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EFFECTS OF HAPPINESS ON GENDER STEREOTYPING

IN SOCIAL PERCEPTION

A Thesis

Presented to

The Faculty of the Department of Psychology

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In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Eurika B. Marina

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EFFECTS OF HAPPINESS ON GENDER STEREOTYPING

IN SOCIAL PERCEPTION

by

Eurika B. Marina

APPROVED FOR THE DEPARTMENT OF PSYCHOLOGY

SAN JOSÉ STATE UNIVERSITY

December 2014

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ABSTRACT

EFFECTS OF HAPPINESS ON GENDER STEREOTYPING

IN SOCIAL PERCEPTION

by Eurika B. Marina

Past research has shown that people's perception of others can be influenced by a number

of factors, including their own affective state. The purpose of the present study was to

investigate the effects of happiness on gender stereotyping. College undergraduate

participants in a happy or neutral state completed a social judgment task in which they

determined the likelihood of guilt of either a male or a female suspect in a computer

hacking case. Happy participants showed increased gender stereotyping, but only against

the male suspect. Neutral participants did not show stereotype activation only when the

suspect was identified as female. Practical applications and directions for future research

are discussed.

ACKNOWLEDGEMENTS

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I am greatly indebted to my parents, Faidie and Silvia, whose lifetime of hard work, love, and sacrifice have been my driving force all along. Mere words cannot express my endless gratitude for all that they endured to provide me and my siblings with a happy, loving home to grow up in and for courageously leaving everything behind and immigrating to a foreign land thousands of miles away to ensure us a brighter future. To them I dedicate this thesis.

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Finally, I am forever grateful to my husband and best friend, Jesse, for never losing faith in me, even at times when I nearly lost faith in myself. He is my constant source of motivation, strength, and comfort. I could never have made it this far without the extraordinary love and patience that he has relentlessly shown me throughout the years. This thesis belongs to him.

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INTRODUCTION

Social psychologists have long sought to determine the conditions in which stereotyping is likely to occur in social perception. Findings of early psychological research were consistent with the commonly-held belief that prejudices and stereotypes are most likely to emerge during times of distress (e.g., Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Dollard, Miller, Doob, Mowrer, & Sears, 1939). Bodenhausen (1990) suggested the possibility of prejudices and stereotypes being defense mechanisms used to cope with negative affect, such that individuals in a negative affective state may receive some sort of relief by expressing their prejudices and stereotypes toward others.

Macrae, Milne, and Bodenhausen (1994) offered a new perspective and suggested that stereotypes are merely shortcuts used to simplify information and conserve cognitive resources for other tasks. Chaiken (1980) referred to these shortcuts as heuristic cues. In *heuristic* processing, people do not think critically about the information; instead, they focus on simple cues that are often irrelevant to information itself in order to quickly make decisions or judgments. Kahneman (2011) added that, by processing information heuristically, individuals subconsciously relate new information to existing patterns or thoughts, instead of creating a brand new pattern each time new information is learned. On the contrary, *systematic* processing is slower, yet more conscious and logical (Kahneman, 2011), and it involves comprehensive analysis of information in which individuals are likely to carefully base their decisions or judgments on relevant cues given about the information (Chaiken, 1980).

Consistent with Macrae et al.'s (1994) perspective, there is increasing evidence that stereotypes serve as heuristic cues in social perception (Bodenhausen, 1990, 1993; Gilbert & Hixon, 1991; Pratto & Bargh, 1991; Stangor & Duan, 1991). Because stereotypes provide quick and convenient summaries of social information, they have been shown to be especially useful when the social perceivers are cognitively busy and/or do not have enough time to engage in a systematic analysis of the information. Stangor and Duan (1991), for example, found that participants stereotyped more as the number of items in a recall task increased. Similarly, Pratto and Bargh (1991) found that participants relied more on stereotypes to form impressions of others when they were in a hurry.

Cognitive overload and time constraint are not the only factors that influence how people process information. The persuasion literature has long established that one's affective state can also influence cognitive processing. Studies on affect and persuasion have shown that positive affect, such as happiness, increases reliance on heuristics (Batra & Stayman, 1990; Mackie & Worth, 1989; Park & Banaji, 2000; Worth & Mackie, 1987). These findings remain consistent across various types of positive affect. Janis, Kaye, and Kirschner (1965), for example, found that participants were more likely to agree with a series of controversial arguments when they were full than when they were hungry. Likewise, Griskevicius, Shiota, and Neufeld (2010) found that positive affect, such as enthusiasm and amusement, resulted in greater acceptance of weak persuasive messages. Wegener and Petty (1994) suggested that when people are in a positive affective state, they become motivated to maintain that state and, thus, choose not to think critically about new information that could potentially spoil their current state.

Conversely, research findings on the effects of negative affect on cognitive processing have been more much inconsistent. Sadness, for instance, has been found to both increase (Isen, 1984, 1987) and decrease (Ellis & Ashbrook, 1988) the use of systematic processing. Isen (1984, 1987) suggested that being sad causes people to become motivated to change their current state by focusing on new stimuli; thus, they are more inclined to engage in systematic processing in an attempt to escape their negative state. In contrast, Ellis and Ashbrook (1988) argued that negative affect triggers intrusive thoughts and, thus, limits one's capability to systematically process information.

Recognizing the potentially distinct effects of various types of negative affect, Bodenhausen, Shepard, and Kramer (1994) compared the effects of sadness and anger on social information processing and found that angry subjects made more stereotypic judgments on a social perception task than sad subjects. Henry (1986, as cited in Bodenhausen, Shepard, et al., 1994) attributed this to the fact that anger is intricate in nature, triggering much more complex physiological responses (e.g., epinephrine secretion, increase in heart rate and blood pressure, etc.) when compared to sadness. Due to such variance in the impact of negative affect, the main focus of the present study was on positive affect, specifically happiness.

What, then, are the implications of affect in relation to stereotyping? If the perspective that stereotyping is driven by the need to cope with negative affect is correct, then happy individuals can be expected to show no evidence of stereotypic thinking. However, if it is true that stereotyping is merely a form of heuristic processing, and because happiness has been shown to increase use of heuristic processing, then happy

individuals may also be more likely to engage in stereotypic thinking. Compelling

evidence suggesting the latter was found by Bodenhausen, Kramer, and Siisser (1994).

Bodenhausen, Kramer, et al. (1994) induced participants' mood to either a happy

or neutral state and asked them to rate the likelihood of guilt of a fellow student in an

alleged physical assault case. For half of the participants, the suspect was identified as

"John Garner", and for the other half of participants, the suspect was identified as "Juan

Garcia", a traditional Hispanic name (Bodenhausen (1990) had found that male Hispanics

were typically viewed as aggressive and were more likely to be stereotypically associated

with physical assault and/or other types of aggression). All participants in Bodenhausen,

Kramer, et al.'s study were given the same ambiguous facts about the case that could

imply either guilt or innocence. Their findings revealed that neutral participants showed

no difference in the guilt ratings of both suspects, indicating that their judgments were

likely to be based on the given facts, whereas happy participants reported significantly

higher guilt ratings for Juan Garcia, suggesting that they relied more on racial stereotypes

when making judgments about the suspects.

One way to extend Bodenhausen, Kramer, et al.'s (1994) study is by investigating

whether the results can be generalized beyond racial stereotypes. Other than race, one of

the most prevalent stereotypes that still exist in our society today is regarding gender. A

common stereotype about men is that they are generally thought to be more competent

and masterful than women (Eagly & Mladinic, 1989). In advertisements of technology

products, for example, women are often portrayed as incompetent and unskilled users

(Barker & Aspray, 2006). Popular television programs like *The Big Bang Theory* feature

nerdy, computer savvy men and technologically inept women (Kirk, 2009). Nevertheless, past research has suggested that feminine stereotypes are not always negative; in fact, sometimes they are more favorable than the male stereotypes. For example, women are often perceived as more honest and ethical than men (Dolan, Deckman, & Swers, 2011). Conversely, men are generally thought to be less obedient and more likely to engage in self-serving behaviors than women (Buckley, Wiese, & Harvey, 1998).

The purpose of the present study was to examine whether happiness increases reliance on these gender stereotypes the same way it increased use of racial stereotypes as evidenced in Bodenhausen, Kramer, et al.'s (1994) study (due to inconsistent findings and the complexity of negative affect as discussed previously, the present study only focused on happiness). Given the same ambiguous facts, participants induced to either happy or neutral state were asked to make judgments about a pretend misconduct case involving a scenario in which a student (male or female) was suspected of hacking into the university computer system in order to change his or her grade. Based on Bodenhausen, Kramer, et al.'s (1994) findings that happiness increased use of stereotypes, and given the commonly-endorsed stereotypes of men as being technologically competent, yet more dishonest and unethical than women, happy participants in this study were hypothesized to give higher guilt ratings for the male suspect than the female suspect, reflecting their use of stereotypes in making those judgments. Because neutral participants were not expected to rely on stereotypes, they were hypothesized to show no difference in their guilt ratings of both suspects.

Furthermore, because the stereotype of men being more technologically skilled than women has been shown to be prescribed by *both* genders (Hargittai & Shafer, 2006), gender of participants was also taken into account in the analysis. It was hypothesized that both male and female participants in the happy group would equally stereotype against the male suspect (i.e., giving the male suspect higher guilt ratings than the female suspect) because he was more likely to be perceived as capable of hacking a computer system than the female suspect.

Method

Participants

A convenience sample of 131 San José State University students was recruited from the psychology research subject pool to participate in this study. All participants received course credit for their participation and were treated in accordance with the ethical standards of the American Psychological Association (American Psychological Association, 2002).

Design

Participants were randomly assigned to different conditions in a 2 (affective state: happy or neutral) x 2 (gender of suspect: male or female) between-subjects factorial design. In the male-suspect condition, the suspect was identified as "John", whereas in female-suspect condition, the suspect was identified as "Jane". The dependent measure was the mean guilt ratings of the suspect.

Materials

Affective state was induced using the exact procedure as described in Bodenhausen, Kramer, et al. (1994) and Strack, Schwarz, and Gschneidinger (1985). For the happy group, participants were given a single sheet of standard-size paper containing instructions of their task, which was to recall and write down vivid descriptions of a specific event that made them particularly happy (see Appendix A). Bodenhausen, Kramer, et al. and Strack et al. have found this procedure to be successful in inducing happiness. Similarly, participants in the neutral condition were given a single sheet of standard-size paper containing instructions to recall and write down their normal everyday routines (see Appendix B).

In an attempt to enhance the effect of the manipulations, a happy or neutral instrumental music was quietly played in the background during this task. The happy musical selection was "Brandenberg Concerto No. 3" by Johann Sebastian Bach (played only in the happy condition), whereas the neutral selection was "Waltz No. 12 in F minor" by Frédéric Chopin (played only in the neutral condition). These selections have been used and validated in previous studies (e.g., Green, Sedikides, Saltzberg, Wood, & Forzano, 2003; Wood, Saltzberg, & Goldsamt, 1990). Additionally, a meta-analysis of affect inductions conducted by Westermann, Spies, Stahl, and Hesse (1996, cited in Green et al., 2003) revealed that musical affect inductions did not yield significantly different effect sizes across various affective states. Therefore, the use of music to induce happy and neutral states can be expected to produce approximately equal effect sizes (Green et al., 2003).

Similar to those used in Bodenhausen, Kramer, et al.'s (1994) study, the remaining materials were as follows:

1.   Demographic questionnaire, consisting of questions about the participants' gender and age, as well as several filler questions (e.g., "How interesting did you find this task?"). Embedded within these fillers were questions used to assess the effectiveness of the affect manipulation (e.g., "What mood are you in at this time?"), with response choices on a scale of 0 ("very bad") to 10 ("very good"). Other questions aimed to measure happiness used the terms *happy, excited, energetic*, and *cheerful* (see Appendix C). These terms were derived from PANAS-X, the expanded version of the Positive and Negative Affect Schedule (Watson & Clark, 1994). Watson and Clark (1994) used these terms to describe *joviality*, which was categorized as one of the basic positive emotions. The established alpha coefficient for the positive affect portion of the PANAS-X among undergraduate students was .88 (Watson & Clark, 1994);

2.   Introduction to the San José State University's (SJSU) Office of Student Conduct and Ethical Development to provide cover story about the peer disciplinary review panel (see Appendix D);

3.   Brief case summary, containing several sentences about either a male student identified as "John" (for the male-suspect group) or a female student identified as "Jane" (for the female-suspect group) who had been suspected of hacking into the university computer system to change his or her course grade, as well as ambiguous facts relating to the case that may or may not imply guilt (see Appendix E);

4.   Case questionnaire, on which participants were to rate the likelihood of the

accused student's guilt on 11-point scales ranging from 0 ("not at all likely") to 10 ("very

likely"), along with a few filler questions to maintain the cover story of the experiment

(see Appendix F).

Procedures

Upon arrival for their appointments, participants were greeted and seated

promptly. They were given consent forms, which informed participants about the

purpose, procedure, and risks of the experiment, the benefits they would receive for

participating, as well as confidentiality issues and participants' right to refuse or

withdraw from the experiment. Participants signed the form only if they agreed to

participate.

Manipulation of affect.   Prior to their arrival, each scheduled participant had

already been randomly assigned to either the happy or neutral group. Music

corresponding to the appropriate group was already playing quietly in the background

when participants arrived and continued to play until the participants left the room. The

experimenter explained to the participants that the background music was being played to

drown out outside noises so that they would be able to concentrate better on the given

tasks.

Next, participants were told that they would be participating in two different

experiments. Following the procedures used by Bodenhausen, Kramer, et al. (1994),

those in the happy group were told that the purpose of first study was to investigate the

relationship between emotion and memory, and they were asked to recall and write down vivid descriptions of a specific event that made them particularly happy. Conversely, those in the neutral group were told that the first study was to explore the psychological structure of everyday memory, so they were asked to recall and write down their normal daily routines. Participants in both groups were given exactly 12 minutes to complete this task. At the end of the 12 minutes, they were asked to fill out the demographic questionnaire (Appendix C) containing questions used to assess the effectiveness of the affect manipulation.

Social judgment task. Similar to the task described by Bodenhausen, Kramer, et al. (1994), for what they believed to be the second study, participants were told that SJSU's Office of Student Conduct and Ethical Development was testing out a peer disciplinary review panel, which would include SJSU students who were randomly selected to review student misconduct cases and participate in disciplinary proceedings in exchange for extra course credit. In order to examine how such peer disciplinary review system might work at SJSU, participants were asked to take on the role of a student member of this panel and review a past alleged misconduct case from another university that had adopted the same system. Each participant was given a packet containing materials in the following order: background information on the peer disciplinary panel (Appendix D), case summary (Appendix E), and case questionnaire (Appendix F). For male-suspect group, the suspected student was identified as "John", whereas for the female-suspect group, the suspected student was identified as "Jane". Participants were given another 10 minutes to complete this task. After reviewing all of the materials and

completing the questionnaire, participants were fully debriefed and thanked for their

participation.

Results

Demographics

One-hundred thirty one San José State University students participated in this

study. Of these 131 participants, four (3%) were excluded from data analysis for

answering the reverse-coded item (item 6 in Appendix F) the same way as other items.

Two of these participants belonged in the happy group with the male suspect, and two

others belonged to the happy group with the female suspect.

The total number of participants included in the analysis was 127. The vast

majority (79.5%) of the participants were females ($n = 101$), whereas only 20.5% were

males ($n = 26$). Ninety-two percent of the participants were between the ages of 18 and

24 ($n = 117$), and the remainders were between the ages of 25 and 34 ($n = 7$), 35 and 44

($n = 2$), 45 and 55 ($n = 1$). Of those who were in the happy group ($n = 65$), about half ($n = 33$) reported that the happy event occurred less than one year ago, whereas the other

half ($n = 32$) reported that the event occurred more than one year ago.

Affect Manipulation Check

Effectiveness of the affect manipulation was assessed by comparing the means of

participants' responses to the questions measuring happiness (items 2, 3, 5, 7, and 9)

shown in Appendix C. The possible scores range from 0 to 10, with higher scores

signifying greater levels of happiness. Items 2, 3, 5, 7, and 9 were found to have high

internal consistency (Cronbach's $\alpha = .91$).

As predicted, participants in the happy group ($M = 7.25$, $SD = 1.32$) rated themselves as significantly happier than those in the neutral group ($M = 5.33$, $SD = 1.23$), $t(125) = 8.47$, $p < .001$. In addition, there was no significant difference in happiness ratings between those who experienced the happy event less than 1 year ago ($M = 7.28$, $SD = 1.36$) and those who experienced it more than 1 year ago ($M = 7.22$, $SD = 1.29$), $t(63) = .20$, $p = .84$.

Perceived Guilt

The guilt ratings of the four groups were analyzed. Guilt ratings from items 1, 2, 4, and 6 shown in Appendix F were averaged for each group. The possible scores ranged from 0 to 10, with higher scores indicating higher guilt ratings (the scores of item 6 were inverted prior to analysis). Items 1, 2, 4, and 6 were found to have high internal consistency (Cronbach's $\alpha = .92$).

The first group ($n = 33$) was induced to feel happiness and then gave guilt ratings for John, the male suspect; the second group ($n = 31$) was induced to feel a neutral mood and then gave guilt ratings for John; the third group ($n = 32$) was induced to feel happiness and then gave guilt ratings for Jane, the female suspect; the fourth group ($n = 31$) was induced to feel a neutral mood and then gave guilt ratings for Jane. Table 1 shows the means, standard deviations, and sample sizes of these groups.

Table 1

Means and Standard Deviations of Guilt Ratings as a Function of Affective State and Gender of Suspect

	Male Suspect				Female Suspect		
Affective State	*n*	*M*	*SD*		*n*	*M*	*SD*
Happy	33	6.55	1.09		32	4.10	1.57
Neutral	31	5.19	1.42		31	4.24	1.42
Total	64	5.89	1.42		63	4.17	1.49

Note. Possible scores range from 0 to 10. Higher scores indicate higher guilt ratings.

Happy participants were hypothesized to give higher guilt ratings for the male suspect than the female suspect, whereas neutral participants were hypothesized to show no difference in their guilt ratings of both suspects. Mean guilt ratings were subjected to a two-way between-subjects analysis of variance (ANOVA) having two levels of affective state (happy, neutral) and two levels of suspect's gender (male, female). All effects were statistically significant at the .05 significance level. Significant main effects were observed for both affective state, $F(1, 123) = 6.06$, $p = .015$, and gender of suspect, $F(1, 123) = 47.63$, $p < .001$. However, the interaction between affective state and gender of suspect was also significant, $F(1, 123) = 9.20$, $p = .003$, indicating that the significant main effects are misleading and that the data must be interpreted with respect to the combination of *both* affective state and gender of suspect. Table 2 presents the complete ANOVA source table.

Table 2

Source Table for 2 (Affective State) x 2 (Gender of Suspect) Between-Subjects ANOVA

Source	SS	df	MS	F	p
Affective State	11.64	1	11.64	6.06	.015*
Gender of Suspect	91.45	1	91.45	47.62	<.001*
Affective State x Gender of Suspect	17.66	1	17.66	9.20	.003*
Error	236.19	123	1.92		

Note. * = significant at the $p < .05$ level. $n = 127$.

Affective state x gender of suspect interaction. As depicted in Figure 1, simple comparisons revealed that the guilt ratings for the male suspect ($M = 6.55$, $SD = 1.08$) were significantly higher than for the female suspect ($M = 4.10$, $SD = 1.57$) among happy participants, $F(1, 63) = 53.31$, $p < .001$. Likewise, among neutral participants, guilt ratings for the male suspect ($M = 5.19$, $SD = 1.42$) were also significantly higher than for the female suspect ($M = 4.24$, $SD = 1.42$), $F(1, 60) = 6.93$, $p = .01$. Because both happy and neutral groups gave significantly higher guilt ratings for the male suspect than the female suspect, the effect of suspect's gender was not dependent on the affective state of participants. On the other hand, the effect of participants' affective state was dependent on gender of suspect. When the suspect was identified as male, happy participants ($M = 6.55$, $SD = 1.08$) gave significantly higher guilt ratings than neutral participants ($M = 5.19$, $SD = 1.42$), $F(1, 62) = 18.36$, $p < .001$. However, when the suspect was identified as female, guilt ratings among happy participants ($M = 4.10$, $SD = 1.57$) and neutral participants ($M = 4.24$, $SD = 1.42$) did not differ, $F(1, 61) = .14$, $p = .71$.
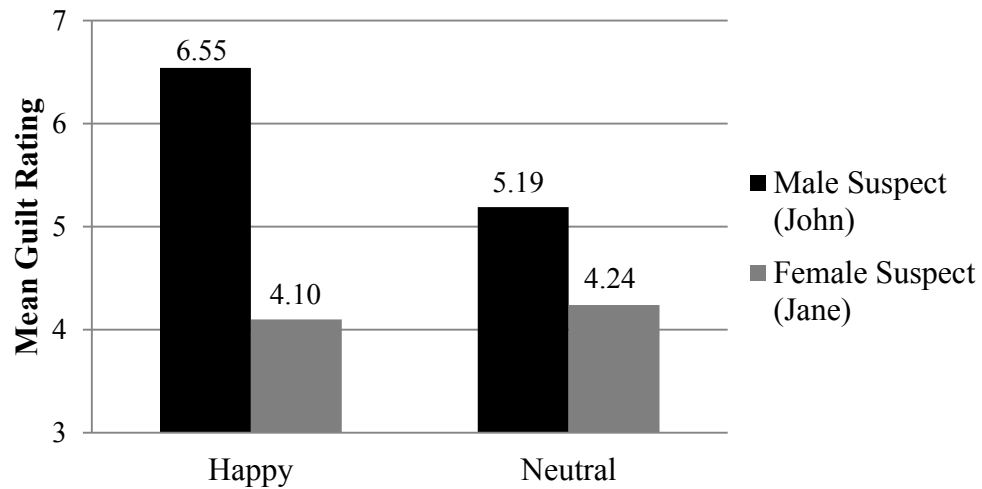
Figure 1. Mean perceived guilt as a function of participants' affective state and gender of suspect for all participants (*n* = 127).

Gender of participants. In order to analyze the effect of participants' gender, mean guilt ratings were later subjected to a three-way ANOVA with two levels of affective state (happy, neutral), two levels of suspect's gender (male, female), and two levels of participants' gender (male, female). It was hypothesized that both male and female participants in the happy group would stereotype against the male suspect. The result failed to confirm the hypothesis, as the main effect of participants' gender was not significant, $F(1, 119) = 1.22, p = .27$. Moreover, the three-way interaction between affective state, gender of suspect, and gender of participant was not significant, $F(1, 119) = .42, p = .52$. Figures 2 and 3 illustrate the mean guilt ratings among female and male participants, respectively.
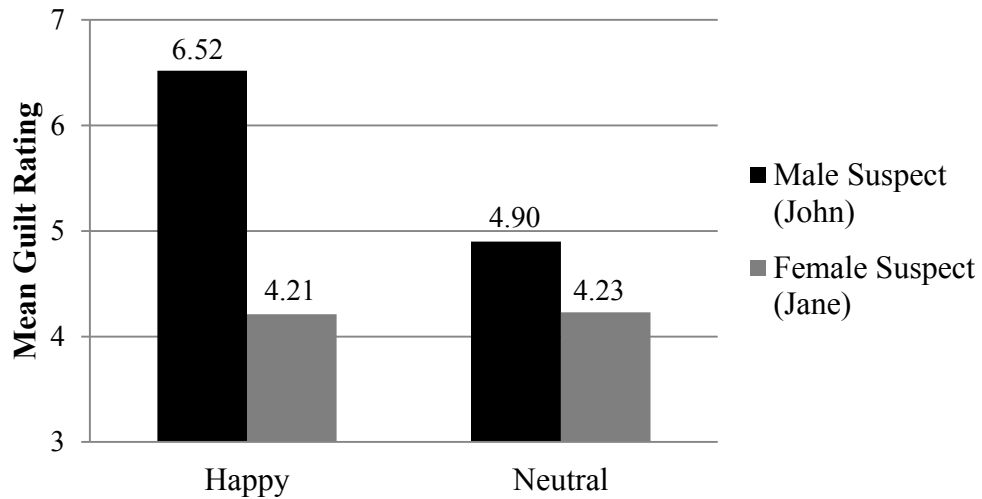
Figure 2. Mean perceived guilt as a function of affective state and gender of suspect among female participants ($n = 101$).
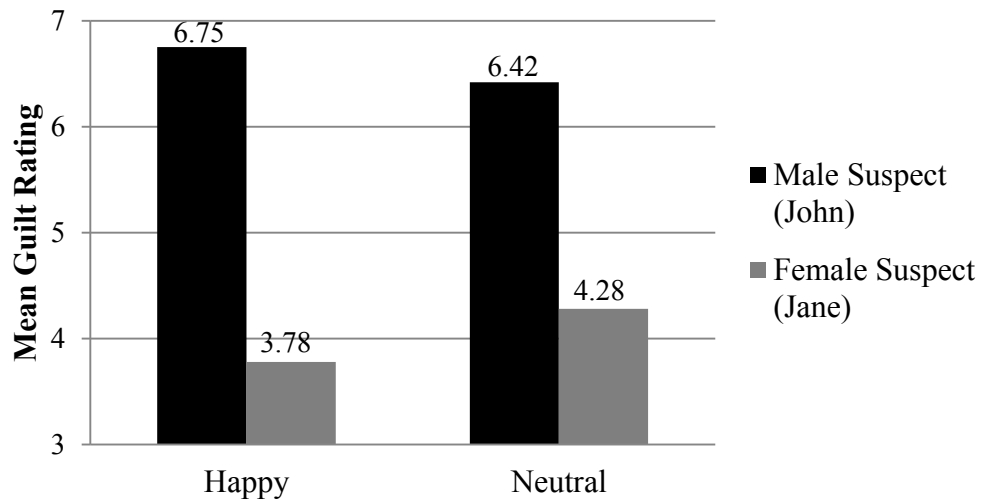
Figure 3. Mean perceived guilt as a function of affective state and gender of suspect among male participants ($n = 26$).

Figure 2 shows that happy female participants gave higher guilt ratings for the male suspect ($M = 6.52$, $SD = 1.16$) than for the female suspect ($M = 4.21$, $SD = 1.33$), whereas neutral female participants gave nearly the same guilt ratings for the male suspect ($M = 4.90$, $SD = 1.34$) and the female suspect ($M = 4.23$, $SD = 1.33$). Figure 3 shows that happy male participants gave higher guilt ratings for the male suspect ($M = 6.75$, $SD = .35$) than for the female suspect ($M = 3.78$, $SD = 2.24$). Similarly, neutral male participants gave higher guilt ratings for the male suspect ($M = 6.42$, $SD = 1.16$) than for the female suspect ($M = 4.28$, $SD = 1.77$) – this is by a considerably large margin when compared to the guilt ratings given by neutral female participants, which were nearly the same for both suspects. However, due to the small number of male participants ($n = 26$), these means must be interpreted with caution.

Based on these means, it appears that nearly all groups stereotyped against the male suspect, with the exception of neutral female participants. Although the hypothesis that both happy male and female participants would stereotype against the male suspect was not confirmed statistically, the group means suggest that there may be a trend going in the expected direction.

Discussion

The hypothesis of this study was that happy people would stereotype more than those in a neutral affective state. Specifically, happy participants were hypothesized to give the male suspect higher guilt ratings than the female suspect, reflecting their use of stereotypes when making those judgments. Without stereotype activation, neutral

participants were hypothesized to show no difference in their guilt ratings of both suspects.

The results of this study confirmed that happy people stereotyped more than those in a neutral state, but, interestingly, only against the male suspect. For the female suspect, being happy did not cause either increased or decreased stereotyping. Additionally, this study failed to confirm that neutral participants would show no evidence of stereotyping, as neutral participants also stereotyped against the male suspect, although not as much as happy participants.

A possible cause for such results may be related to the nature of the type of crime used in the cover story. Computer hacking can be considered as a male crime because hackers are mostly associated with men and not women. In the original study, Bodenhausen, Kramer, et al. (1994) used a scenario involving an allegation of assault, another male crime that, at the baseline level, both men (John Garner and Juan Garcia) were equally likely to commit. It was not until after stereotyping was activated by happiness that Juan Garcia was perceived to be more likely to commit the crime. In the present study, due to the use of a scenario involving a male crime (i.e., computer hacking), it is possible that there was already a pre-existing stereotype against the male suspect at baseline. Specifically, perhaps the male suspect was already perceived to be more likely to commit a computer hacking crime than the female suspect prior to any manipulations. This may explain why neutral participants gave higher guilt ratings for the male suspect as well. It appears that happiness enhanced this pre-existing stereotype, as the guilt ratings for the male suspect were still higher among happy participants when

compared to neutral participants. Moreover, because neutral male participants showed a considerably larger difference between their guilt ratings for the male and female suspects when compared to neutral female participants, the pre-existing stereotype that men are more technologically competent than women may have been more prevalent among male participants at baseline.

Issues and Future Studies

The present study has several limitations. First, as previously discussed, the fact that happiness increased gender stereotyping only when the suspect was identified as male was likely to be caused by the decision to use a scenario involving a male-specific crime (i.e., computer hacking). In retrospect, because the objective of this study was to examine the effect of happiness on gender stereotyping, perhaps a more gender-neutral crime – a crime that both men and women appear to be equally likely to commit at baseline (e.g., larcerny) – should have been used. In addition, it would be of great interest to future researchers to investigate whether the use of a female crime (e.g., "crime of passion") would result in increased stereotyping against the female suspect.

Next, female participants in this study far outnumbered male participants, so gender effects could not be studied. Although there was a trend suggesting that both male and female participants in the happy condition may have stereotyped against the male suspect, such outcome was not obtained statistically. Future researchers should attempt to recruit equal numbers of male and female participants to examine whether gender of participants has any influence on their perceived guilt of a suspect belonging to either the same or opposite gender.

Furthermore, the main hypothesis of this study was heavily based on previous findings confirming that positive affect causes increased reliance on heuristics. Because heuristic processing involves the application of pre-existing or pre-learned schemas or rules (Eagly & Chaiken, 1993; Kahneman, 2011), it appears that happy individuals narrow their cognitive processing by exclusively focusing on familiar schemas or rules and conveniently utilizing them to process information, regardless of the presence of other cues may be more relevant to the information itself. At the same time, however, this notion seems to contradict the broaden-and-build theory of positive emotions (Fredrickson, 2001), which suggests that positive affect allows individuals to *broaden* their cognitive processing by facilitating novel and exploratory thoughts and actions. This theory is supported by numerous findings showing that individuals with positive affect outperformed others in tasks commonly used to measure creativity, such as the classic candle task (Duncker, 1945, as cited in Isen, Daubman, & Nowicki, 1987) and the Remote Associates Task (Mednick, 1962, as cited in Isen, et al., 1987), as well as in other cognitive tasks, such as anagram solving (Erez & Isen, 2002).

One obvious question raised by these findings is: Under what conditions does positive affect broaden cognitive activity, and how do they differ from the conditions in which positive affect increases reliance on heuristics? Schwarz, Bless, Wänke, and Winkielman (2003) argued that while positive affect may broaden cognitive processing, it can also serve as a cue indicating that things are going well and that there is no need to use extra cognitive resources to process information. It is plausible, then, that a person in a positive mood is capable of slowing down and process information systematically, but

only when the situation calls for it (Lyubomirsky, King, & Diener, 2005). Perhaps the key difference here is the individual's motivation to perform the task. Aspinwall (1998) suggested that happy people may use systematic processing during tasks that are important and/or self-relevant (e.g., tasks measuring their own creativity or intelligence) and may tend to rely on heuristics in tasks that seem unimportant and/or not self-relevant (e.g., tasks that require them to judge or make decisions about other people). In their fourth experiment, Bodenhausen, Kramer, et al. (1994) indeed discovered that happy participants were able to overcome their stereotypes when they learned that they would be held accountable for their decisions. Bodenhausen, Kramer, et al. (1994) further speculated that, in general, creativity-related tasks may be intrinsically more appealing and provide more enjoyment to participants than social perception tasks. Hence, it would be very beneficial for future researchers to examine the effects of participants' motivation. It may be that happy people are more willing to expend more cognitive efforts on tasks deemed important, enjoyable, and/or self-relevant.

Finally, although the present study has focused exclusively on the impact of happiness, it may be worthwhile to further investigate the effects of various types of negative affect on stereotyping in future studies. An important issue to be addressed is regarding the conflicting effects of sadness on cognitive processing, as it remains inconclusive whether or not sadness increases systematic processing. The concept of anger in relation to stereotypes is also intriguing, as it is commonly believed to be the source of stereotypes and prejudice. Although it has been shown that angry people made more stereotypic judgments than sad people (Bodenhausen, Shepard, & Kramer, 1994), it

remains unclear if and how these angry stereotypic judgments are different from the stereotypic judgments made by happy people.

Practical Applications

The findings suggesting that positive affect increases heuristic processing in social judgment have important practical applications, especially in real-life situations where such judgments can have profound consequences. A good example of this can be seen inside our courtrooms. In the American legal system, humor is deemed appropriate for display within the courtroom and is frequently used as a persuasive tactic during court hearings (Hobbs, 2007). During a Supreme Court hearing in 2012, for example, humor was incorporated in the oral arguments about the constitutionality of the Affordable Care Act (ACA), producing 63 moments of laughter in the six-hour hearing, making it the "funniest" case in the Court's history (Malphurs & Drescher, 2012). While the reasoning behind Supreme Court's ultimate decision to uphold the constitutionality of the ACA is likely to be multifaceted, Malphurs and Drescher's (2012) findings shed light on how a positive courtroom atmosphere, induced by humor and laughter, can influence the rulings. In regard to stereotyping, a defense attorney may use humor when presenting his arguments to induce a positive mood among the jury who, in turn, may show leniency towards a defendant who does not fit the gender-crime stereotype (Curtis, 2013). Nevertheless, as previous research has established, the success of using such tactic in courtrooms is likely to depend on the jury's motivation and sense of accountability.

Conclusion

The findings of this study suggest that happiness caused increased reliance on gender stereotyping among participants when judging a computer hacking case, but only when the suspect was identified as male. Future researchers should investigate if the use of a scenario involving a female crime would elicit increased stereotyping against the female suspect and whether more gender-neutral crime would result in equal perception of both male and female suspects at baseline. It would also be beneficial to further examine whether other factors regarding the participants, such as their own gender, motivation, and sense of accountability, can influence their perception of others.

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Appendix A

Affect Manipulation Instructions for Happy Group

For the first study, we are investigating the relationship between emotion and memory.

We would like you to think of a specific event in your life that made you particularly

happy and to relive it for a moment. This happy event can be something that has

happened in your past or in your present life. Please write about this event as much as

you can. Try to be as vivid and detailed as possible in your descriptions. If you run out of

space, please continue on the back of this page.

When did this specific happy event occur? (please circle one)

Less than 1 week ago   Less than 3 months ago   Less than 6 months ago

Less than 1 year ago   More than 1 year ago

Appendix B

Affect Manipulation Instructions for Neutral Group

For the first study, we are investigating the psychological structure of everyday memory (memory processes that routinely occur in one's daily life). We would like you to recall and describe your normal routines on a typical day. This includes your routine activities in the morning, during the day, in the afternoon, and in the evening. If you run out of space, please continue on the back of this page.

Appendix C

Questionnaire for Affect Manipulation Check

Please circle your answer to the following questions.

What is your age range?

18 – 24   25 – 34   35 – 44   45 – 55   Over 55

What is your gender?

Male   Female

Now we would like to ask some general questions about the experiment that you just

completed.

1. How difficult was the task for you?

0   1   2   3   4   5   6   7   8   9   10

not at all difficult   very difficult

2. What mood are you in at this time?

0   1   2   3   4   5   6   7   8   9   10

very bad   very good

3. How excited are you at this time?

0   1   2   3   4   5   6   7   8   9   10

not at all excited   very excited

4. How well were you able to concentrate during the experiment?

0   1   2   3   4   5   6   7   8   9   10
not well   very well

5. How happy do you feel at this time?

0   1   2   3   4   5   6   7   8   9   10
not at all happy   very happy

6. How interesting was the task to you?

0   1   2   3   4   5   6   7   8   9   10
not at all interesting   very interesting

7. How energetic do you feel right now?

0   1   2   3   4   5   6   7   8   9   10
not at all energetic   very energetic

8. How challenging was it for you to complete the task in the given time?

0   1   2   3   4   5   6   7   8   9   10
not at all challenging   very challenging

9. How cheerful do you feel at this time?

0   1   2   3   4   5   6   7   8   9   10
not at all cheerful   very cheerful

Appendix D

Cover Story for the Peer Disciplinary Review Panel

San José State's Office of Student Conduct and Ethical Development was founded in 1984. Its main purpose is to promote academic integrity and a safe learning environment on campus by reviewing student misconduct cases and taking appropriate disciplinary actions.

The Office of Student Conduct and Ethical Development is currently testing out a peer disciplinary review panel, which will consist of randomly-selected SJSU students who will review student misconduct cases and participate in student disciplinary proceedings in exchange for extra course credit. The goal is to increase awareness of the university's student misconduct policies. The same system has been implemented with much success in several universities across United States and Canada.

The purpose of this study is to examine how such a system might work on our campus. Your task is to take on a role of student member of the disciplinary review panel. You will be asked to review a previous student misconduct case from another university and make decisions based on the provided information.

Appendix E

Description of the Student Misconduct Case

Below is a summary of a previous misconduct case from another university. Please review the information carefully.

Suspected student: John/ Jane *last name withheld*

Alleged misconduct: Attempting to hack into the university's computer system (similar to MySJSU system) to change his (her) course grade.

Known facts:

- The IP address of the computer attempting remote access to the system belongs to one of the student dorms where John (Jane) lives.

- John (Jane), an undeclared major, had taken a few computer programming classes in past semesters.

- A witness testified that on the same day that the remote access was attempted, John (Jane) was seen inside his (her) dorm room, working on his (her) laptop all day.

- After confiscating John's (Jane's) computer, campus police found no traces of his (her) browsing history as it had been recently deleted.

Appendix F

Case Questionnaire to Determine Guilt Rating

Please circle your answer to the following questions.

1. What do you think is the likelihood that John (Jane) is guilty of the alleged

    misconduct?

0   1   2   3   4   5   6   7   8   9   10

not at all likely   very likely

2. How convincing was the evidence given about the case?

0   1   2   3   4   5   6   7   8   9   10

not at all convincing   very convincing

3. How much effort did you put into evaluating the case?

0   1   2   3   4   5   6   7   8   9   10

very little   very much

4. How confident are you that the allegations against John (Jane) are true?

0   1   2   3   4   5   6   7   8   9   10

not at all confident   very confident

5. Given the opportunity, how likely is it that you would participate in a peer

   disciplinary review panel at SJSU?

   0   1   2   3   4   5   6   7   8   9   10

   not at all likely   very likely

6. If you were a member of this disciplinary review panel, what is the likelihood that

   you would rate John (Jane) as innocent?

   0   1   2   3   4   5   6   7   8   9   10

   not at all likely   very likely

7. How likely is it that you would encourage a friend or classmate to participate in this

   panel?

   0   1   2   3   4   5   6   7   8   9   10

   not at all likely   very likely

8. In your opinion, how would this peer disciplinary review system work at SJSU?

   0   1   2   3   4   5   6   7   8   9   10

   very poorly   very well

9. In your opinion, how effective would the peer disciplinary system be in promoting academic integrity at SJSU?

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

not at all effective   very effective

10. In your opinion, how appealing is extra course credit as a means of compensation for participating in this panel?

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

not at all appealing   very appealing