THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF PSYCHOLOGY

EFFECTS OF EYE GAZE AND GENDER ON DEPRECATING HUMOR

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ABSTRACT

First, the current study was designed to test the prediction, based on the signal value of gaze direction (direct gaze is associated with approach behaviors and averted eye gaze is associated with avoidance behaviors), that self-deprecating humor would be perceived as funnier when coming from an individual with direct eye gaze, and other-deprecating humor would be perceived as funnier when coming from an individual with averted eye gaze. Second, this study was also designed to test the prediction, based on gender stereotypes of male aggression and female submissiveness, that self-deprecating jokes will be perceived as funnier when coming from a male, and other-deprecating jokes will be perceived as funnier when coming from a female. Both of these predictions draw on literature that suggests that incongruity in humor production will enhance perceived humor. Undergraduate participants rated neutral male and female faces with either direct or averted eye gaze that were paired with a self- or other-deprecating joke on a scale of 1 (not funny at all) to 7 (very funny). Results indicated a main effect of eye gaze, but no interaction between type of joke and gaze direction; however, an interaction between joke and gender was found, partially supporting the hypothesis.

TABLE OF CONTENTS

LIST OF FIGURES

Introduction

Humor is an integral part of everyday human interaction. It is an unavoidable social behavior used universally by nearly every individual and culture. Whether employed in one-on-one discussion, social gatherings, or propagated by the media, humor facilitates and enhances societal interactions. The ability to interpret another's motives and attitudes is another universal behavior that is used to understand and illuminate social interaction. Along with facial expression, direction of eye gaze as either direct or averted is an important feature in the interpretation of emotion and motivation of others (Adams & Kleck, 2005). It is useful as humans to be able to perceive the potential threat or safety of our surroundings, and eye gaze interpretation helps us to quickly assess situations. Even in informal social interaction, eye contact is an important component of humor and laughter (Provine, 2000). Eye contact lets a person know that a conversation or dialogue is directed towards them. Therefore, the direction of gaze, either averted or direct, can impact the perception of a joke or humorous story coming from one person directed towards another.

This paper will focus on humor as it relates to eye gaze during interaction between two individuals, in which humorous comments are made by one person and directed towards another person involved in the same interaction. This research will attempt to identify the effects of direct and averted eye gaze on perceived funniness of self-deprecating and other-deprecating humor. Also analyzed in this study will be the effects of gender and both self- and other-deprecating humor on the perceived funniness of humor.

The topics reviewed will include theories of humor and types of humor, specifically self-deprecating and other-deprecating, interpretation of direct and averted eye gaze as they relate to

perceived emotion, and the potential effects of gender on this interaction. To examine these possibilities, first theories of humor are reviewed and the role of eye contact in perception of humor is considered. Then, attention is turned to theory and research on the relation between the direction of gaze and interpretation of motives. Also assessed is the role of gender, and how expected gender stereotypes may have an effect on the interpretation of self- and other-deprecating humor. Then, integrating relevant theory and research on humor, eye gaze, and gender stereotypes, predictions are made in light of the literature reviewed.

Background

Theories of Humor

There are two main theories of humor to explore relating to the concept of humor: Incongruity Theory and Configurational Theory. Incongruity Theory states that situations formed by opposite or unconnected elements that violate the norm will be most conducive to humor; a stipulation of this being the assurance that everything in the situation is "all right"; that is, the situation is not immediately dangerous to any individual in the interaction (Goldstein & McGhee, 1972). In a recent study by McGraw and Warren (2010), benign moral violations of norms were tested to elicit humorous reactions from participants, and it was found that humor is a beneficial and acceptable reaction to blatant norm violation. Participants were instructed to read either a control scenario (no norm violation) or a situation that violated a norm (considered a benign moral violation by the participant), and the results indicated that the violating scenarios were considered to be more humorous. This research suggests that norm violation, when viewed as benign, can result in a humorous reaction—in turn, this reaction is an acceptable response to the norm violation. By contrast, Configurational theory states that the perceiver's insight into originally disjointed ideas is what causes the situation to be humorous (Goldstein & McGhee, 1972). Once the perceiver is aware of the violation or incongruent ideas, his or her insight and understanding of the situation is what makes them think it's funny. Humor does not arise inherently in the situation itself, but becomes funny once the perceiver understands it.

Types of Humor

Two of the most common types of humor revolve around the basis of directing disrespect: self-deprecating towards yourself, and other deprecating towards another person or

group of people (Greengross & Miller, 2008). Greengross and Miller (2008) examined the correlation between self- vs. other -deprecating humor, on the one hand, and the "Big Five" personality traits (i.e., openness, conscientiousness, extraversion, agreeableness and neuroticism), on the other hand. It was found that lower than average conscientiousness, extraversion, and agreeableness, along with higher than average neuroticism were associated with the use of self-deprecating humor, while lower than average agreeableness was associated with the use of other-deprecating humor (Greengross & Miller, 2008). These personality traits can have an effect on the perception of humor, especially with regards to perceived intent of the speaker. For example, if lower than average agreeableness is associated with other-deprecating humor, is it possible for the target to perceive this humor as threatening in some way.

Eye Gaze and Humor

In 2005, Adams and Kleck expected that averted eye gaze would enhance the perception of avoidance-oriented emotion (sadness and fear) and that direct eye gaze would enhance the perception of approach-oriented emotions (anger and joy). They predicted that when underlying emotion and behavioral intentions matches eye gaze, emotion perception is facilitated; this is called the "shared signal hypothesis" (Adams & Kleck, 2005). To test these hypotheses they conducted a study that tested the effect of gaze direction with neutral faces on perceived emotion. Undergraduate participants were instructed to rate each of 30 photographs of neutral faces from 1 (not at all frequently) to 7 (very frequently) on how often the person was likely to experience the emotions of anger, fear, sadness and joy. It was found that anger and joy (approach-oriented emotions) were attributed more when the face displayed direct eye gaze, while sadness and fear (avoidance-oriented emotions) were more attributed when the eye gaze was averted (Adams & Kleck, 2005). Another study they conducted examined the effect of eye

gaze on the intensity of emotion. The shared signal hypothesis was supported; faces expressing pure anger and joy with direct eye gaze were rated as more intense, while faces expressing pure fear and sadness with averted eye gaze were rated as more intense (Adams & Kleck, 2005).

Research also reveals that the role of gaze becomes more important when emotional facial expressions are ambiguous (Graham & LaBar, 2008). These results indicate that in order to have a participant process a face in terms of gaze direction only, the rest of the face must be neutral to control for any facial expression interference. Since my study will focus solely on eye gaze as it relates to humor, it will be important to keep the facial expression of the expresser neutral to control for any interaction or exaggeration of perceived humor that might arise from pairing an expression with a gaze direction.

Gender and Humor

Another potential moderator of humor perception could be the associated gender expectations that the perceiver places on the speaker. The gender differences among males and females are played out and performed in social interaction, and are accepted on the basis of pre-existing stereotypes and expectations of gender roles (Crawford, 2003). The social role theory states that women are expected to perform examples of communal and submissive behavior, while men are expected to be more aggressive and dominant (Eagly, Wood & Diekman, 2000). This expected male behavior is much like the approach-oriented associations of direct eye gaze, and the expected female behavior like the avoidance-oriented aspects of averted eye gaze. The dominance of direct eye gaze, coupled with the submission of averted eye gaze mirrors the gender stereotypes of male and female gender performance expectations.

Predicted Effects

Eye Gaze and Humor

Since direct eye gaze is associated with approach-oriented emotions, anger and joy (Adams & Kleck, 2005), and other-deprecating humor associated with less than average agreeableness (Greengross & Miller, 2008) it is possible to perceive it as a direct threat and therefore not funny. Self-deprecating humor is associated with lower than average extraversion and higher than average neuroticism (Greengross & Miller, 2008), and averted eye gaze is associated with avoidance-oriented emotion, sadness and fear (Adams & Kleck, 2005). Therefore, when paired, this could result in sympathy rather than humor. This study predicts, therefore, that other-deprecating humor coming from an individual with averted eye gaze will be perceived as funnier than when paired with direct eye gaze. These predictions also correlate with the Incongruity Theory of humor, since other-deprecating humor and averted eye gaze, and self-deprecating humor and direct eye gaze are correspondingly opposing ideas, when paired they will result in a humorous condition (Goldstein & McGhee, 1972).

Gender and Humor

Gender stereotypes, as moderated by facial appearance, can influence the perception of emotional expression (Adams, Franklin, Nelson & Stevenson, 2010). Pervasive gendered emotional assumptions, such as the association of females with submissive qualities and males with assertive qualities, may also affect the perception of self- and other- deprecating humor when coming from both male and female sources. Mirroring the research that suggests a link between direct eye gaze and approach tendencies, and averted eye gaze and avoidance tendencies, the expected dominance of a male stereotype and the expected submissiveness of a

female stereotype may have an effect on perceived humor in the same way that this study predicts the perceived effect of eye gaze on humor (Adams & Kleck, 2005). Taking this research and coupling it with the Incongruity Theory of humor (which suggests that when a norm is violated, a situation becomes conducive to humor), a self-deprecating joke by a male can be considered a norm violation, and it will therefore be considered more humorous than the pervasive stereotype of an other-deprecating joke (a more aggressive style of humor) coming from a male (which can also be perceived as threatening when directed towards the viewer, and therefore not humorous; Goldstein & McGhee, 1972). Therefore, this study predicts that self-deprecating humor will be perceived as funnier when coming from a male individual as opposed to a female, and that other-deprecating humor coming from a female will be perceived as funnier than when coming from a male.

Method

Participants

Forty-six undergraduate participants from The Pennsylvania State University were recruited for participation in the study. The participants were be both male and female (30 female and 16 male), of differing races, and ranged in age from age 18-23. The participants received partial class credit for their participation.

Design

The design of this study is Eye Gaze (averted, direct) X Humor (self-deprecating, other-deprecating) X Gender (male, female) within-subjects design. The three factors are gender, eye gaze and humor; their respective levels being male or female, averted or direct, and self- or other- deprecating. The dependent variable is the perceived funniness of the joke by the participant.

The faces used in this study were neutral expression photographs of both male and female college-aged students. The photographs were manipulated so that each photo had a direct eye gaze and averted eye gaze condition. The jokes used in this study were pre-rated to be of average funniness by a separate sample of participants, and consisted of both self-deprecating and other-deprecating styles. As perceived funniness was the dependent variable, a scale of 1 (not funny at all) to 7 (very funny) was used to rate funniness.

Procedure

The participants came into the laboratory 2-6 participants at a time, and were told that they would be rating jokes coming from different up-and-coming comedians' photos on how

funny they perceive the joke to be. The experiment was administered to participants using E-Prime 2.0 software. Each participant was shown 16 jokes, 8 self-deprecating and 8 other-deprecating. Each joke was paired with a picture of a face. There were 8 different actors (4 males, 4 females) that were used. Each face was shown twice, once with direct gaze and once with averted gaze. For each joke, the participants rated how funny they perceived the joke to be on a scale of 1-7 from not funny at all to very funny. Three different versions of the program were made, with random combinations of the faces and jokes in the required conditions, in order to assure counterbalance.

Results

After submitting the data to a repeated measures ANOVA, the results indicate that there was no main effect of joke, $F(1,45) = 4.126$, $p = .048$. There was a main effect of gaze, suggesting that direct eye contact jokes are perceived as funnier than averted eye contact jokes, $F(1,45) = 4.219$, $p = .046$. There was no main effect of gender, $F(1,45) = 2.024$, $p = .162$. Surprisingly, we found no gaze by joke, $F(1,45) = .007$ $p = .932$, or gaze by gender, $F(1,45) = .142$, $p = .708$, interactions.

However, there was an interaction between joke and gender, $F(1,45) = 5.008$, $p = .030$, indicating that self-deprecating jokes coming from a male source were perceived as funniest (M=3.45, SD=1.25) which is consistent with my hypothesis. The results are displayed in Figure 1. The 3-way interaction of joke, gender, and gaze was also not significant, $F(1,45) = .620$, $p = .435$.
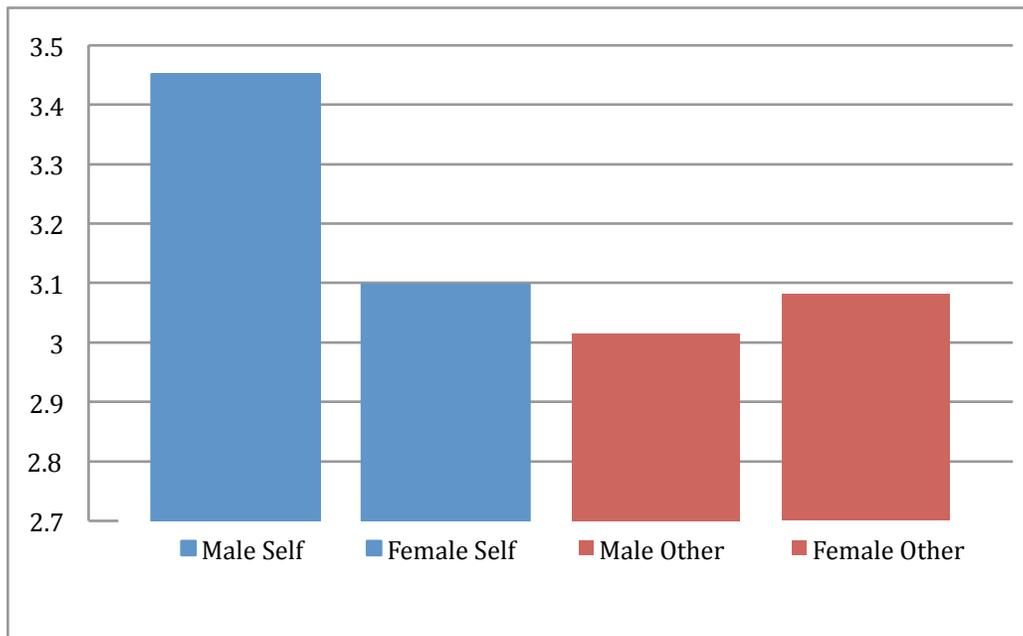
Figure 1, Mean funniness as a function of gender of joke teller and self- versus other-

deprecating humor.

Discussion

The results from this study did not support the hypothesis that self-deprecating humor would be found funnier when paired with direct eye gaze, and that other-deprecating humor would be found funnier when paired with averted eye gaze. That said, we did find an interesting main effect of gaze direction, such that jokes paired with direct eye gaze were found to be funnier than jokes paired with averted eye gaze. This could point to the idea that direct eye gaze not only indicates an intended audience, but it elicits an increased physiological response, as measured by Galvanic Skin Response (Nichols & Champness, 1971). This correlation could have increased physiological response in participants, and in turn, increased their perceptiveness and attention to the joke itself. Furthermore, a misattribution of arousal effect could be affecting the participants' ratings of the direct eye gaze jokes as well, such that the increased arousal elicited by direct eye gaze may be attributed to the humor itself (see Cantor, Bryant & Zillman, 1974).

There was also a main effect of joke found in the study, which is interesting as all of the jokes were pre-rated to be of average funniness. One potential explanation for this effect could be that since taking a stab at oneself could be considered a basic social norm violation, the production of self-deprecating humor could be viewed as a greater norm violation than other-deprecating humor. Therefore, the self-deprecating humor would be perceived as funnier as it is a greater norm violation than other-deprecating humor.

The prediction that self-deprecating humor coming from a male source would be perceived as funnier was supported in the gender and joke interaction effect. The interaction between gender and joke could be attributed to the theory of humor that predicts that a situation

will be found as humorous if it consists of opposing ideas. Reviewed research suggests that, when paired, female faces and other-deprecating humor and male faces paired with self-deprecating humor violate normal gender performance expectations, and therefore will be rated as funnier (Goldstein & McGhee, 1972). It could be that in our society, even though gender-emotion stereotypes are pervasive, it is more acceptable for females to display anger or aggression and less acceptable for males to display submission, as averted eye gaze would suggest (Adams et al., 2010). Males are of higher status in our society, and are therefore arguably subject to more strict codes of conduct and expected stereotypes. Therefore, when males violate these normal expectations, it could be considered a greater norm violation than if females were to subvert stereotypes. Due to the Incongruity Theory of humor, this would be perceived as funnier (Goldstein & McGhee, 1972). Although more research is necessary to validate this assumption, it could be an influential factor in determining the origins of the gender and joke interaction.

Another factor that could be relevant to the findings of this study is facial attractiveness. In a similar study conducted by Robinson et al., it was found that participants rated self-deprecating jokes paired with attractive faces the funniest (Robinson, Stevenson, Rosales, Henry & Adams, 2010). This effect is consistent with the Incongruity Theory of humor in that attractive people making fun of themselves could be seen as a greater norm violation than less attractive individuals engaging in self-deprecating humor, and therefore were found to be funnier. The implications of the attractiveness research mirror the gender effects found in this study; the norms violated when using self-deprecating humor could have been perceived as greater when the face was attractive or male. A main effect of joke was also found by Robinson et. al, in which self-deprecating humor was also rated significantly funnier by participants.

Further research should focus on the interaction between gender and attractiveness as it relates to self-deprecating humor.

Some limitations of this study arise when considering the faces used in the study. The faces were of neutral expression to control for any confounding variables; this could have an effect on perception of humor since neutral faces are not friendly or welcoming looking, so all jokes could potentially be rated differently than coming from a face with a kind expression, as joking normally would be in social interactions. The faces were paired with written jokes instead of video footage of joke telling, so this could also have an effect on how jokes were rated. For future research, it would be interesting to see if a video could be constructed to mimic the eye gaze variable, while controlling for all other extraneous variables to make the task more realistic to the participant.

The implications of this study have far-reaching potential. Gender stereotypes continue to be a defining factor in how individuals interpret the motivation and emotion of others (Adams, Franklin, Nelson & Stevenson, 2010), and coupled with literature suggestions that norm violations are perceived as humorous (Goldstein & McGhee, 1972), this combination could affect both joke-teller and target in a variety of formal and informal social interactions. From the corporate office to the grocery store, the perception that Tommy making fun of himself would be considered funnier than Tammy doing the same suggests that not all humor, or the perception of it, is created equal.

APPENDIX A

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VITA

Cara Henry

EDUCATION

THE PENNSYLVANIA STATE UNIVERSITY State College, PA
Expected Graduation: 5/12
Bachelor of Science Degree in Psychology with honors
- Minor in Business, Minor in English
- Schreyer Honors College
- National Society of Collegiate Scholars (invitation only, top 20% of class)
- Dean's List every semester
  GRE SCORES: Verbal Reasoning   157
                      Quantitative Reasoning 158

EXPERIENCE

SOCIAL VISION AND INTERPERSONAL PERCEPTION LAB, University Park, PA
  Research Assistant 8/09 – present
- Run participant studies and collect data for doctoral students' experiments
- Analyze and interpret data to formulate results
- Research relevant experiments and literature to provide theory evidence
- Relevant Research includes authorship on a study entitled "The Effect of Style and
    Deprecation and Level of Attractiveness on Perceived Humor"

Honors Thesis 8/10 – present
- Research and execute an honors thesis in the SVIP lab
- Working Title: "The Effects of Eye Gaze on Deprecating Humor"
- Tasks include: literature research and review, methodological study proposal and approval,
stimuli creation, data collection (run participant studies), analyzing and interpreting results to
form conclusions, paper compilation and poster presentation

MARC USA, Pittsburgh, PA   5/11 - 8/11
  Human Resources Intern
- Composed and maintained open position recruitment ads
- Reviewed and categorized incoming resumes and applications
- Scheduled and coordinated phone and in-person candidate interviews
- Wrote and edited position-specific behavioral interview questions
- Assisted in compiling and organizing the 2011 Affirmative Action Plan
- Organized intern functions and facilitated their execution
- Reviewed/revised legal agreements (Non-Solicitation, Confidentiality, Social Media Policy,
etc)
- Developed the OpinionZone Marketing Strategy
- Proposed a marketing strategy for a new market research service "OpinionZone"

- Research included competitive landscape analysis, brand identity, marketing campaign projections, budget allotment, target and overall strategy analysis.

THE SAVVY FOX, INC. Mount Lebanon, PA 5/10 – present
  Sales Associate
• Provide assistance and advice to the clientele
• Categorize and price incoming items/keep the inventory in order
• Complete sales transactions quickly and efficiently

LIONSGATE FILM STUDIOS, Pittsburgh, PA 5/09 – 7/09
  Background Actor
• Full time actor in the feature film production of the movie Warrior
• Worked 12-16 hours a day, 6 days a week during production

SCOTT TOWNSHIP ATHLETIC ASSOCIATION, Scott Township, PA 5/06 – 8/08
  Concession Restaurant Manager
• Served customers, prepared food, kept inventory stocked
• Promoted to Manager after one year of employment
• Oversaw the operation of the restaurant, including other employees

LEADERSHIP

PEOPLE OF GOD SUMMER CAMP   2006-2010
▪ Served as a counselor for a week-long overnight camp for children age 9-13
▪ Responsible for the safety and well being of a cabin of 8 girls
▪ Lead and developed craft activities for all 80 children at the camp

 APPALACHIAN OUTREACH MISSION TRIP   2006 – 2007
▪ Traveled to Appalachia, Tennessee for two week-long mission trips
▪ Helped build and repair homes for individuals living in poverty

ST. CLAIR MEMORIAL HOSPITAL   2004 – 2007
▪ Volunteered over 120 hours total
▪ Worked in the café and records department filing and transferring patient binders

OUR LADY OF GRACE VACATION BIBLE SCHOOL 2004 – 2007
▪ Led and taught children in a week-long Christian day camp
▪ Volunteered for four summers, a total of 80 hours

ASSISTANT CROSS COUNTRY COACH 2005 – 2006
▪ Trained and conditioned the Our Lady of Grace middle school cross country team during the 2005 and 2006 seasons
• Attended practices and meets to help coach and coordinate the team