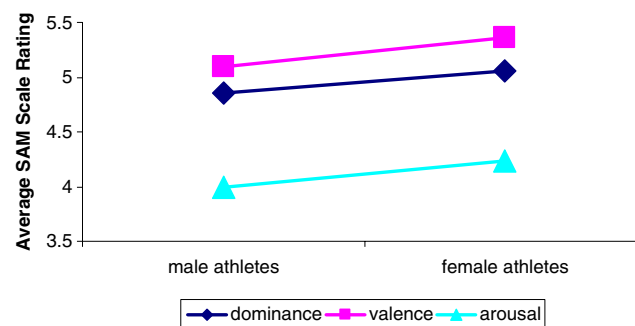


Fig. 1 This graph shows the average SAM arousal, valence, and dominance scores ratings for all participants while watching sports featuring male athletes and sports featuring female athletes.

Hypothesis three stated that participants would self-report higher levels of arousal for sports featuring female athletes than for sports featuring male athletes. Analysis showed that there was a significant effect of athlete sex on the participants' self-reported arousal scores, $F(1, 42)=5.72$, $p=.021$, $\epsilon^2=.10$. In addition the means further support the hypothesis by demonstrating that participants self-reported higher levels of arousal for sports featuring female athletes ($M=4.24$, $SD=1.19$) as compared to sports featuring male athletes ($M=4.00$, $SD=.99$). See Fig. 1.

Hypothesis four postulated that participants would self-report higher levels of arousal for sports featuring athletes participating in gender-appropriate sports as compared to athletes competing in sports that could be perceived as gender-inappropriate. There were main effects for athlete sex, $F(1, 42)=5.72$, $p=.021$, $\epsilon^2=.10$, and perceived sport gender, $F(2, 84)=13.49$, $p<.001$, $\epsilon^2=.23$; there was also a significant interaction between the two, $F(2, 84)=13.62$, $p<.001$, $\epsilon^2=.23$. However, an examination of the mean scores shows that the effect is not in the predicted direction. Women participating in masculine sports did garner higher arousal scores ($M=7.76$, $SD=1.27$) than women participating in feminine sports ($M=4.10$, $SD=1.44$), and participants felt more aroused while watching male athletes participating in feminine sports ($M=4.27$, $SD=1.26$) than those participating in masculine sports ($M=4.04$, $SD=1.03$). This hypothesis is, therefore, not supported. See Fig. 2.

Hypothesis five stated that participants would self-report higher levels of valence for sports featuring female athletes than for sports featuring male athletes. Analysis showed that there was a significant effect of athlete sex on the participants' self-reported valence scores, $F(1, 42)=14.25$, $p<.001$, $\epsilon^2=.24$. In addition the means further support the hypothesis by demonstrating that participants self-reported higher levels of valence for sports featuring female athletes ($M=5.36$, $SD=.99$) as compared to sports featuring male athletes ($M=5.09$, $SD=.84$). See Fig. 1.

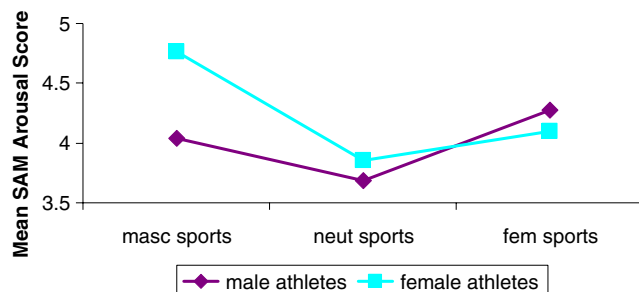


Fig. 2 This graph shows the average SAM arousal scores for all participants while watching male and female athletes participating in sports that are perceived to be masculine, gender neutral, or feminine.

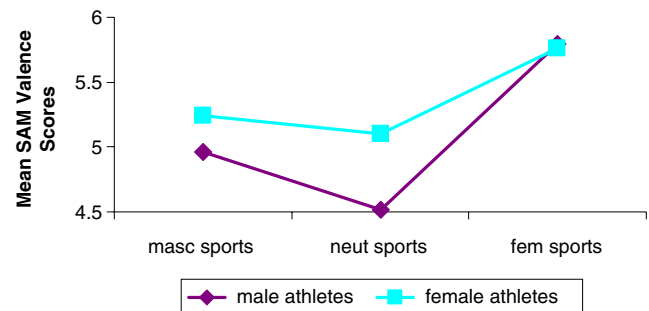


Fig. 3 This graph shows the average SAM valence scores for all participants while watching male and female athletes participating in sports that are perceived to be masculine, gender neutral, or feminine.

Hypothesis six postulated that participants would self-report higher levels of valence for sports featuring athletes participating in gender-appropriate sports as compared to athletes competing in sports that could be perceived as gender-inappropriate. There were main effects for athlete sex, $F(1, 42)=14.25$, $p<.001$, $\epsilon^2=.24$, and perceived sport gender, $F(2, 84)=32.12$, $p<.001$, $\epsilon^2=.42$. There was also a significant interaction between the two, $F(2, 84)=8.26$, $p=.001$, $\epsilon^2=.14$. In an examination of the mean scores, women participating in feminine sports did garner higher valence scores ($M=5.76$, $SD=1.16$) than women participating in masculine sports ($M=5.24$, $SD=1.22$). However, participants had higher valence scores while watching male athletes participating in feminine sports ($M=5.79$, $SD=1.02$) than male athletes participating in masculine sports ($M=4.96$, $SD=.88$). This hypothesis is supported for sports featuring female athletes but not for sports featuring male athletes. See Fig. 3.

Hypothesis seven stated that participants would encode the content of sports featuring female athletes better than that of sports featuring male athletes. Analysis showed that there was no significant effect of athlete sex on the participants' memory sensitivity scores, $F(1, 42)=.205$, $p=.65$. In addition, athlete sex did not have a significant effect on criterion bias scores ($F(1, 42)=1.36$, $p=.25$). Therefore the hypothesis was not supported.

Hypothesis eight postulated that participants would better recognize sports featuring athletes participating in gender-appropriate sports as compared to athletes competing in sports that could be perceived as gender-inappropriate. There were not main effects for athlete sex on message sensitivity, $F(1, 42)=.18$, $p=.68$, or criterion bias, $F(1, 42)=1.25$, $p=.27$, or for perceived sport gender on message sensitivity, $F(2, 84)=.22$, $p=.81$, or criterion bias, $F(2, 84)=.48$, $p=.62$. In addition there is no a significant interaction effect between the two on either message sensitivity, $F(2, 84)=.13$, $p=.88$, or on criterion bias, $F(2, 84)=.84$, $p=.44$. This hypothesis was not supported.

Discussion

As expected, female viewers of sports reported feeling happier, more aroused, and more dominant/in control while watching female athletes compete as compared to watching male athletes. This plays into the ideas behind Social Dominance Theory (SDT) (Sidanius 1993; Sidanius and Pratto 1999). SDT discusses *social dominance orientation*, which is a personality measure that allows for an individual predilection toward a societal hierarchy (Bates and Heaven 2001; Pratto et al. 1994; Schmitt et al. 2003; Sidanius and Pratto 1999). In other words, individuals have a preference for the groups to which they belong (i.e., sex, race, sexual orientation), and they perceive this group at a higher social level than and possibly superior to other groups. Female viewers may feel more positive, more aroused, and more dominant while watching female athletes because these athletes are exceeding societal expectations for women and exceeding in an arena that is typically thought of exclusively as being for men.

What is not consistent are the results obtained following the viewing of athletes that cross the perceived gender lines through the sport they play. While participants felt happier watching women participating in feminine sports, they also felt happy while watching men participating in the same sports. In addition, participants were more aroused by athletes that crossed the perceived gender boundaries. This could partially be explained as due to their viewing these athletes being successful while still maintaining their femininity; they appear to be rejecting female athletes who are attempting to be successful in realms that would cause them to be perceived as masculine or unlike the typical woman. Female viewers felt more aroused and positive toward men who showed their feminine side by participating in sports such as figure skating and gymnastics. It appears that female viewers of sports value their own sense of femininity and the qualities of femininity in female athletes while enjoying seeing some of these same traits in the male athletes that they view, and quite possibly making these male athletes easier for the female viewers to relate to.

The emotions elicited by sports that feature athletes that cross gender boundaries should be examined further. The use of psychophysiological measures will demonstrate if a viewer's self-report measures match what their physiology is indicating. Skin conductance responses should correlate in some way with responses on the SAM arousal scale while measurements of facial EMG should correlate in some way with the responses on the SAM valence scale. Unfortunately there are currently no physiological correlates to the SAM dominance scale. An important reason for using such measures is that, due to possible cultural biases, it is possible that physiological responses may not actually correlate to self-report measures.

By relating these self-reported results to future psychophysiological findings, it will give a better understanding about how the construction of these sports broadcasts are processed by male and female viewers and what the possible long lasting effects exposure can have. By integrating psychophysiological measures such as heart rate and skin conductance, it will further demonstrate the psychological impact the viewing of these stereotypes can have on the television audience. This is particularly true when examining cultivation effects and the viewer's construction of social reality. In addition, such research will better inform producers of televised sports, particularly if there are significant differences between the effects sports featuring male athletes and sports featuring female athletes have. If one is having a significantly more negative impact than the other, particularly in the construction of an individual's reality and their beliefs about gender roles, then the producers of such sports content may be able to alter broadcast practices in order to alleviate or equalize the impact the two sports broadcasts can have.

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