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# The Interpersonal Consequences Of Humor

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# The Interpersonal Consequences Of Humor

**Abstract**

Humor is a fundamental part of personal and professional interactions. Yet, prior psychology and management literature has largely overlooked humor. By using field and experimental methods, I explore the interpersonal consequences of the use of humor. I find that humor significantly shapes interpersonal perception and behavior. In order to understand organizations, we must first understand humor.

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Thomas Bradford Bitterly

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in

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2018

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THE INTERPERSONAL CONSEQUENCES OF HUMOR

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## DEDICATION

This dissertation is dedicated to you.

Yes, you.

You, the person who cares enough to be reading this thing.

## ACKNOWLEDGEMENT

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## ABSTRACT

### THE INTERPERSONAL CONSEQUENCES OF HUMOR

T. Bradford Bitterly

Maurice E. Schweitzer

Humor is a fundamental part of personal and professional interactions. Yet, prior psychology and management literature has largely overlooked humor. By using field and experimental methods, I explore the interpersonal consequences of the use of humor. I find that humor significantly shapes interpersonal perception and behavior. In order to understand organizations, we must first understand humor.

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CHAPTER 1  
RISKY BUSINESS:  
WHEN HUMOR INCREASES AND DECREASES STATUS

T. Bradford Bitterly

Alison Wood Brooks

Maurice E. Schweitzer

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Across eight experiments, we demonstrate that humor can influence status, but attempting to use humor is risky. The successful use of humor can increase status in both new and existing relationships, but unsuccessful humor attempts (e.g., inappropriate jokes) can harm status. The relationship between the successful use of humor and status is mediated by perceptions of confidence and competence. The successful use of humor signals confidence and competence, which in turn increases the joke teller's status. Interestingly, telling both appropriate and inappropriate jokes, regardless of the outcome, signals confidence. Although signaling confidence typically increases status, telling inappropriate jokes signals low competence and the combined effect of high confidence and low competence harms status. Rather than conceptualizing humor as a frivolous or ancillary behavior, we argue that humor plays a fundamental role in shaping interpersonal perceptions and hierarchies within groups.

## RISKY BUSINESS: WHEN HUMOR INCREASES AND DECREASES STATUS

Dick Costolo, the former CEO of Twitter, began his career in improvisational comedy, and he attributes much of his success in business to his use of humor (Bilton, 2012). The night before Costolo joined Twitter as Chief Operation Officer in September 2009, he tweeted: “First full day as Twitter COO tomorrow. Task #1: undermine CEO, consolidate power.” (Costolo, 2009). A year later, he became the Chief Executive Officer.

Just as humor can contribute to career success, it can lead to tumultuous falls. On December 20, 2013, before leaving Heathrow Airport for South Africa, Justine Sacco, a Public Relations Representative for IAC, a media and internet company, tweeted: “Going to Africa. Hope I don’t get Aids. Just Kidding. I’m white!” (Ronson, 2015). Her humor attempt provoked a firestorm of criticism, and ultimately cost Sacco her job.

Costolo’s experience suggests that humor can help an individual climb the corporate ladder, but Sacco’s experience offers a cautionary tale of the inherent risks in using humor. We postulate that humor can profoundly influence status, and we argue that humor is a pervasive but under-investigated behavioral construct. Across eight studies, we investigate how the use of humor influences status. We conceptualize the use of humor as a risky behavior, and we explore how the appropriateness of humor and observers’ reactions to humor attempts (e.g., laughter) influence whether the joke teller’s status increases or decreases.

## Status

Status is ubiquitous and consequential. Across cultures, across organizations, and across social hierarchies, individuals are highly motivated to achieve greater status (Anderson, Hildreth, & Howland, 2015; Anderson, John, Keltner, & Kring, 2001; Barkow, 1975; Maslow, 1943). Status is the relative level of respect, prominence, and esteem that an individual possesses within a dyad or group (Anderson, Hildreth, & Howland, 2015; Anderson & Kilduff, 2009a; Anderson, Willer, Kilduff, & Brown, 2012; Berger, Cohen, & Zelditch, 1972; Flynn, Reagans, Amanatullah, & Ames, 2006; Goldhamer & Shils, 1939; Kilduff & Galinsky, 2013; Magee & Galinsky, 2008; Pettit & Lount, 2010). Status is a defining characteristic of human interaction; every social group has a status hierarchy (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006; Berger et al., 1972; Magee & Galinsky, 2008; Mazur, 1973; Ridgeway, 1987).

In addition to being ubiquitous, status is important. Compared to low-status individuals, high-status individuals have greater access to resources (e.g., money, social support), and enjoy greater physical and psychological well-being (Adler, Epel, Castellazzo, & Ickovics, 2000; Anderson & Kilduff, 2009a; Ellis, 1994; Marmot, 2004; Pettit & Sivanathan, 2012). The allure of obtaining higher status is strong (Anderson, Hildreth, & Howland, 2015; Anderson, John, Keltner, & Kring, 2001; Barkow, 1975; Frank, 1985; Hardy & Van Vugt, 2006; Loch, Huberman, & Stout, 2000; Maslow, 1943; Pettit & Sivanathan, 2011; Rucker & Galinsky, 2008; Sivanathan & Pettit, 2010; Willer, 2009).

To gain status, individuals endeavor to display competence. Groups accord greater respect and influence to individuals who demonstrate superior abilities (Anderson & Kilduff, 2009a; Berger et al., 1972; Lord, De Vader, & Alliger, 1986). In many cases, however, individuals lack objective information about how competent an individual is, and rely on signals instead. As a result, behaviors that signal competence increase status (Anderson, Brion, Moore, & Kennedy, 2012; Anderson & Kilduff, 2009a, 2009b; Chen, Peterson, Phillips, Podolny, & Ridgeway, 2012; Kennedy, Anderson, & Moore, 2013). For example, in a new encounter, individuals who express overconfidence and act in a domineering way can signal competence and boost their status (Anderson, Brion, Moore, & Kennedy, 2012; Anderson & Kilduff, 2009b; Kennedy, Anderson, & Moore, 2013). That is, by appearing competent (e.g., projecting confidence, sharing good ideas, making intelligent comments), individuals can increase their status. In our investigation, we examine an unexplored method by which individuals might signal competence and increase their status: using humor.

## **Humor**

Consistent with prior work, we define humor as an event between two or more individuals in which at least one individual experiences amusement and appraises the event as funny (adapted from Cooper, 2005, 2008; Gervais & Wilson 2005; Martin 2007; McGraw & Warren, 2010; McGraw, Warren, & Kan, 2015; Warren & McGraw, 2015a, 2015b). We define a joke as a humor attempt, and we conceptualize humorous encounters as interactions between three focal actors: the expresser, the target(s), and the audience. Targets of jokes can be

specific or general, and human, nonhuman, or even inanimate. In some cases, the target and audience are the same (e.g., teasing), or the expresser and the target are the same (e.g., self-deprecating humor). In a humor attempt, the expresser acts with the intention to amuse and elicit mirth from the audience. Importantly, humor attempts may or may not be successful.

When an expresser attempts to use humor, observers will judge the success of the humor attempt based on several factors, including, but not limited to, the appropriateness of the humor attempt and whether or not the attempt elicits laughter. Prior work suggests that humor is successful when someone perceives the attempt to be a benign violation (McGraw & Warren, 2010; Veatch, 1998; Warren & McGraw, 2015a, 2015b). That is, for a humor attempt to be perceived as funny, it must be two things. First, it must violate physical or psychological safety (e.g., violations of linguistic, social, or moral norms). Second, it must be benign. For example, Dick Costolo violated social norms by tweeting that he intended to undermine his CEO. However, the norm violation was not overtly offensive-it was clear that he was not actually attacking his CEO. Similarly, Justine Sacco violated social norms by tweeting that she could not get AIDS because she is white. However, by joking about the correlation between a devastating illness and race, Justine Sacco's humor attempt was deemed offensive by many audience members and was not benign enough to be perceived as funny.

In the current research, we explore how humor attempts influence the perceived competence and confidence of a joke teller. Humor is risky; an expresser's humor attempt can fall flat in different ways. First, if the target or

audience perceives the humor attempt to be merely benign, it might not be obvious that the expresser was attempting to use humor at all. Second, if the humor attempt is not interesting, exciting, or entertaining, then the target or audience may view the humor attempt as boring. Third, a humor attempt may fail by offending the joke target, the audience, or both. As Justine Sacco learned, it is easy to offend others, especially because humor norms vary across contexts and individuals (Daniel, O'Brien, McCabe, & Quinter, 1985; Feingold, 1992; Martin, 2007; McGraw & Warner, 2014; Smeltzer & Leap, 1988; Thomas & Esses, 2004). Prior to attempting to use humor, the expresser cannot be certain of how the audience will react. This is particularly true when the joke teller is interacting with an unfamiliar audience; the joke teller cannot be certain of what the audience views as acceptable, and the audience does not know the intentions behind the teller's comment. The act of attempting to use humor demonstrates confidence because humor attempts may fall flat or offend the audience. We expect observers to infer this and evaluate individuals who attempt to use humor as more confident than those who do not.

*Hypothesis 1: The use of humor increases perceptions of confidence.*

The willingness to use humor signals confidence, but it is the successful use of humor that signals competence. The successful use of humor requires the expresser to recognize the opportunity to say something funny and deliver the joke, while navigating the risks of being either boring or offensive. A substantial literature has documented a close association between the successful use of humor and competence. For example, in a study of children (ages 10-14 years old),

Masten (1986) found a correlation between the successful use of humor and IQ, and a correlation between the successful use of humor and school performance. In addition, Masten (1986) found that kids who used humor successfully were liked better by their teachers and their peers. In related work, Decker (1987) found that employees' ratings of their supervisor's sense of humor correlated with ratings of the supervisor's intelligence, confidence, and effectiveness. The link between humor and competence has also been established with abstract reasoning and verbal intelligence tests (Greengross & Miller, 2011). Though correlational, these studies suggest that the use of humor is closely associated with competence.

Humor has also been linked with performance and creativity (Huang, Gino, & Galinsky, 2015; Lehmann-Willenbrock & Allen, 2014; Martin, 2007). Lehmann-Willenbrock and Allen (2014) found that group performance was positively associated with the use of humor. Humorous remarks that were positive, not mean or disparaging, and successful were associated with greater functional communication behaviors (e.g., procedural statements such as goal-oriented statements and socioemotional statements such as encouragement). Importantly, Lehmann-Willenbrock and Allen (2014) found that the successful use of humor prompted novel idea generation. In a series of experiments, Huang, Gino, and Galinsky (2015) found that individuals who express sarcasm perform better on creativity tasks. Sarcasm is a form of humor in which an individual communicates a message using words that mean the opposite of the literal statement (Gibbs, 1986; Huang, Gino, & Galinsky, 2015; Pexman & Olineck, 2002). We postulate that the association between humor and competence is

pervasive and familiar, and that people will make the inference that those who effectively use humor are competent.

*Hypothesis 2: The successful use of humor increases perceptions of competence.*

Signaling greater confidence and competence can boost status (Anderson, Brion, Moore, & Kennedy, 2012; Anderson & Kilduff, 2009a, 2009b; Chen, Peterson, Phillips, Podolny, & Ridgeway, 2012; Kennedy, Anderson, & Moore, 2013; Ridgeway, 1991). Consequently, we predict that the effective use of humor can increase status by signaling confidence and competence. That is, just as dominance and overconfidence can signal competence and boost perceptions of status, we expect the successful use of humor to signal confidence and competence and cause observers to infer that the joke teller is more capable and therefore more competent. Specifically, we expect perceptions of confidence and competence to mediate the relationship between humor and status.

*Hypothesis 3: The successful use of humor increases status.*

*Hypothesis 4a: Perceptions of confidence mediate the relationship between the use of humor and status.*

*Hypothesis 4b: Perceptions of competence mediate the relationship between the use of humor and status.*

A few studies have linked the successful use of humor with influence in interpersonal settings (Avolio, Howell, & Sosik, 1999; Lehmann-Willenbrock & Allen, 2014; O'Quin & Aronoff, 1981). The use of humor can increase concession-making in negotiations (Kurtzberg, Naquin, and Belkin, 2009; O'Quin



& Aronoff, 1981), and Avolio, Howell, and Sosik (1999) found that leaders in productive groups were more likely to use humor successfully than were those in unproductive groups. Lehmann-Willenbrock and Allen (2014) identify a link between the use of humor and performance. This relationship, however, only existed in certain instances, such as when a joke was followed by either laughter or another joke.

The successful use of humor may increase influence by boosting positive affect. Increased positive affect has been shown to increase positive evaluations of others and draw attention away from negative information (Lyttle, 2001; Strick, Holland, van Baaren, & van Knippenberg, 2012). On the other hand, a humor attempt that does not succeed because it is offensive (e.g., Justine Sacco's tweet) might induce negative affect, which could harm the audience's evaluations of the joke teller. Although prior work has linked humor with interpersonal influence and established that leadership requires the ability to influence others (Yukl, Wall, & Lepsinger, 1990), no prior work has conceptualized humor as a tool for gaining status.

Surprisingly, prior humor research has focused almost exclusively on the successful use of humor. In practice, many humor attempts fail because they are too benign, boring, or inappropriate. Forecasting appropriateness is difficult, because the appropriateness of humor is highly context dependent (Campos, Keltner, Beck, Gonzaga, & John, 2007; Hopton, Barling, & Turner, 2013; Keltner, Capps, Kring, Young, & Heerey, 2001; Keltner, Young, Heerey, Oemig, & Monarch, 1998; Martin, 2007; McGraw, Warren, Williams, & Leonard, 2012;

Lyttle, 2001; Robert, Dunne, & Iun, 2015). In our research, we conceptualize the appropriateness of a humor attempt to reflect both the type of joke told (e.g., self-deprecation, puns, insults, sexual innuendos) and the fit of that joke in context.

We consider the appropriateness of a humor attempt as a moderator of the relationship between humor and status. We expect the use of appropriate humor to be more successful in boosting status than the use of inappropriate humor.

Attempting to use both appropriate and inappropriate humor requires confidence, and demonstrating confidence is typically associated with competence and higher status (Anderson, Brion, Moore, & Kennedy, 2012; Anderson & Kilduff, 2009a, 2009b; Chen, Peterson, Phillips, Podolny, & Ridgeway, 2012; Kennedy, Anderson, & Moore, 2013; Ridgeway, 1991). However, by making inappropriate jokes, expressers signal that they are ignorant of social boundaries, that they have failed to understand and follow norms (e.g., making racist, sexist, or otherwise bigoted remarks), and that they lack competence. Although an individual who tells an inappropriate joke may signal confidence to the audience, the audience also receives a signal of ignorance. As a result, in contrast to the use of appropriate humor, the use of inappropriate humor can demonstrate confidence, but can signal a lack of competence and lower status.

*Hypothesis 5: Appropriateness of the humor attempt will moderate the relationship between humor and competence.*

Public reactions to humor attempts can profoundly shape perceptions of the humor attempt. For example, individuals are more likely to laugh when they hear others laugh (Provine, 1992; Olson, 1992; Smyth & Fuller, 1972), and

laughter from the target and/or audience serves as a public demonstration that the expresser's humor attempt was successful. Laughter demonstrates amusement and approval (Sauter, Eisner, Ekman, & Scott, 2010), and because people pay more attention to individuals whom others approve of (Chudek, Heller, Birch, & Heinrich, 2012), we expect humor attempts that elicit laughter to be more effective in boosting status than humor attempts that fail to elicit laughter. In contrast to a humor attempt that elicits laughter, a humor attempt that fails to elicit laughter signals low competence.

*Hypothesis 6: Laughter will moderate the relationship between humor and competence.*

Taken together, we summarize our theoretical framework (Hypotheses 1-6) in Figure 1. Our research program advances our theoretical and practical understanding of humor and status. We are the first to explore how humor attempts influence status. In contrast to prior humor research that has focused on successful humor attempts, we consider the consequences of both successful and unsuccessful humor attempts. In exploring unsuccessful humor attempts, we consider jokes that fail to elicit laughter and jokes that are perceived as inappropriate.

### **Overview of Current Work**

Our work investigates the relationship between humor attempts and status. Though humor attempts can involve non-verbal expressions, in our investigation, we operationalize humor attempts using spoken jokes. We motivate our investigation with two pilot studies. In these pilot studies, we identify workplace

humor as a common phenomenon, and we pilot test each of the jokes we use in Studies 1 through 4 to gauge how funny and appropriate they are. In Studies 1a-b and 2a-b, we explore the relationship between humor and status using different contexts and different jokes. We also investigate how humor changes perceptions of confidence and competence, our proposed mediating mechanisms.

In Studies 2 through 4, we examine the moderating role of joke success as signaled by audience laughter and joke appropriateness. In Studies 2a-b, we consider the moderating role of audience laughter. In Studies 3a-b and 4a-b, we consider the moderating role of joke appropriateness. We test the moderating roles of laughter and appropriateness in an organizational setting because the workplace provides a context where there are higher standards for professional behavior, and norms of appropriateness matter (e.g., a joke with sexual content is typically seen as inappropriate for a professional setting but might be viewed as acceptable in a more casual setting outside of work). Though successful humor attempts are likely to increase perceptions of confidence, competence, and status, humor attempts may harm perceptions of competence and status when a joke is perceived to be inappropriate or when the audience fails to laugh.

### **Pilot Study 1: Pervasiveness of Humor at Work**

In Pilot Study 1, we recruited 200 working adults to investigate the pervasiveness of humor in the workplace and to motivate our investigation of humor in organizations.

Method

**Participants.** We recruited 200 participants (118 male, 82 female) online via Amazon.com's Mechanical Turk to participate in a survey in exchange for \$0.40. Participants were, on average, 29.4 years old ( $SD = 8.58$ ), and 100% were partially or fully employed at the time of the survey.

**Design and Procedure.** First, we asked participants to recall a joke a coworker had told in the past and when it was told. We also asked participants to indicate their agreement with statements that their coworkers frequently made jokes and that it would be normal for jokes like the one they recalled to be told in the workplace (1: Strongly Disagree; 7: Strongly Agree). Finally, participants reported their demographic information (age, gender).

Next, we had three research assistants rate the extent to which they agreed with the following statement: "The joke is appropriate for a coworker to tell to another coworker" (1 = "Strongly Disagree", 7 = "Strongly Agree"). The ratings across research assistants were consistent ( $\alpha = .90$ ).

**Results and Discussion.** Results from this study reveal that telling jokes is a common workplace behavior. Only one participant (0.5% of our sample) was not able to recall a joke, and 74% of the recalled jokes had been heard within the past month. Participants reported that coworkers other than the joke-teller in their example make similar jokes ( $M = 4.99$ ,  $SD = 1.34$ ), and that their coworkers frequently make jokes ( $M = 5.40$ ,  $SD = 1.17$ ). We also find that both appropriate and inappropriate jokes are common in the workplace (appropriateness rating  $M = 4.94$ ,  $SD = 1.90$ , 27% < 4, 70% > 4). All jokes from this study are available from the corresponding author upon request.

## **Pilot Study 2: Testing Joke Funniness and Appropriateness**

Across Studies 1 through 4, we use nine different jokes. In this pilot study, we assess the funniness, boringness, and appropriateness of each joke. We use variance in the ratings of appropriateness of these jokes to test our hypotheses.

### **Method**

**Participants.** We recruited 457 participants (264 male, 193 female) online via Amazon.com's Mechanical Turk to participate in a short study in exchange for \$0.20. The participants were, on average, 32.96 years old ( $SD = 10.97$ ).

**Design and Procedure.** Each participant evaluated one of the nine jokes listed in Table 1 and described in Appendix A. We presented participants with joke scenarios that depict either a customer testimonial or a meeting between a manager and a job candidate. The scenarios end after the joke and did not include information about how other individuals reacted to the joke.

After reading one of the nine joke scenarios, participants rated the last comment made by the customer/candidate on eight dimensions (funny, humorous, boring, dull, inappropriate, appropriate, tasteless, suitable). The response scale ranged from 1 (not at all) to 7 (extremely). We combined “funny” and “humorous” to form a rating of funniness for each joke ( $r = .93$ ). We combined “boring” and “dull” to form a rating of boringness for each joke ( $r = .80$ ), and we combined “appropriate” and “suitable” with reverse scores for “inappropriate” and “tasteless” to form a rating of appropriateness for each joke ( $\alpha = .92$ ). Finally, we asked participants demographic questions (age, gender).

**Results and Discussion.** Participant ratings of funniness were moderate to high across all nine joke scenarios (all means were above 3.39), ratings of boringness were low (all means were below 2.99), and—as intended—ratings of appropriateness varied across the nine jokes. The varied appropriateness of these jokes enabled us to investigate the effects of joke appropriateness on interpersonal perception. Confirming our expectations in selecting these jokes, the appropriateness ratings were significantly lower for the “inappropriate” jokes we would use in Study 3a ( $M = 1.93, SD = 0.94$ ), Study 3b ( $M = 1.79, SD = 1.21$ ), Study 4a ( $M = 1.80, SD = 0.81$ ), and Study 4b ( $M = 2.62, SD = 1.35$ ) than the appropriateness ratings for the other jokes we used in our studies. We present these results in Table 1.

### **Study 1: Successful Humor Increases Status**

In Study 1, we investigate the influence of humor on status. In Study 1a, participants rated the status of a presenter who either attempted or did not attempt to use humor in a face-to-face interaction. In Study 1b, participants nominated individuals who either did or did not attempt to use humor in a face-to-face interaction as leaders for a subsequent task.

#### **Study 1a**

##### Method

**Participants.** We recruited 166 adults from a city in the northeastern United States to participate in a behavioral lab study in exchange for \$10. A total of 160 people completed the study (66 male, 94 female,  $M_{\text{age}} = 24.86$  years,  $SD = 9.39$ ).

**Design and Procedure.** After checking into the behavioral lab, participants (along with two confederates who also checked into the behavioral lab) walked to a nearby classroom where they completed the study. The largest group had fifteen people (thirteen participants and two confederates); the smallest group had six people (four participants and two confederates). In the classroom, we sat each participant at their own desk with a packet of materials. As participants read the materials, we asked them to imagine that they were writing customer testimonials for a pet waste removal service, FastScoop.com. We informed them that FastScoop was running a contest, looking for customer testimonials, with the hope that the testimonials would attract attention for the service. We then presented participants with a background photo for an advertisement for FastScoop and asked them to write a brief (1-3 sentence) testimonial to accompany the photo. We include an advertisement photo very similar to the one used in the study in Appendix B (the original is available upon request from the authors). We gave participants three minutes to write their testimonials.

We told participants that each of them would present their testimonials in front of the rest of the participants in a randomly determined order. After completing their testimonials, we asked participants to draw a number from an envelope to determine the order in which they would present. The envelope contained pieces of paper numbered 3 to 25. We omitted the numbers one and two from the envelope, so that the two confederates would always present first and second.



We used a mixed between- and within-subjects design, in which one confederate delivered a serious testimonial, and the other confederate alternated between presenting a humorous and a serious testimonial by lab session. Across all sixteen sessions, we used the same two male confederates who switched presenting either first or second each day. After all participants drew a number, the experimenter asked the participant who had drawn the number 1 to come to the front of the room and present his testimonial in front of the group. The first confederate placed his testimonial on a document camera, which projected the testimonial on a screen in front of the room. The first testimonial was always a serious testimonial, which set the tone and expectation for the exercise. The confederate projected their handwritten testimonial on the screen and read their testimonial out loud. The serious testimonial read, “They come every week and are very dependable! Overall, a great waste removal service!”

Next, the experimenter asked the participant who had drawn the number 2 to come to the front of the room and present his testimonial. Half of the time, the second confederate delivered a humorous testimonial, and half of the time the second confederate delivered a serious testimonial. We alternated the treatment condition each laboratory session. The humorous testimonial read, “Very professional. After cleaning up the poop, they weren’t even upset when they found out that I don’t have a pet! But seriously, this service is reliable and always leaves the yard spotless!” The serious testimonial that the second confederate delivered was, “Very professional. This service is reliable and always leaves the yard spotless!”

After each confederate delivered their testimonial, we asked participants to complete a customer testimonial evaluation form. The testimonial evaluation form asked participants to rate the presenter's customer testimonial, using a 7-point scale (1 = "Not at all", 7 = "Extremely"), on the following qualities: engaging, funny, appropriate, entertaining, succinct, clear, memorable, and effective. Ratings of funniness served as our manipulation check. We were also interested in participant ratings of the appropriateness of the testimonial. We included the other items to mask the purpose of the study.

We also asked participants to rate, using the same 7-point scale, other characteristics about the confederates: independent, powerful, low status, respected, competent, confident, intelligent, capable, and skillful. We combined the first four items evaluating the presenter (with low status reverse-coded) to form an index of status conferral (adapted from Brescoll & Uhlmann, 2008; Tiedens, 2001;  $\alpha = 0.64$ ), our main dependent variable.<sup>1</sup> We used the "confident" item to measure confidence. We combined the remaining four items to form a competence index (adapted from Fiske, Cuddy, Glick, & Xu, 2002;  $\alpha = 0.92$ ).

After participants rated the second confederate, the experimenter announced that due to time constraints, no additional participants would present. The experimenter then handed out the exit questionnaire, which asked participants to provide their age, gender, and any additional comments.

## **Results and Discussion**

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<sup>1</sup> We also ran our analysis without "independent" in our index of status conferral. We find that excluding "independent" does not change our results. This is true for all studies where we use this index of status conferral (Studies 2b, 3a, 3b, and 4a).

*Manipulation Check.* Our manipulation checks confirmed that our humor manipulation was successful. Participants rated the humorous testimonial ( $M = 6.13$ ,  $SD = .99$ ) as significantly funnier than the serious testimonial ( $M = 2.31$ ,  $SD = 1.41$ ),  $t(15) = 29.26$ ,  $p < .0001$ . We found that participants viewed the humorous testimonial ( $M = 5.20$ ,  $SD = 1.36$ ) as less appropriate than the serious testimonial ( $M = 5.71$ ,  $SD = 1.27$ ),  $t(15) = 3.11$ ,  $p < .01$ . However, ratings of the appropriateness of the humorous testimonial were well above the midpoint of the scale. Although participants viewed the humorous testimonial as less appropriate than the serious one, they did not view the humorous testimonial as inappropriate. None of the experimental control variables (research assistant that presented, age, and sex of the participant) influenced how funny or appropriate participants rated the humorous and serious testimonials of the second presenter.

*Main Results.* We report our results controlling for confederate fixed effects, ratings of the first presenter, and clustering standard errors by session.<sup>2</sup>

*Status.* The status of the second presenter was significantly higher when he delivered the humorous testimonial ( $M = 5.03$ ,  $SD = 0.76$ ) than when he delivered a serious testimonial ( $M = 4.43$ ,  $SD = 0.89$ ),  $t(15) = 5.95$ ,  $p < .0001$ , 95% CI [0.38, 0.80], simulated power = .99 at an  $\alpha$  of .05 using 1000 simulations (not clustered by session without fixed effects). Male participants rated the second presenter as higher on status than female participants did ( $p < .05$ ). None of the

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<sup>2</sup> We control for confederate fixed effects to account for any results which are driven by the research assistant that was delivering the second testimonial. We control for participant ratings of the first presenter to account for participant level differences in ratings. We cluster the standard errors by session, because randomization occurred at the session level and participant reactions within each session are not independent. The results are unchanged if we do not control for confederate fixed effects, cluster by session, and control for ratings of the first presenter ( $p$ 's  $< .01$  for Funniness, Status, Competence, and Confidence;  $p < .05$  for Appropriateness).

remaining experimental control variables (which confederate delivered the second testimonial or participant age) influenced status.

*Competence.* Ratings of competence of the second presenter were also significantly higher when he delivered a humorous testimonial ( $M = 5.32$ ,  $SD = 0.93$ ) than when he delivered a serious testimonial ( $M = 4.90$ ,  $SD = 0.99$ ),  $t(15) = 4.00$ ,  $p < .01$ , 95% CI [0.28, 0.91]. None of the experimental control variables (which confederate delivered the second testimonial, participant gender, or participant age) influenced perceptions of competence. We depict these results in Figure 2.

*Confidence.* We find that the second presenter was rated as significantly more confident when he delivered a humorous testimonial ( $M = 5.64$ ,  $SD = 1.07$ ) than when he delivered a serious testimonial ( $M = 4.70$ ,  $SD = 1.23$ ),  $t(15) = 6.46$ ,  $p < .0001$ , 95% CI [0.71, 1.41].

*Mediation.* Both competence and confidence mediated the relationship between the second presenter's testimonial (humorous versus serious) and status. This is true across both Baron and Kenny (1986) and bootstrap analyses (Preacher & Hayes, 2004, 2008). We provide details of the mediation analyses for every study in Appendix F and summarize the mediation analysis in Table 5.

*Summary.* In Study 1a, we found that when an individual makes a comment that is funny and appropriate, others view him as higher in confidence and competence, which lead to higher ratings of status. Increased ratings of confidence and competence mediated the relationship between the use of humor and judgments of status.

## Study 1b

We extend our investigation of humor and status in Study 1b by using a different joke, a different attitudinal measure of status, and a behavioral measure of status.

### Method

**Participants.** We recruited 210 adults from a city in the northeastern United States to participate in a behavioral lab study in exchange for \$10. A total of 190 people completed the study (32.8% male,  $M_{\text{age}} = 19.94$  years,  $SD = 1.70$ ). The modal session included 13 participants and 2 confederates. Across the 15 sessions, the number of participants per session ranged from 9 to 13.

**Design and Procedure.** The procedure for Study 1b was largely the same as Study 1a, with three notable changes. First, we used a different context with a different joke. Second, we used a different attitudinal measure of status, and third, we included a behavioral measure of status.

*Scenario and Joke.* We asked participants to imagine that they were writing customer testimonials for a hypothetical travel service, VisitSwitzerland.ch. We informed them that VisitSwitzerland was soliciting customer testimonials for a competition, hoping to attract attention for their travel service. We then presented participants with a photo for an advertisement for VisitSwitzerland. We include an advertisement photo very similar to the one used in the study in Appendix C (the original is available upon request from the authors). Note that the photo of Switzerland includes Switzerland's flag (a red background with a white cross). We then gave participants 3 minutes to write a

brief (1-2 sentence) testimonial to accompany the advertisement to answer the question, “What made you fall in love with Switzerland?”

As in Study 1a, the first confederate always presented a serious testimonial. The first testimonial read, “The country is beautiful. The scenery is truly breathtaking!” Half of the time, the second confederate delivered a humorous testimonial, and half of the time the second confederate delivered a serious testimonial. We alternated the treatment condition each laboratory session. In the humor condition, the testimonial included a joke, “The mountains are great for skiing and hiking, and the flag is a big plus! Seriously, it’s amazing!” In the serious condition, the testimonial read, “The mountains are great for skiing and hiking! It’s amazing!”

*Attitudinal Measures.* As in Study 1a, after each confederate delivered their testimonial, we asked participants to complete a customer testimonial evaluation form. Using 7-point scales (1 = “Not at all”, 7 = “Extremely”), participants rated the testimonials on the following qualities: engaging, funny, appropriate, entertaining, succinct, clear, memorable, and effective. Ratings of funniness served as our manipulation check. We were also interested in participant ratings of the appropriateness of the testimonial. We included the other items to mask the purpose of the study.

We asked participants to rate other characteristics about the confederates: respected, admired, influential, competent, confident, intelligent, capable, and skillful (7-point scales). We used the first three items to measure status (adapted from Anderson, Kraus, Galinsky, & Keltner, 2012; Kilduff & Galinsky, 2013;  $\alpha =$

0.88), the item “confident” to measure confidence, and the remaining four items to measure competence (adapted from Fiske, Cuddy, Glick, & Xu, 2002;  $\alpha = .92$ ).

*Behavioral Measure.* After participants rated the second confederate, the experimenter announced that due to time constraints, no additional participants would present. The experimenter then asked participants to complete a Group Leader form, our behavioral measure of status. The form instructed participants that later in the lab session we would ask them to complete a group task. We informed participants that the groups would be randomly determined, and any of the other participants could be assigned to their group. Each participant had 25 points to allocate to each presenter or themselves, based on the extent to which they would like that individual to be the leader of their group. We used the number of points the participants gave to each presenter as our behavioral measure of status (adapted from Halevy, Chou, Cohen, & Livingston, 2012).

## **Results and Discussion**

*Manipulation Check.* The manipulation checks confirmed that our humor manipulation was successful. Participants rated the humorous testimonial ( $M = 4.53$ ,  $SD = 1.88$ ) as significantly funnier than the serious testimonial ( $M = 2.16$ ,  $SD = 1.42$ ),  $t(15) = 8.22$ ,  $p < .001$ . We next considered ratings of the appropriateness of the two testimonials presented second. We found no significant differences in appropriateness ratings between the humorous testimonial ( $M = 5.57$ ,  $SD = 1.25$ ) and the serious testimonial ( $M = 5.52$ ,  $SD = 1.28$ ),  $t(15) = 0.95$ ,  $p = .36$ . None of the experimental control variables (research assistant that

presented, age, and sex of the participant) influenced how funny or appropriate participants rated the humorous and serious testimonials of the second presenter.

*Main Results.* As in Study 1a, we report all results controlling for confederate fixed effects, ratings of the first presenter, and clustering standard errors by session.

*Status.* The number of leader points allocated to the second presenter was significantly higher when the confederate delivered the humorous testimonial ( $M = 6.66$ ,  $SD = 6.32$ ) than when the confederate delivered the serious testimonial ( $M = 4.85$ ,  $SD = 4.84$ ),  $t(15) = 3.13$ ,  $p < .01$ , 95% CI [0.52, 2.75], simulated power = .58 at an  $\alpha$  of .05 using 1000 simulations (not clustered by session without fixed effects). None of the experimental control variables (confederate delivering the second testimonial, participant gender, and participant age) influenced the number of leader points allocated to the second presenter. We depict these results in Figure 3.

Attitudinal ratings of status of the second presenter were significantly higher when he delivered the humorous testimonial ( $M = 4.46$ ,  $SD = 1.23$ ) than when he delivered the serious testimonial ( $M = 4.23$ ,  $SD = 1.06$ ),  $t(15) = 4.21$ ,  $p < .01$ , 95% CI [0.19, 0.58].<sup>3</sup>

*Competence.* Ratings of competence of the second presenter were also significantly higher when the confederate delivered the humorous testimonial ( $M$

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<sup>3</sup> When we control for participant ratings of the first presenter, but do not cluster by session or control for confederate fixed effects, the effects are significant for the behavioral measure of status ( $p < .05$ ), the attitudinal measure of status ( $p < .01$ ), ratings of competence ( $p < .001$ ), and ratings of confidence ( $p < .001$ ). When we do not control for the first presenter, do not cluster by session, and do not control for confederate fixed effects, the effects remain significant for the behavioral measure of status ( $p < .05$ ), are not significant for the attitudinal measure of status ( $p = .16$ ), are not significant for competence ( $p = .14$ ), and are significant for confidence ( $p < .01$ ).



= 5.14, SD = 1.17) than when the confederate delivered the serious testimonial (M = 4.90, SD = 1.05),  $t(15) = 2.70, p < .05, 95\% \text{ CI } [0.07, 0.59]$ .

*Confidence.* We find that the second presenter was rated as more confident when he delivered a humorous testimonial (M = 5.49, SD = 1.19) than when he delivered a serious testimonial (M = 4.94, SD = 1.27),  $t(15) = 5.67, p < .001, 95\% \text{ CI } [0.53, 1.17]$ .

For ratings of status, confidence, and competence of the second presenter, we found a significant effect for the confederate who presented ( $p$ 's < .05). These effects are driven by one confederate who received low ratings of status, competence, and confidence. Though this confederate received low ratings for each of our dependent variables, he still received higher ratings when he delivered the humorous testimonial than when he delivered the serious testimonial. By controlling for confederate fixed effects, we account for this confederate's low baseline ratings in our analysis. We also find a significant effect of participant gender on ratings of status of the second presenter,  $t(15) = -2.17, p < .05$ ; men rated the second presenter lower on the attitudinal measure of status. Age of the participant did not influence ratings of status, competence, or confidence of the second presenter. We report results including all of our data.

*Mediation.* In both Baron and Kenny (1986) and bootstrap analyses (Preacher & Hayes, 2004, 2008), we find that competence mediated the relationship between the second presenter's testimonial and our behavioral and attitudinal measures of status, and that confidence mediated the relationship between the second presenter's testimonial and our attitudinal measure of status

(see Appendix F and Table 5). Although the indirect effect of confidence on status is consistently positive and significant in our other studies (see Table 5), confidence did not mediate the relationship between the second presenter's testimonial and our behavioral measure of status in this study.

*Summary.* In Study 1b, with both an attitudinal and a behavioral measure of status, we found that individuals show deference to humorous individuals. When an individual makes a comment that is funny and appropriate, others view that individual as more confident and competent and are more likely to select them as a group leader.

## **Discussion**

In a face-to-face interaction, the use of humor can increase perceptions of the joke teller's confidence and competence. By appearing more confident and competent, the joke teller was viewed as higher in status. In Study 1b, we found that by signaling competence, the joke teller was also more likely to be selected for a leadership position in a subsequent task.

### **Study 2: Joke Success as a Moderator**

In Study 2, we explore humor in different contexts and we consider a boundary condition that may moderate the influence of humor on status: joke success. The decision to tell a joke may be risky. In Studies 2a and 2b, we explore perceptions of joke tellers when their joke is appropriate, but fails to elicit laughter. In Study 2a, we consider positive affect as a mediator of the relationship between humor and status. An appropriate, funny joke may induce positive affect in the audience, and positive affect could boost the audience's evaluation of the

joke teller. In Study 2b, we test confidence and competence as mediators of the relationship between humor and status. Telling a joke is likely to make a joke teller appear more confident, but we expect only successful jokes—those that elicit laughter—to cause a joke teller to appear more competent.

## Study 2a

### Method

**Participants.** We recruited 120 participants online via Amazon.com's Mechanical Turk to participate in a short survey in exchange for \$0.50 (70% male,  $M_{\text{age}} = 31.54$  years,  $SD = 8.63$ ).

**Design and Procedure.** We randomly assigned participants to one of three between-subjects conditions: Successful Joke vs. Failed Joke vs. Serious Comment. Across all conditions, we asked participants to think of five coworkers they had known for less than a year. Participants wrote down the first name and last initial for each coworker.

We then asked all participants to think about the third coworker they wrote down. We asked participants in the Serious Comment condition to recall the last greeting this coworker told them. We asked participants in the Successful Joke condition to recall the last appropriate joke this coworker told them that the participant thought was funny. We gave the participants in the Failed Joke condition nearly identical instructions as the Successful Joke condition. However, in the Failed Joke condition, we asked participants to recall a joke they thought was *not* funny. We asked participants in all three conditions to write about what

coworker 3 had said with enough detail that someone who did not know them or their coworker could understand their coworker's comments.

After writing about what their coworker had said, we asked participants to rate, using a 7-point scale (1 = "Not at all", 7 = "Extremely"), their coworker on the following qualities: respected, admired, and influential. We combined these three items to form the same status index we used in Study 1b (adapted from Anderson, Kraus, Galinsky, & Keltner, 2012; Kilduff & Galinsky, 2013;  $\alpha = 0.90$ ).

In order to measure affect, we asked participants to complete the Positive and Negative Affect Schedule (PANAS; Watson, Clark, Tellegen, 1988). The PANAS consists of 20 items. Ten items of the PANAS measure positive affect: interested, excited, strong, enthusiastic, proud, alert, inspired, determined, attentive, and active ( $\alpha = 0.91$ ). The other ten items measure negative affect: distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, and afraid ( $\alpha = 0.94$ ). We asked participants to indicate, on a 7-point scale (1 = "Not at all", 7 = "Extremely"), to what extent they felt that way at the present moment.

Next, we asked participants to complete a manipulation check. To measure the funniness of the comments recalled, we asked participants to rate the extent to which coworker 3's comments were "funny" and "humorous" ( $r = .94$ ). We also had participants rate the extent to which coworker 3's comments were "boring" and "dull" ( $r = .87$ ). We instructed participants to recall jokes that were appropriate (not offensive), so whether or not the jokes participants recalled failed or succeeded should be related to whether or not participants viewed the jokes as

boring. If a humor attempt by the coworker failed by being too benign, it is likely that participants would not have recalled the coworker's comment as a joke at all. Finally, we asked participants to report the relative rank of their coworker. We asked participants to characterize their coworker's rank as senior, equal, or subordinate to them in their organization because the relative status of a coworker might impact how funny their jokes seem (e.g., a participant might rate a joke told by a manager as funnier than a joke told by a subordinate).

## **Results and Discussion**

*Manipulation Check.* Our humor manipulation was successful.

Participants rated their coworker's comment as significantly funnier in the Successful Joke condition than in the Failed Joke condition and the Serious Comment condition. Funniness ratings were also significantly lower in the Failed Joke condition than they were in the Serious Comment condition. Participants rated their coworker's comment as significantly less boring in the Successful Joke condition than in the Failed Joke condition and the Serious Comment condition.

*Status.* We conducted an analysis of variance (ANOVA) on status ratings as a function of experimental condition: Successful Joke vs. Failed Joke vs. Serious Comment. We found a significant main effect of experimental condition on ratings of status. Participants' ratings of their co-worker's status were significantly higher in the Successful Joke condition than they were in the Failed Joke condition and the Serious Comment condition.

Other differences in perceived status were not significant. The difference between the Serious Comment and Failed Joke conditions was directional, but not

significant ( $p = .42$ ). Controlling for the coworker's relative rank did not significantly alter any of our results. We summarize the results of Study 2a in Table 3.

*Mediation.* We conducted both Baron and Kenny (1986) and bootstrap analyses (Preacher & Hayes, 2004, 2008). The relationship between humor and status was not mediated by affect; that is, positive or negative affect cannot account for the boost in perceptions of status triggered by recalling a successful joke told by a coworker (see Appendix F and Table 5).

*Summary.* In this study, we asked participants to recall an exchange they had with a co-worker. We found that co-workers in the humorous conditions recalled a wide array of jokes. The jokes participants recalled significantly influenced their perceptions of their co-worker's status. Recalling an appropriate joke increased perceptions of status in an existing relationship, but only if the joke was successful.

By having participants recall jokes, we were able to test the effects of many different joke stimuli and the effects of humor in existing relationships. Our design, however, has limitations. We did not find that positive or negative affect mediate the relationship between humor and status, but participants may not have experienced the same affect during recall that they felt at the time the joke was told. Furthermore, recalling a successful or unsuccessful joke told by a coworker may have increased the salience of positive or negative traits of the coworker. Notably, even transitory shifts in perceptions of status may have lasting effects. For example, if perceptions of status shift during the course of a group decision-

making process, the relative influence individuals exert is likely to change, and these changes may influence outcomes.

Though documenting the influence of humor in existing relationships is a strength of this study, the possibility of misattribution is a limitation. Though participants did not report having a difficult time recalling a co-worker's joke, it is possible that participants misattributed jokes and recalled a joke told by someone different from the third coworker they listed, and rated that person instead. In our remaining studies, we hold the joke teller constant and manipulate the joke in order to establish a clear causal link between humor attempts and perceptions of status.

### **Study 2b**

We extend our investigation of joke success in Study 2b in a different context, using a different joke than we used in Studies 1a and 1b, and by manipulating audience laughter as an indicator of joke success. We also examine confidence and competence as mechanisms of the relationship between humor and status. Although both successful and unsuccessful humor attempts should make a joke teller appear more confident, only successful humor attempts should make a joke teller appear more competent.

#### Method

**Participants.** We recruited 274 participants online via Amazon.com's Mechanical Turk to participate in a short survey in exchange for \$0.25 (55% male,  $M_{\text{age}} = 31.45$  years,  $SD = 11.25$ ).

**Design and Procedure.** We randomly assigned participants to one of three between-subjects conditions: Successful Joke vs. Failed Joke vs. Serious Response. For our dependent measures, we used the same items for status ( $\alpha = 0.81$ ), competence ( $\alpha = 0.92$ ), and confidence as we used in Study 1a.

In this study, we asked participants to imagine a job candidate interviewing with a manager. The manager asks the candidate a question (“Where do you see yourself in five years?”) and the candidate responds with either a Serious Response (“Continuing to work in this field in a role like this one”) or a Joke we adapted from comedian Mitch Hedberg (“Celebrating the fifth year anniversary of you asking me this question”; quoted in Thinkexist.com, 2014).

We manipulated the success of the joke by describing the manager’s response. After the joke, participants were informed that the manager either laughed or sat in silence. We include an example screenshot from this scenario in Appendix E.

## **Results and Discussion**

We identify audience laughter as a key moderator of the relationship between humor and status. We find that appropriate humor attempts increase status as long as they are successful (i.e., the manager laughs). We report the means, standard deviations, and test statistics of Study 2b in Table 3.

*Status.* Participants’ ratings of the interviewee’s status were significantly higher in the Successful Joke condition than in the Failed Joke condition and the Serious Response condition ( $p$ ’s  $< .0001$ ). The difference in perceived status



between the Serious Response and Failed Joke conditions was not significant ( $p = .66$ ).

*Competence.* Participants' ratings of the interviewee's competence were significantly higher in the Successful Joke condition than in the other two conditions ( $p$ 's  $< .01$ ). We depict these results in Figure 5.

*Confidence.* Participants' ratings of the interviewee's confidence were highest in the Successful Joke condition and lowest in the Serious Response condition. We report confidence ratings across conditions in Table 3. In planned pairwise comparisons, ratings of the interviewee's confidence were significantly different across all conditions ( $p$ 's  $< .01$ ).

*Mediation.* We conducted both Baron and Kenny (1986) and bootstrap analyses (Preacher & Hayes, 2004, 2008) and found that both perceptions of confidence and competence mediated the relationship between the successful use of humor and status (see Appendix F and Table 5). However, whereas confidence was significantly higher in both joke conditions than the Serious Response condition, competence and status were only higher in the Successful Joke condition. We find that the indirect effect of confidence was positive and significant regardless of whether or not the joke was successful. The indirect effect of competence, however, was only positive and significant if the joke is successful.

*Summary.* In this study, we again identify perceptions of confidence and competence as the mechanisms linking the successful use of humor and status. Attempting to use humor made the joke teller appear more confident, whether or

not the joke was successful. However, only an appropriate, successful joke increased perceived competence and boosted status.

## **Discussion**

In Study 2, we extended our investigation of humor and status with different methods. In Studies 2a and 2b, we identify joke success (i.e., audience laughter) as an important moderator of the relationship between humor and competence. A humor attempt does not enhance perceptions of competence and status when the audience does not find it funny. Interestingly, in our studies, when the audience did not find the joke funny, the humor attempt did not harm status compared to the no-humor-attempt condition. We speculate that the “failed” jokes in this study were not large failures, because they were generally funny and appropriate. This was certainly true of the humor attempt in Study 2b (see joke ratings from Pilot Study 2, summarized in Table 1).

### **Study 3: Inappropriate Jokes as a Boundary Condition**

In Studies 3a and 3b, we extend our investigation to the use of inappropriate jokes. As in Study 2b, we manipulate the success of humor attempts by describing an audience who either laughs or does not laugh. Across both Studies 3a and 3b, we present participants with jokes that were judged by participants in Pilot Study 2 to be inappropriate for an interview. We consider the prospect that telling an inappropriate, unsuccessful joke demonstrates confidence but signals a lack of competence and may actually *decrease* status.

#### **Study 3a**

Method

**Participants.** We recruited 274 participants online via Amazon.com's Mechanical Turk to participate in a short survey in exchange for \$0.25 (57% male,  $M_{\text{age}} = 30.03$  years,  $SD = 9.94$ ).

**Design and Procedure.** The design of Study 3a was nearly identical to Study 2, except for the manager's final question and the candidate's response. We randomly assigned participants to one of three between-subjects conditions: Successful Joke vs. Failed Joke vs. Serious Response.

Across all three conditions, the manager asked the candidate, "Are you looking for a challenging position?" In the Serious Response condition, the candidate responded by saying, "Yes. I am a hard worker and like challenges." In the Successful Joke condition, the job candidate answered the manager's question with a joke rated as inappropriate in Pilot Study 2. Specifically, the candidate replied by saying, "That's what she said!" and participants then read that, "The manager and candidate both laugh." The Failed Joke condition used the same candidate response, "That's what she said!" but this time "The candidate laughs and the manager sits in silence." In this way, both joke conditions used an inappropriate joke, but we manipulated the success of the joke by changing the manager's reaction (laughter versus no laughter). In both joke conditions, the candidate then adds, "But seriously, yes. I am a hard worker and like challenges."

We used the same items for status ( $\alpha = 0.77$ ), competence ( $\alpha = 0.94$ ), and confidence as we used in Studies 1a and 2b.

## **Results and Discussion**

We find that inappropriate humor attempts make a joke teller appear more confident, but less competent and decrease status. However, audience laughter reduces the harmful effects of telling an inappropriate joke. We report the means, standard deviations, and test statistics for Study 3 in Table 3.

*Status.* Participants' ratings of the interviewee's status were highest in the Serious Response condition, lower in the Successful Joke condition, and lowest in the Failed Joke condition. In planned pairwise comparisons, ratings of status were significantly different across all three conditions ( $p$ 's < .001).

*Competence.* Participants' ratings of the interviewee's competence were highest in the Serious Response condition, lower in the Successful Joke condition, and lowest in the Failed Joke condition. In planned pairwise comparisons, competence levels were significantly different across each of the three conditions ( $p$ 's < .001).

*Confidence.* We found a different pattern of results looking at confidence. Participants' ratings of the interviewee's confidence were significantly higher in the Successful Joke condition than in the Serious Response condition. Ratings of the interviewee's confidence in the Failed Joke condition were not significantly different from those in the Serious Response condition or the Successful Joke condition. We depict these results in Figure 6.

*Mediation.* We conducted both Baron and Kenny (1986) and bootstrap analyses (Preacher & Hayes, 2004, 2008) and found that perceptions of competence mediated the relationship between the use of inappropriate humor and

status. Confidence mediated the relationship between the successful use of inappropriate humor and status (see Appendix F and Table 5).

*Summary.* In this study, we identify inappropriate humor as a boundary condition of the positive relationship between humor and status. Compared to not using humor, making an inappropriate joke caused the job candidate to be viewed as more confident. However, making an inappropriate joke caused the job candidate to appear less competent, which in turn lowered status. This effect was even more dramatic when the candidate made an inappropriate joke and the manager did not laugh.

### **Study 3b**

We conducted a conceptual replication of Study 3a with a different inappropriate joke and a different participant pool. We recruited 228 adults from a city in the northeastern United States to participate in a study in exchange for \$10 in a behavioral laboratory (42% male,  $M_{\text{age}} = 23.79$  years,  $SD = 9.40$ ).

In all conditions, the manager asked the candidate, “What do you see yourself doing in the first 30 days of this job?” In the Serious Response condition, the candidate responded by saying, “Getting to know the team and getting up to speed.” In the humor conditions, the candidate replied by saying, “The receptionist I saw on the way in.”

As we found in Study 3a, results from Study 3b demonstrate that telling an inappropriate joke can decrease status, compared to not making a joke. We report the results for this study in Table 3. We find that telling a joke signals confidence, which typically boosts perceptions of status. Telling an inappropriate joke,

however, signals low competence in addition to high confidence. In our studies, the signal of low competence outweighed the signal of confidence, and participants judged targets who told inappropriate jokes to have lower status. That is, the combined effects of confidence and low competence decreased status.

These results provide further support for the importance of the manager's reaction; telling a joke that elicits laughter signals a greater level of competence than telling a joke that elicits no laughter. The manager's laughter mitigates the harmful effect of telling an inappropriate joke on perceptions of the job candidate's status. When the candidate told an inappropriate joke, the candidate was seen as more competent and higher status when the manager laughed than when the manager did not laugh.

## **Discussion**

Findings from Study 3 support our conceptualization of humor as risky. Merely attempting to use humor makes an individual appear confident, but the appropriateness and success of the attempt influence perceptions of the joke teller's competence. Whereas appropriate jokes signal competence and boost status (Studies 1-2), inappropriate jokes signal low competence and can decrease status (Study 3). Eliciting laughter with an inappropriate joke mitigates the harmful effects of telling an inappropriate joke on status.

### **Study 4: Comparing Appropriate and Inappropriate Humor Attempts**

In Study 4, we investigate the effect of joke success and the effect of joke appropriateness simultaneously. In Study 4a, we examine confidence and competence as the mechanisms linking the use of humor with changes in status. In

Study 4b, we rule out positive and negative affect as an alternative explanation for the relationship between humor and status. If an inappropriate joke induces negative affect in the audience, the negative affect might harm ratings of a joke teller's competence and status. In Study 4b, we also disentangle the effects of funniness and appropriateness. We contrast the consequences of jokes that are similarly funny, but very different with respect to appropriateness (see results from Pilot Study 2, summarized in Table 1). We test whether or not joke appropriateness moderates the relationship between humor and status.

### Study 4a

#### Method

**Participants.** We recruited 186 adults from a city in the northeastern United States to participate in a study in exchange for \$10 in a behavioral lab (34% male,  $M_{\text{age}} = 20.10$  years,  $SD = 2.10$ ).

**Design and Procedure.** In Study 4a, we randomly assigned participants to one of five between-subjects conditions: *Appropriate Successful Joke* vs. *Appropriate Failed Joke* vs. *Inappropriate Successful Joke* vs. *Inappropriate Failed Joke* vs. *Serious Response*.

Across all five conditions, the manager asked the candidate, "What would you do if you won the lottery?" In the Serious Response condition, the candidate responded by saying, "I would probably go on a vacation to Hawaii." In the Appropriate Joke conditions, the job candidate answered the manager's question by saying, "When I die, I would want my last words to be, 'I left one million dollars under the...'" In the Inappropriate Joke conditions, the candidate

answered the manager's question with, "I'll tell you what I'd do, two chicks at the same time" (quoted in IMDb.com, 2015). In the Successful Joke conditions, after the joke, the participants read that, "The manager and candidate both laugh." In the Failed Joke conditions, the participants are informed that, "The candidate laughs and the manager sits in silence." In all four joke conditions, the scenario ends with the candidate saying, "But seriously, I would probably go on a vacation to Hawaii."

For our dependent variables, we used the same status ( $\alpha = 0.69$ ), the competence ( $\alpha = 0.92$ ), and confidence items that we used in our prior studies. We also asked participants to rate, on a 7-point scale (1 = "Not at all", 7 = "Extremely"), the candidate on nine dimensions. Seven of the items were filler items. The two items of interest were "funny" and "inappropriate." The other seven items (agreeable, interesting, thoughtful, persuasive, dominant, pleasant, and considerate) were used to mask the purpose of the study and were not analyzed.

## **Results and Discussion**

We find that a successful, appropriate humor attempt makes a joke teller appear more competent and increases status, but a failed, inappropriate humor attempt causes a joke teller to appear less competent and harms status. We find that all humor attempts cause the joke teller to appear more confident, which helps status. We find an effect of laughter; joke tellers are perceived to be more confident and competent when the audience laughs than when the audience does



not laugh. We report the means, standard deviations, and test statistics of Study 4a in Table 4.

*Manipulation Checks.* Participants rated successful jokes as funnier than unsuccessful jokes. Participants rated the inappropriate joke as far more inappropriate than the appropriate joke. The serious response was rated as the most appropriate response.

*Status.* The successful, appropriate joke increased ratings of the candidate's status, but the failed, inappropriate joke decreased status (see Figure 8). Ratings of the interviewee's status were significantly higher in the Appropriate Successful Joke condition than in all other conditions ( $p$ 's < .001). Ratings of status were also significantly lower in the Inappropriate Failed Joke condition than in all other conditions ( $p$ 's < .001).

*Competence.* Similar to the results for status, participants rated the candidate's competence highest after a successful, appropriate joke and lowest after a failed, inappropriate joke. Ratings of the interviewee's competence were significantly higher in the Appropriate Successful Joke condition than in all other conditions ( $p$ 's < .001). Ratings of competence were also significantly lower in the Inappropriate Failed Joke condition than in all other conditions ( $p$ 's < .01). We depict this pattern of results in Figure 8.

*Confidence.* Confidence ratings were higher in all four joke conditions than they were in the Serious Response condition ( $p$ 's < .05).

*Mediation.* Perceptions of confidence and competence fully mediated the relationship between the Appropriate Successful Joke condition and status.

Regardless of joke outcome, the indirect effect of confidence is positive and significant (see Appendix F and Table 5). However, joke appropriateness and success moderate the indirect effect of competence. The indirect effect of competence was negative, but not significant, after an appropriate joke that fails. The indirect effect of competence was negative and significant for an inappropriate joke, regardless of outcome. These results are consistent with our model (see Figure 1).

*Summary.* In this study, we found that telling an appropriate joke that elicits laughter increased status, but telling an inappropriate joke that fails to elicit laughter harmed status. We found that confidence and competence mediate the relationship between the successful use of appropriate humor and status. However, the appropriateness and success of a joke changes perceptions of competence. Individuals who tell both appropriate and inappropriate jokes are perceived to be more confident than those who tell no jokes, but only individuals who tell appropriate jokes that elicit laughter are perceived to be more competent than those who tell inappropriate jokes that fail to elicit laughter and those who tell no jokes at all.

### **Study 4b**

In Study 4b, we extend our investigation of inappropriate jokes. In this study, we use different jokes, all of which were rated as very funny, but differ with respect to appropriateness. In this study, we use the same status measure as the one we used in Studies 1b and 2a, and we test whether joke appropriateness moderates the relationship between humor and status. We also consider whether

affect mediates the relationship between humor attempts and status by exploring if the harm to a joke teller after an inappropriate joke might be driven by negative affect felt by observers.

## Method

**Participants.** We recruited 509 adults from Amazon.com's Mechanical Turk to participate in a study in exchange for \$0.45 (52% male,  $M_{\text{age}} = 33.89$  years,  $SD = 11.25$ ).

**Design and Procedure.** In Study 4b, we randomly assigned participants to one of five between-subjects conditions: *Appropriate Successful Joke* vs. *Appropriate Failed Joke* vs. *Inappropriate Successful Joke* vs. *Inappropriate Failed Joke* vs. *Serious Response*.

Across all five conditions, the manager asked the candidate, "What is a creative use for an old tire?" In the Serious Response condition, the candidate responded by saying, "Make a tire swing out of it." In the Appropriate Joke conditions, the job candidate answered the manager's question by saying, "Someone doing CrossFit could use it for 30 minutes, then tell you about it forever." In the Inappropriate Joke conditions, the candidate answered the manager's question with, "Melt it down, make 365 condoms, and call it a GOODYEAR!" In the Successful Joke conditions, after the joke, the participants read that, "The manager and candidate both laugh." In the Failed Joke conditions, the participants read, "The candidate laughs and the manager sits in silence." In all four joke conditions, the scenario ends with the candidate saying, "But seriously, make a tire swing out of it."

For our dependent variables, we used the same status index (adapted from Anderson, Kraus, Galinsky, & Keltner, 2012; Kilduff & Galinsky, 2013;  $\alpha = 0.95$ ) as the one we used in Studies 1b and 2a. After rating status, participants completed the PANAS (Watson, Clark, & Tellegen, 1988;  $\alpha_{PA} = 0.93$ ;  $\alpha_{NA} = 0.94$ ). We also asked participants to rate, on a 7-point scale (1 = “Not at all”, 7 = “Extremely”), the candidate’s response to the manager’s question on eight dimensions (funny, humorous, boring, dull, inappropriate, appropriate, tasteless, and suitable). We combined two items (funny, humorous) to create a measure of funniness ( $r = 0.90$ ) and another two items (boring, dull) to measure boringness ( $r = 0.83$ ). We combined the remaining items (inappropriate (reverse scored), appropriate, tasteless (reverse scored), suitable) to form a measure of appropriateness ( $\alpha = 0.93$ ).

## **Results and Discussion**

As in Study 4a, we find that joke appropriateness moderates the relationship between humor and status. With different stimuli, we find that a successful, appropriate humor attempt increases the joke teller’s status, but a failed, inappropriate humor attempt harms the joke teller’s status. Although affect could cause participants to rate the joke teller more or less favorably, we do not find that affect mediates the relationship between humor and status. We report the means, standard deviations, and test statistics of this study in Table 4.

*Manipulation Checks.* The candidate’s response was rated as significantly funnier and less boring in all of the joke conditions compared to the Serious Response condition (all  $p$ ’s < .0001). Participants judged the candidate’s response

to be significantly more appropriate in the Appropriate Joke conditions ( $M_{appropriateness} > 4.42$  for the Appropriate Successful and Appropriate Failed conditions) than in the Inappropriate Joke conditions ( $M_{appropriateness} < 3.05$  for the Inappropriate Successful and Inappropriate Failed conditions;  $p$ 's  $< .0001$ ). Participants judged successful humor attempts to be more appropriate than failed humor attempts.

*Status.* Ratings of the interviewee's status were significantly higher in the Appropriate Successful Joke condition than in all other conditions ( $p$ 's  $< .001$ ). Ratings of status were also significantly lower in the Inappropriate Failed Joke condition than in all other conditions ( $p$ 's  $< .001$ ). We depict these results in Figure 9.

*Mediation.* We conducted both Baron and Kenny (1986) and bootstrap analyses (Preacher & Hayes, 2004, 2008) and we did not find that affect mediated the relationship between humor and status (see Appendix F and Table 5). Positive affect did not boost ratings of status after a successful, appropriate joke, and negative affect did not diminish status after a failed, inappropriate joke.

*Moderation.* We tested the moderating effect of appropriateness on the relationship between humor and status. We conducted an analysis of variance (ANOVA) on status ratings as a function of experimental condition, appropriateness, and the interaction of experimental condition and appropriateness ( $F(9,499) = 45.34, p < .0001, \eta^2 = .45, 95\% \text{ CI } [0.38, 0.49]$ ). The effect of experimental condition on ratings of status was marginally significant ( $F(4,499) = 2.38, p = .05, \eta^2 = .02$ ), the effect of ratings of appropriateness of the

response was significant ( $F(1,499) = 115.00, p < .0001, \eta^2 = .19$ ), and the interaction of response and appropriateness was significant ( $F(4,499) = 2.40, p < .05, \eta^2 = .02$ ).

*Summary.* In Study 4b, we extend our investigation of inappropriate humor with jokes that were rated as very funny in Pilot Test 2 ( $M_{\text{funny}} > 4.9$  for both jokes). The appropriate joke (CrossFit joke) was rated as appropriate ( $M_{\text{appropriate}} = 4.86$ ), but the Goodyear joke was rated as inappropriate ( $M_{\text{appropriate}} = 2.62$ ). As in Study 4a, we find that appropriateness moderates the relationship between the use of humor and status.

In this study, we also consider and rule out affect as an alternative mechanism; positive affect did not increase status when appropriate jokes elicited laughter, and negative affect did not decrease status when inappropriate jokes failed to elicit laughter. These results are consistent with the findings in Study 2a. In Study 2a, it might have been possible that positive or negative affect did not mediate the relationship between humor and status because participants were not experiencing the same emotions they felt during recall as they felt when the joke was told. In Study 4b, however, we address this concern by measuring positive and negative affect immediately after the humor attempt was delivered.

Our findings in Studies 4a and 4b illustrate the inherent risk of using humor. Telling an appropriate joke that elicits laughter increases status, but telling an inappropriate joke that fails to elicit laughter decreases status. Telling a joke displays confidence and helps status, but a signal of low competence (e.g., an inappropriate joke) can harm status.

These studies also underscore the importance of the audience's reaction to the joke. When the audience laughs, people are far more likely to perceive the humor attempt as funny and appropriate. These results reveal just how malleable our perceptions of humor are; merely reading that another individual either laughed or did not laugh influences how we evaluate both the humor attempt and the expresser himself.

### **General Discussion**

Our findings reveal an important link between humor and status. In Studies 1a and 1b, telling a successful joke—one rated as funny and appropriate—increased the joke teller's status. Successful joke tellers are viewed as higher in confidence, competence, and status, and are more likely to be nominated as group leaders.

Importantly, joke success (i.e., whether or not the audience laughs) moderates the relationship between humor and status. In Study 2a, we found that recalling an appropriate joke told by a coworker increased perceptions of the coworker's status, but only if the joke was funny. Interestingly, we found the link between humor and status to be so powerful that merely prompting individuals to recall a humorous exchange with a coworker shifted their perceptions of their coworker's status. That is, in Study 2a we found that merely recalling a humorous exchange shifted perceptions of status in existing relationships. In Study 2b, we used a different experimental paradigm and show that attempting to use humor displays confidence, but only the successful use of humor signals competence and increases status.

In Studies 3a and 3b, we found that the use of humor is risky. Telling an *inappropriate* joke signals a lack of competence and can decrease status. Even inappropriate jokes, however, signal a high level of confidence. We extended our investigation in Studies 4a and 4b, and found that humor attempts have substantially different effects on status and competence depending on whether or not the joke is appropriate and whether or not the joke elicits laughter. Once again, we found that confidence and competence, not affect, mediate the relationship between humor and status.

Taken together, our results demonstrate that humor attempts, even unsuccessful ones, boost perceptions of confidence, but only humor attempts that are appropriate and elicit laughter boost perceptions of competence and status. Inappropriate humor attempts that fail to elicit laughter can overpower the beneficial effects of signaling high confidence and cause a joke teller to appear less competent and harm status.

Though humor can boost status, using humor is risky. Humor attempts can fail in several ways: by being too boring (i.e., not funny), too bold (i.e., inappropriate), or failing to elicit laughter from the audience. How the audience reacts profoundly influences perceptions. If the audience does not laugh, observers are less likely to view the humor attempt as appropriate or funny, and the joke teller may lose status.

### *Theoretical Implications*

Our findings make several important theoretical contributions. First, we establish an important link between humor and status. Individuals expend



substantial resources to gain status. The use of humor, however, may offer a relatively inexpensive, though risky strategy for gaining status by boosting perceptions of confidence and competence. Importantly, our research demonstrates that to understand status, we need to understand humor.

Second, our findings describe an important relationship between humor, confidence, and competence. Prior work has focused on how displays of ability, dominance, and confidence signal competence and consequently increase status (Anderson & Kilduff, 2009b; Kennedy, Anderson, & Moore, 2013). We find that merely telling a joke displays confidence, and that perceptions of confidence are associated with higher status. This is consistent with prior work, which has found that displaying confidence can boost status (Anderson et al., 2012; Kennedy et al., 2013). However, we identify the inappropriate and failed use of humor as an important exception. Inappropriate and failed humor attempts display confidence, but simultaneously signal low competence and lower status. That is, failed humor attempts can boost perceptions of confidence, but signal low competence and harm status.

Third, our findings underscore the risk of attempting to use humor. Whereas prior humor research has focused on humor attempts that caused other individuals to laugh, we investigate the impact of humor attempts that fail to elicit laughter. Our findings highlight the important role that laughter plays in determining not only whether or not humor attempts succeed, but also how appropriate the use of humor is. Even for objectively inappropriate humor attempts, laughter substantively mitigated the damage that telling an inappropriate

joke caused. In general, telling an inappropriate joke signals a lack of competence and damages status. But someone skilled in the ability to elicit laughter may face far fewer consequences for telling inappropriate jokes.

### *Prescriptive Advice*

Our results reveal that the ability to use humor is an important social and managerial skill. By using humor effectively, individuals can project confidence, signal competence, and increase their status. As a result, individuals within organizations may derive substantial benefits by developing their ability to use humor. Perhaps humor should play an important role in how we select, train, and promote individuals.

Our findings also reveal that humor is risky. Using humor to project confidence, signal competence, and increase status may be particularly effective in novel situations when individuals form initial impressions. These settings, however, are also characterized by unfamiliarity. Expressers may fail to appreciate implicit norms and boundaries as they interact with unfamiliar others. It is possible that the contexts in which humor may be most beneficial are also those in which humor is fraught with risk. Ultimately, our prescriptive advice is to use humor with caution.

### *Future Directions*

Future work can extend our investigation in several ways. Future research should identify characteristics that moderate the risk of telling an inappropriate joke. To succeed, a joke needs to be both benign (inoffensive) and a violation (surprising/inappropriate enough to make people laugh, McGraw & Warren,

2010; Warren & McGraw, 2015a, 2015b). Future work should identify guidelines to minimize the risk of telling offensive jokes. For example, aspects of joke delivery (e.g., physical cues, timing, frequency), characteristics of the joke teller (e.g., age, gender, status), the audience (e.g., size, heterogeneity), the target (e.g., present versus absent, known versus stranger), the setting (e.g., in the workplace, at home), and the relationships between the joke teller, audience, and target (e.g., hierarchy, length of relationship, social closeness, liking) are all likely to influence how beneficial and risky the use of humor is. Misjudging the context could spell the difference between success and disaster.

We found that humor can boost perceptions of confidence, competence, and status. We expect successful joke tellers to be more influential than others. Those who attempt to use humor and fail, however, may lose respect, status, and influence. We call for future work to explore the relationship between successful humor, unsuccessful humor, and influence.

Future research should also explore other potential mediators of the relationship between humor and status. In addition to confidence and competence, being able to anticipate what another individual would view as appropriate and humorous reflects social skill. Inferences about social skills may also help to explain why the audience laughing helps to mitigate the negative effects of telling an inappropriate joke.

It is also possible that individuals who tell successful, appropriate jokes are better liked than individuals who are serious, whereas those who tell failed,

inappropriate jokes are less well-liked. Ultimately, humorous individuals may gain greater influence over time that fuels an even steeper rise in status.

In our studies, we operationalized humor attempts with short, witty, spoken jokes. This is a common form of humor expression, but some humor attempts involve other forms of expression such as physical humor or storytelling. Future work should explore how cultural norms and types of humor expression moderate the relationship between humor and status.

In our studies, we focused on individual-level outcomes for the joke teller: perceptions of confidence, competence, and status. But humor is likely to impact important outcomes at the dyadic, group, and organizational levels as well. For example, organizations that encourage the use of humor may be more effective with respect to recruitment and retention than serious organizations. Future work could investigate outcomes at different levels of analysis.

Future work should also investigate the moderating role of gender in the relationship between humor and status. Varying the gender of the joke teller, target, and audience may matter profoundly for joke success—especially for gender-related jokes (Feingold, 1992; Hooper, Sharpe, Roberts, & George, 2016; Martin, 2007; Mickes, Walker, Parris, Mankoff, & Christenfeld, 2012). Future work should explore gender differences across the three humor roles (i.e., joke teller, joke target(s), and joke audience), and how gender differences impact the appropriateness and willingness of individuals to attempt to use humor.

Important work remains to guide individuals and groups in how to recover following an inappropriate joke failure. When an individual tells a joke that is

inappropriate and unsuccessful, perhaps an apology is the most effective way to regain status. Alternatively, the joke teller's best recovery strategy might be to make a self-deprecating joke or simply shift focus. In some cases, if the joke is extremely inappropriate (e.g., Justine Sacco's joke about AIDS in South Africa), the joke teller might not be able to repair the damage done by the joke.

### **Conclusion**

Humor is pervasive, and making a joke presents an opportunity for individuals to increase their status. If individuals tell appropriate jokes that make others laugh, they are likely to signal both confidence and competence and increase their status. If individuals tell inappropriate jokes that do not make others laugh, they are likely to appear confident, but less competent and lower in status. Taken together, many individuals may be missing opportunities to project confidence, demonstrate their competence, and increase their status. On the other hand, some individuals may be keenly aware about the risks of making inappropriate jokes—especially at work—and they may be wise to keep their jokes to themselves. Whereas Dick Costolo told jokes as he rose to the top, it only took one inappropriate joke for Justine Sacco to get fired. Humor attempts are risky business.

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## Tables

**Table 1. Ratings of Joke Funniness, Boringness, and Appropriateness (Pilot Study 2)**

<u>Study</u>	<u>Joke</u>	<u>Funny</u> <u>M (SD)</u>	<u>Boring</u> <u>M (SD)</u>	<u>Appropriate</u> <u>M (SD)</u>
<b>1A</b>	Pet Waste	4.56 <sub>abc</sub> (1.77)	2.04 <sub>a</sub> (1.31)	4.26 <sub>a</sub> (1.43)
<b>1B</b>	Swiss Flag	3.53 <sub>cd</sub> (1.95)	2.98 <sub>b</sub> (1.75)	5.50 <sub>b</sub> (1.02)
<b>2B</b>	Five-Year Anniversary	4.83 <sub>ab</sub> (1.55)	2.30 <sub>ab</sub> (1.35)	4.36 <sub>a</sub> (1.47)
<b>3A</b>	That's What She Said	3.74 <sub>bcd</sub> (2.04)	2.80 <sub>ab</sub> (1.75)	1.93 <sub>cd</sub> (0.94)
<b>3B</b>	Receptionist	3.40 <sub>d</sub> (2.02)	2.11 <sub>ab</sub> (1.24)	1.79 <sub>d</sub> (1.21)
<b>4A</b>	When I Die	4.31 <sub>abcd</sub> (1.59)	2.79 <sub>ab</sub> (1.37)	4.40 <sub>a</sub> (1.36)
	Two Chicks	3.97 <sub>abcd</sub> (2.05)	2.46 <sub>ab</sub> (1.73)	1.80 <sub>d</sub> (0.81)
<b>4B</b>	CrossFit	4.94 <sub>a</sub> (1.53)	2.14 <sub>ab</sub> (1.15)	4.86 <sub>ab</sub> (1.40)
	Goodyear	4.97 <sub>a</sub> (1.55)	2.01 <sub>a</sub> (1.34)	2.62 <sub>c</sub> (1.35)

**Table 1.** Mean funniness, boringness, and appropriateness ratings for the jokes used in each study. Means in each column with different subscripts are significantly different at a  $p < .05$  level in pairwise t-tests using a Bonferroni correction.

**Table 2. Ratings of Status across All Studies**

<u>Study</u>	<u>Joke</u>	<u>Serious</u> <u><i>M (SD)</i></u>	<u>Failed</u> <u>Joke</u> <u><i>M (SD)</i></u>	<u>Successful</u> <u>Joke</u> <u><i>M (SD)</i></u>
<b>1A</b>	Pet Waste	4.43 <sub>a</sub> (0.89)		5.03 <sub>b</sub> (0.76)
<b>1B</b>	Swiss Flag	4.85 <sub>a</sub> (4.84)		6.66 <sub>b</sub> (6.32)
<b>2A</b>	Coworker	4.18 <sub>a</sub> (1.40)	3.94 <sub>a</sub> (1.46)	4.94 <sub>b</sub> (1.18)
<b>2B</b>	Five-Year Anniversary	4.15 <sub>a</sub> (1.08)	4.22 <sub>a</sub> (1.19)	4.95 <sub>b</sub> (0.83)
<b>3A</b>	That's What She Said	4.58 <sub>a</sub> (1.08)	3.30 <sub>b</sub> (0.93)	3.86 <sub>c</sub> (0.96)
<b>3B</b>	Receptionist	4.20 <sub>a</sub> (1.00)	3.27 <sub>b</sub> (0.98)	3.97 <sub>a</sub> (1.29)
<b>4A</b>	When I Die	4.07 <sub>a</sub> (0.84)	3.68 <sub>a</sub> (0.76)	4.62 <sub>b</sub> (0.88)
	Two Chicks	4.07 <sub>a</sub> (0.84)	2.97 <sub>b</sub> (0.99)	3.73 <sub>a</sub> (0.93)
<b>4B</b>	CrossFit	3.94 <sub>a</sub> (1.27)	3.27 <sub>b</sub> (1.27)	4.84 <sub>c</sub> (0.95)
	Goodyear	3.94 <sub>a</sub> (1.27)	2.57 <sub>b</sub> (1.33)	3.61 <sub>a</sub> (1.50)

**Table 2.** Mean ratings of status across conditions for each study. Means in each row with different subscripts are significantly different at the  $p < .05$  level. For Study 1b, we present the leadership points allocated to the second presenter based on condition.

**Table 3. Summary of Results for Studies 2a, 2b, 3a, and 3b.**

Variable	<i>F</i>	$\eta^2$	95% CI	Power	Serious	Joke	
					Response	Successful	Failed
					<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Study 2a							
Funny	$F(2,117) = 46.24^{***}$	0.44	[0.30, 0.54]	1.00	2.62 <sub>a</sub> (1.70)	5.09 <sub>b</sub> (1.39)	1.95 <sub>c</sub> (1.20)
Boring	$F(2,117) = 8.17^{***}$	0.12	[0.03, 0.23]	0.97	3.39 <sub>a</sub> (2.04)	2.43 <sub>b</sub> (1.48)	4.20 <sub>a</sub> (1.96)
Status	$F(2,117) = 5.42^{**}$	0.08	[0.01, 0.18]	0.87	4.18 <sub>a</sub> (1.40)	4.94 <sub>b</sub> (1.18)	3.94 <sub>a</sub> (1.46)
PA	$F(2,117) = 1.99$	0.03	[0.00, 0.11]	0.40	3.65 <sub>a</sub> (1.32)	3.89 <sub>ab</sub> (1.36)	4.22 <sub>b</sub> (1.24)
NA	$F(2,117) = 0.31$	0.01	[0.00, 0.04]	0.09	1.88 <sub>a</sub> (1.31)	1.83 <sub>a</sub> (1.16)	1.68 <sub>a</sub> (0.98)
Study 2b							
Status	$F(2,271) = 16.12^{***}$	0.11	[0.04, 0.17]	1.00	4.15 <sub>a</sub> (1.08)	4.95 <sub>b</sub> (0.83)	4.22 <sub>a</sub> (1.19)
Competence	$F(2,271) = 7.95^{***}$	0.06	[0.01, 0.11]	0.94	4.73 <sub>a</sub> (1.00)	5.21 <sub>b</sub> (0.94)	4.63 <sub>a</sub> (1.21)
Confidence	$F(2,271) = 28.15^{***}$	0.17	[0.09, 0.25]	1.00	4.73 <sub>a</sub> (1.31)	6.10 <sub>b</sub> (1.08)	5.52 <sub>c</sub> (1.32)
Study 3a							
Status	$F(2,271) = 37.73^{***}$	0.22	[0.13, 0.30]	1.00	4.58 <sub>a</sub> (1.08)	3.86 <sub>b</sub> (0.96)	3.30 <sub>c</sub> (0.93)
Competence	$F(2,271) = 59.78^{***}$	0.31	[0.22, 0.38]	1.00	5.08 <sub>a</sub> (0.92)	3.92 <sub>b</sub> (1.15)	3.27 <sub>c</sub> (1.29)
Confidence	$F(2,271) = 3.31^*$	0.02	[0.00, 0.07]	0.64	5.25 <sub>a</sub> (1.36)	5.70 <sub>b</sub> (0.96)	5.46 <sub>ab</sub> (1.18)
Study 3b							
Status	$F(2,225) = 14.75^{***}$	0.12	[0.05, 0.19]	1.00	4.20 <sub>a</sub> (1.00)	3.97 <sub>a</sub> (1.29)	3.27 <sub>b</sub> (0.98)
Competence	$F(2,225) = 26.95^{***}$	0.19	[0.11, 0.28]	1.00	4.65 <sub>a</sub> (1.15)	3.69 <sub>b</sub> (1.50)	3.06 <sub>c</sub> (1.34)
Confidence	$F(2,225) = 7.18^{**}$	0.06	[0.01, 0.12]	0.94	4.64 <sub>a</sub> (1.43)	5.52 <sub>b</sub> (1.66)	5.37 <sub>b</sub> (1.48)

**Table 3.** Means in each row with different subscripts were significantly different at the  $p < .05$  level. We present the simulated power at an  $\alpha$  of 0.05 using 1,000 simulations. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 4. Summary of Results for Studies 4a and 4b**

Variable	F	$\eta^2$	95% CI	Power	Serious Response		Appropriate Joke		Inappropriate Joke	
					M (SD)	M (SD)	Successful	Failed	Successful	Failed
Study 4a										
Funny	$F(4,181) = 17.64^{***}$	0.28	[0.16, 0.37]	1.00	3.29 <sub>ac</sub> (1.47)	5.65 <sub>b</sub> (1.09)	3.89 <sub>a</sub> (1.39)	3.57 <sub>ac</sub> (1.85)	2.92 <sub>c</sub> (1.77)	
Inappropriate	$F(4,181) = 80.14^{***}$	0.64	[0.55, 0.69]	1.00	2.13 <sub>a</sub> (1.36)	2.97 <sub>b</sub> (1.24)	4.16 <sub>c</sub> (1.66)	6.35 <sub>d</sub> (1.11)	6.35 <sub>d</sub> (1.14)	
Status	$F(4,181) = 17.36^{***}$	0.28	[0.16, 0.36]	1.00	4.07 <sub>a</sub> (0.84)	4.62 <sub>b</sub> (0.88)	3.68 <sub>a</sub> (0.76)	3.73 <sub>a</sub> (0.93)	2.97 <sub>c</sub> (0.99)	
Competence	$F(4,181) = 26.34^{***}$	0.37	[0.25, 0.45]	1.00	3.95 <sub>a</sub> (0.98)	4.45 <sub>b</sub> (0.98)	3.74 <sub>a</sub> (0.84)	3.00 <sub>c</sub> (1.10)	2.34 <sub>d</sub> (0.99)	
Confidence	$F(4,181) = 9.33^{**}$	0.17	[0.07, 0.25]	1.00	4.29 <sub>a</sub> (1.29)	5.78 <sub>bc</sub> (1.11)	5.03 <sub>a</sub> (1.46)	6.00 <sub>b</sub> (1.22)	5.30 <sub>cd</sub> (1.61)	
Study 4b										
Funny	$F(4,504) = 47.94^{***}$	0.28	[0.21, 0.33]	1.00	2.16 <sub>a</sub> (1.40)	5.07 <sub>b</sub> (1.39)	4.28 <sub>c</sub> (1.61)	4.16 <sub>c</sub> (1.67)	4.25 <sub>c</sub> (1.80)	
Boring	$F(4,504) = 38.10^{***}$	0.23	[0.17, 0.29]	1.00	3.74 <sub>a</sub> (1.66)	1.82 <sub>b</sub> (1.16)	2.24 <sub>c</sub> (1.33)	1.92 <sub>bc</sub> (1.12)	1.92 <sub>bc</sub> (1.20)	
Appropriate	$F(4,504) = 132.32^{***}$	0.51	[0.45, 0.56]	1.00	5.96 <sub>a</sub> (1.01)	5.51 <sub>b</sub> (1.00)	4.43 <sub>c</sub> (1.20)	3.04 <sub>d</sub> (1.65)	2.64 <sub>e</sub> (1.47)	
Status	$F(4,504) = 45.23^{***}$	0.26	[0.20, 0.32]	1.00	3.94 <sub>a</sub> (1.27)	4.84 <sub>b</sub> (0.95)	3.27 <sub>c</sub> (1.27)	3.61 <sub>ac</sub> (1.50)	2.57 <sub>d</sub> (1.33)	
PA	$F(4,504) = 0.77$	0.01	[0.00, 0.02]	0.25	4.03 <sub>a</sub> (1.23)	4.03 <sub>a</sub> (1.33)	4.06 <sub>a</sub> (1.29)	3.93 <sub>a</sub> (1.47)	3.79 <sub>a</sub> (1.32)	
NA	$F(4,504) = 1.82$	0.01	[0.00, 0.03]	0.59	1.60 <sub>ab</sub> (0.98)	1.38 <sub>b</sub> (0.68)	1.68 <sub>a</sub> (0.99)	1.65 <sub>a</sub> (0.92)	1.63 <sub>a</sub> (0.88)	

**Table 4.** Means in each row with different subscripts were significantly different at the  $p < .05$  level. We present the simulated power at an  $\alpha$  of 0.05 using 1,000 simulations. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 5. Summary of Mediation Results**

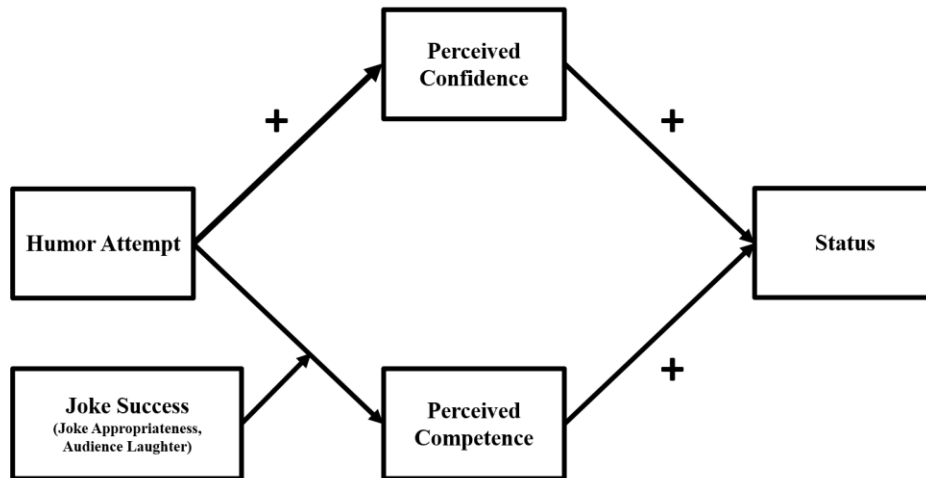
Study	Condition	Confidence			Competence			Total		
		Ind. Effect	95% Conf. Interval	Ind. Effect	95% Conf. Interval	Ind. Effect	95% Conf. Interval	Ind. Effect	95% Conf. Interval	
<b>1a</b>	Appropriate Successful Joke	0.32	[ 0.18, 0.50]	0.11	[ 0.03, 0.24]	0.43	[ 0.27, 0.62]			
<b>1b</b>	Leadership Points	-0.28	[-1.07, 0.33]	0.37	[ 0.03, 1.06]	0.09	[-0.62, 0.82]			
	Attitudinal Status	0.14	[ 0.04, 0.27]	0.16	[ 0.05, 0.31]	0.30	[ 0.14, 0.48]			
<b>2b</b>	Appropriate Successful Joke	0.28	[ 0.16, 0.44]	0.29	[ 0.12, 0.48]	0.58	[ 0.33, 0.82]			
	Appropriate Failed Joke	0.16	[ 0.07, 0.29]	-0.06	[-0.26, 0.14]	0.11	[-0.17, 0.38]			
<b>3a</b>	Inappropriate Successful Joke	0.09	[ 0.03, 0.17]	-0.67	[-0.87, -0.50]	-0.58	[-0.81, -0.36]			
	Inappropriate Failed Joke	0.04	[-0.03, 0.13]	-1.05	[-1.29, -0.84]	-1.01	[-1.28, -0.76]			
<b>3b</b>	Inappropriate Successful Joke	0.17	[ 0.07, 0.31]	-0.47	[-0.73, -0.26]	-0.30	[-0.62, 0.00]			
	Inappropriate Failed Joke	0.14	[ 0.05, 0.27]	-0.79	[-1.05, -0.56]	-0.64	[-0.96, -0.34]			
<b>4a</b>	Appropriate Successful Joke	0.30	[ 0.17, 0.48]	0.27	[ 0.03, 0.54]	0.57	[ 0.27, 0.90]			
	Appropriate Failed Joke	0.15	[ 0.02, 0.31]	-0.11	[-0.34, 0.11]	0.03	[-0.25, 0.32]			
	Inappropriate Successful Joke	0.35	[ 0.19, 0.56]	-0.52	[-0.80, -0.26]	-0.17	[-0.54, 0.20]			
	Inappropriate Failed Joke	0.20	[ 0.07, 0.40]	-0.88	[-1.20, -0.59]	-0.67	[-1.08, -0.29]			
		<b>Positive Affect</b>			<b>Negative Affect</b>			<b>Total</b>		
<b>2a</b>	Appropriate Successful Joke	0.09	[-0.11, 0.35]	0.00	[-0.05, 0.08]	0.09	[-0.12, 0.35]			
	Appropriate Failed Joke	0.20	[ 0.03, 0.51]	0.00	[-0.03, 0.11]	0.21	[ 0.03, 0.53]			
<b>4b</b>	Appropriate Successful Joke	0.00	[-0.11, 0.11]	-0.01	[-0.06, 0.01]	-0.01	[-0.13, 0.10]			
	Appropriate Failed Joke	0.01	[-0.10, 0.12]	0.00	[-0.01, 0.04]	0.01	[-0.09, 0.13]			
	Inappropriate Successful Joke	-0.03	[-0.15, 0.09]	0.00	[-0.01, 0.04]	-0.03	[-0.15, 0.09]			
	Inappropriate Failed Joke	-0.08	[-0.20, 0.03]	0.00	[-0.01, 0.03]	-0.08	[-0.20, 0.03]			

**Table 5.** Comparisons in each row reflect contrasts with the Serious condition.

We report the indirect effects using 5000 simulation bootstrap analysis (Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008).

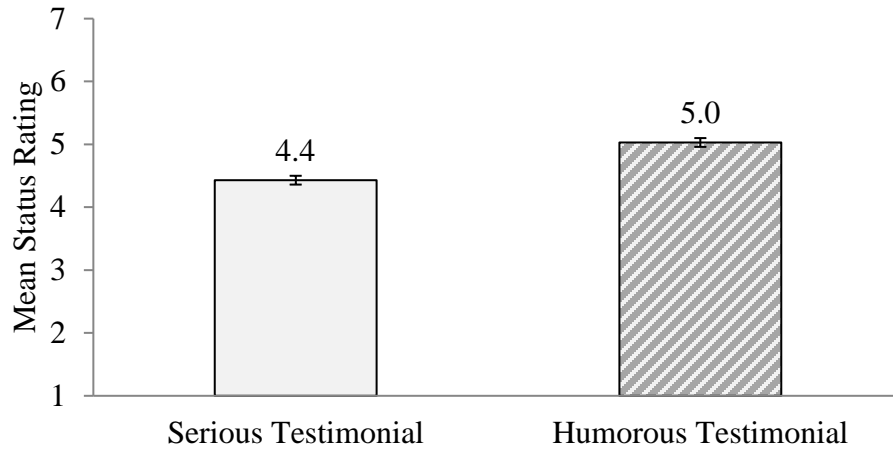
## Figures

Figure 1. Theoretical Model

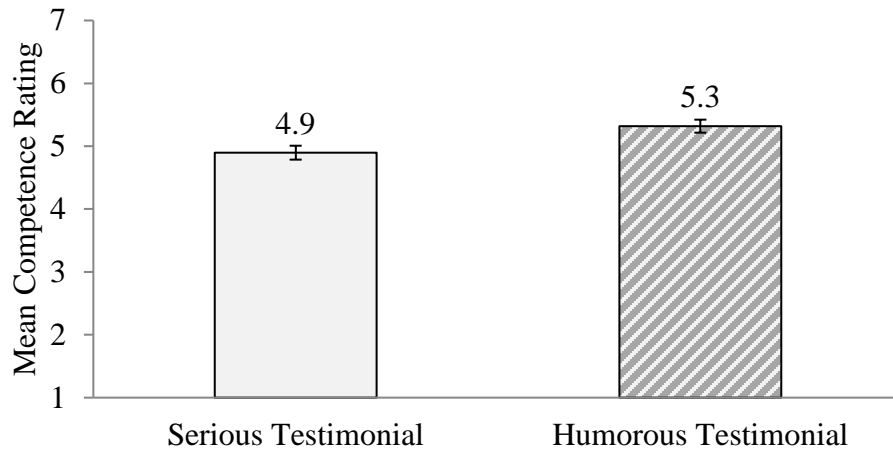


**Figure 2.**

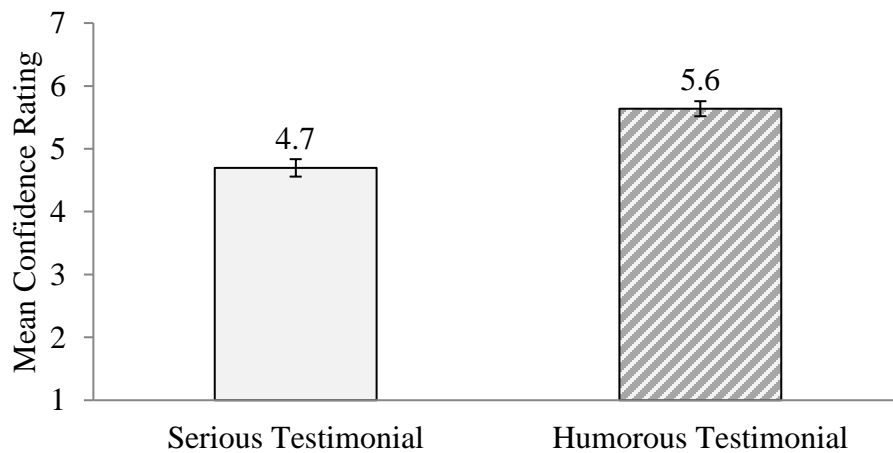
**Panel A. Perceptions of Status in Study 1a: Pet Waste Testimonial**



**Panel B. Perceptions of Competence in Study 1a: Pet Waste Testimonial**

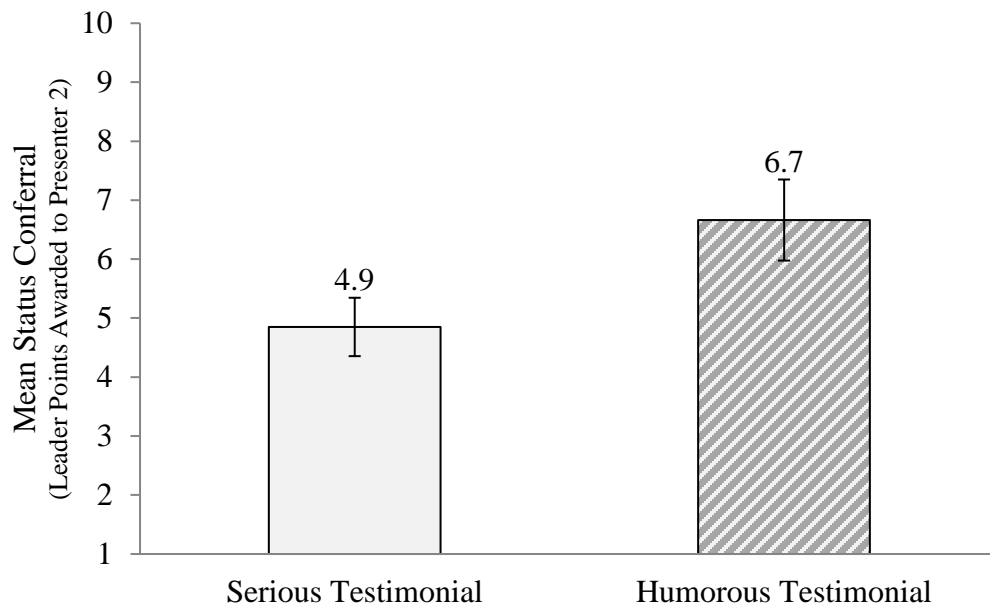


**Panel C. Perceptions of Confidence in Study 1a: Pet Waste Testimonial**

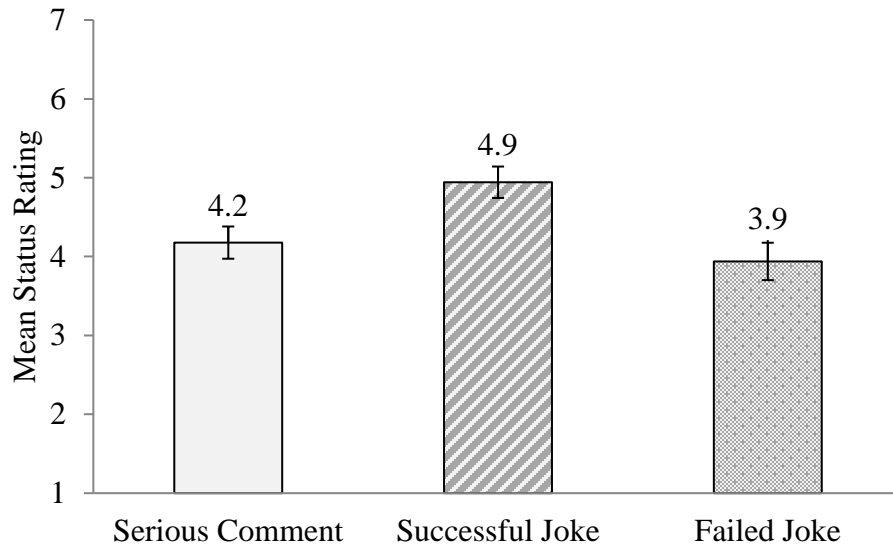




**Figure 3. Status Conferral in Study 1b: Switzerland Testimonial**

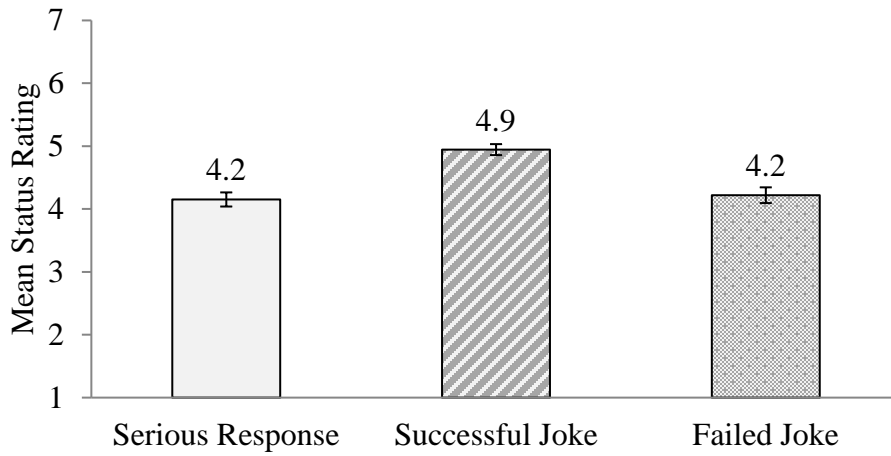


**Figure 4. Joke Teller Status in Study 2a: Appropriate Joke Recalled**

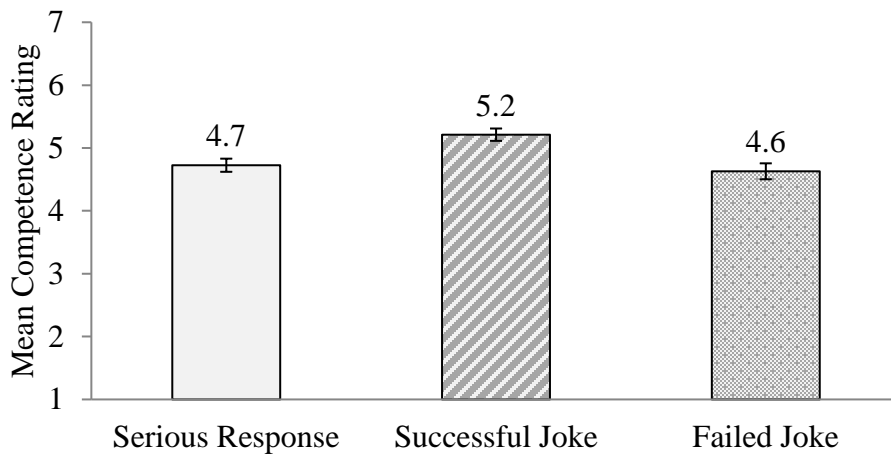


**Figure 5.**

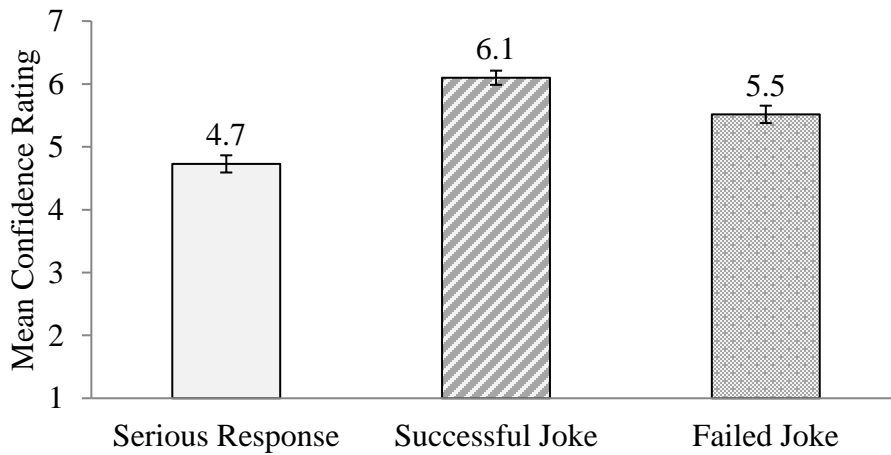
**Panel A. Joke Teller Status in Study 2b: Five-Year Anniversary Joke**



**Panel B. Joke Teller Competence in Study 2b: Five-Year Anniversary Joke**

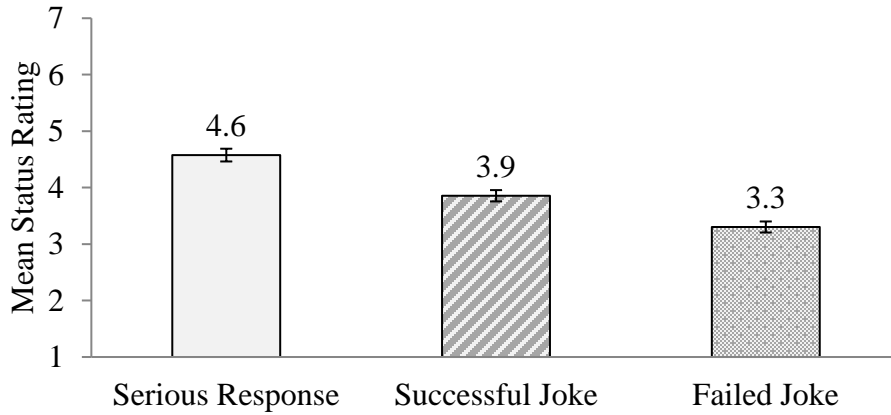


**Panel C. Joke Teller Confidence in Study 2b: Five-Year Anniversary Joke**

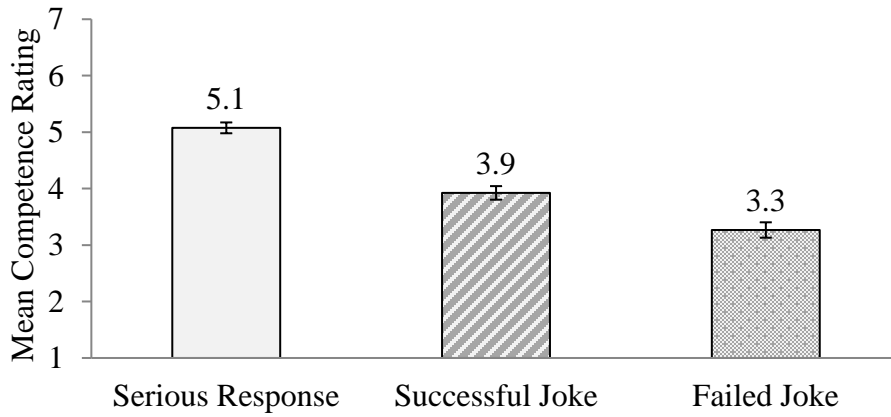


**Figure 6.**

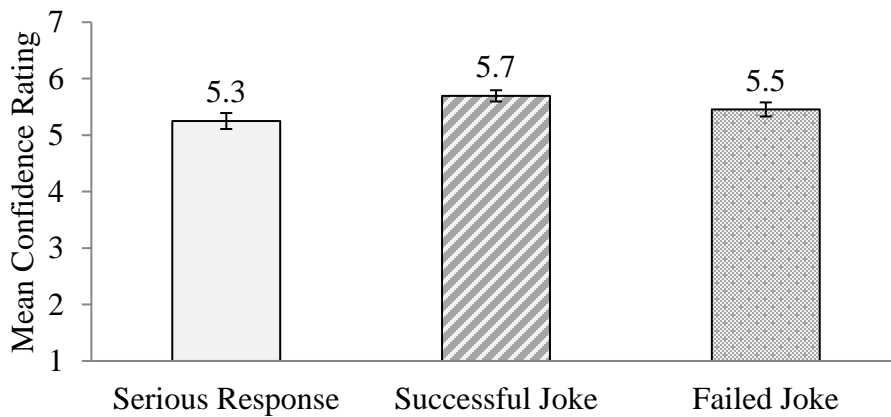
**Panel A. Joke Teller Status in Study 3a: That's What She Said Joke (Inappropriate)**



**Panel B. Joke Teller Competence in Study 3a: That's What She Said Joke (Inappropriate)**

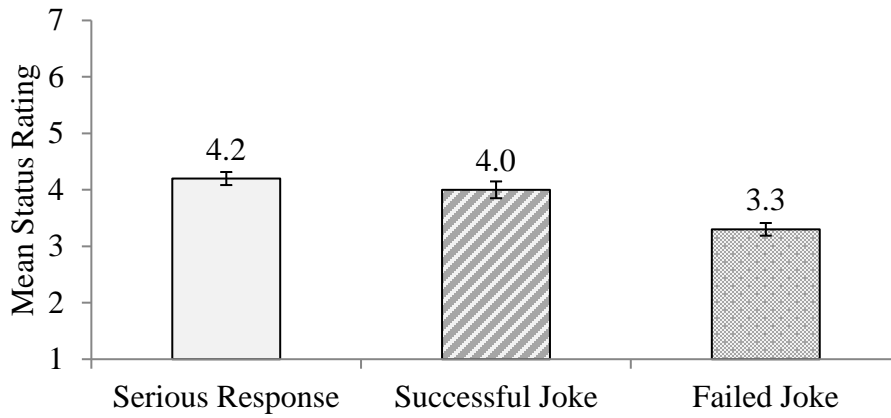


**Panel C. Joke Teller Confidence in Study 3a: That's What She Said Joke (Inappropriate)**

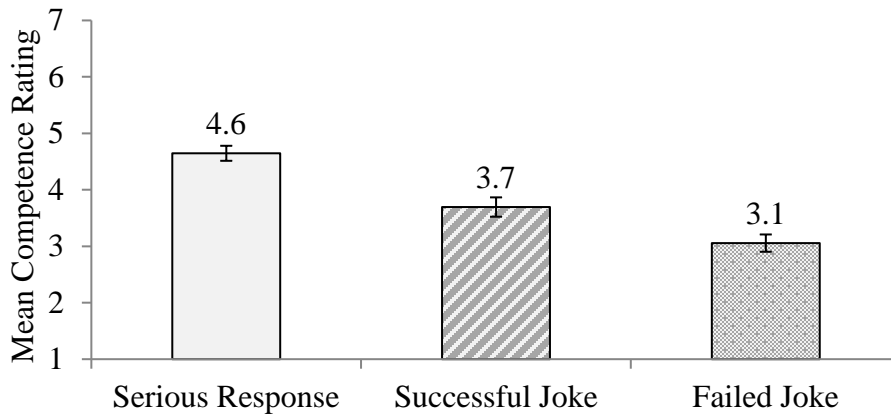


**Figure 7.**

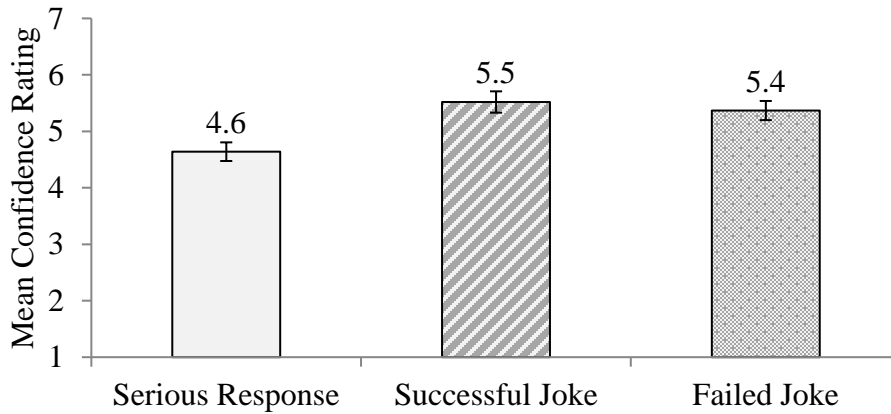
**Panel A. Joke Teller Status in Study 3b: Receptionist Joke (Inappropriate)**



**Panel B. Joke Teller Competence in Study 3b: Receptionist Joke (Inappropriate)**

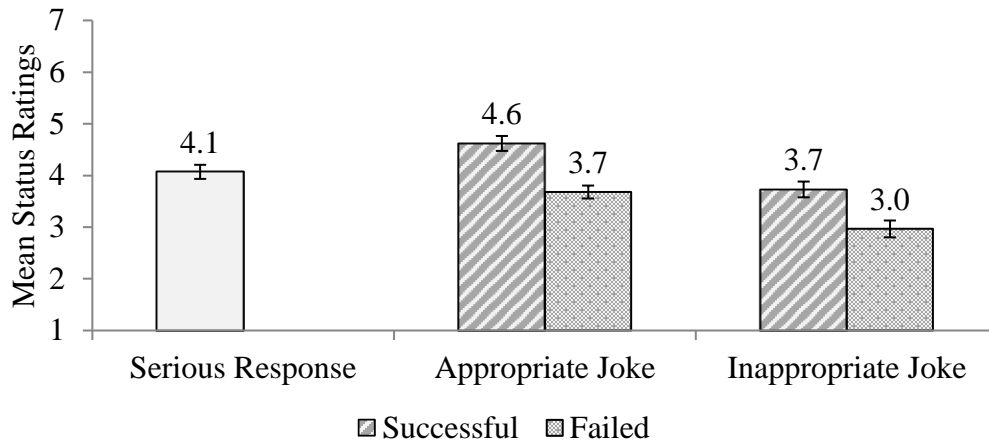


**Panel C. Joke Teller Confidence in Study 3b: Receptionist Joke (Inappropriate)**

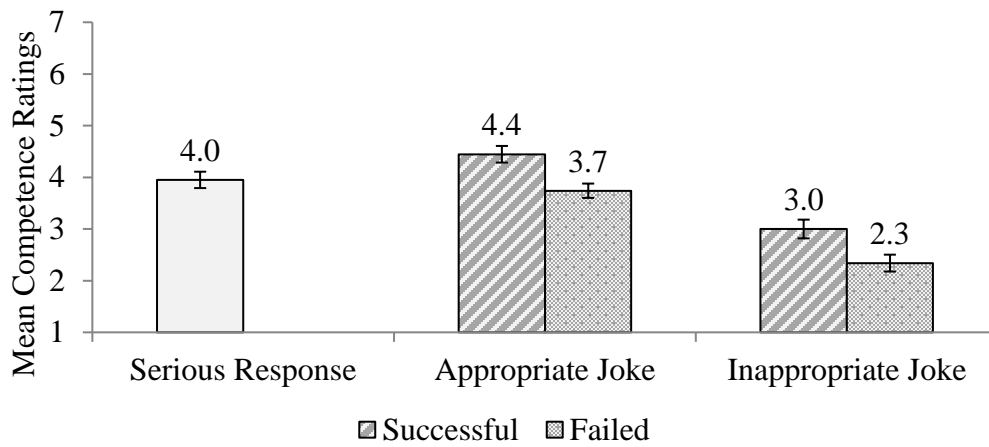


**Figure 8. The Benefits and Risk of Humor**

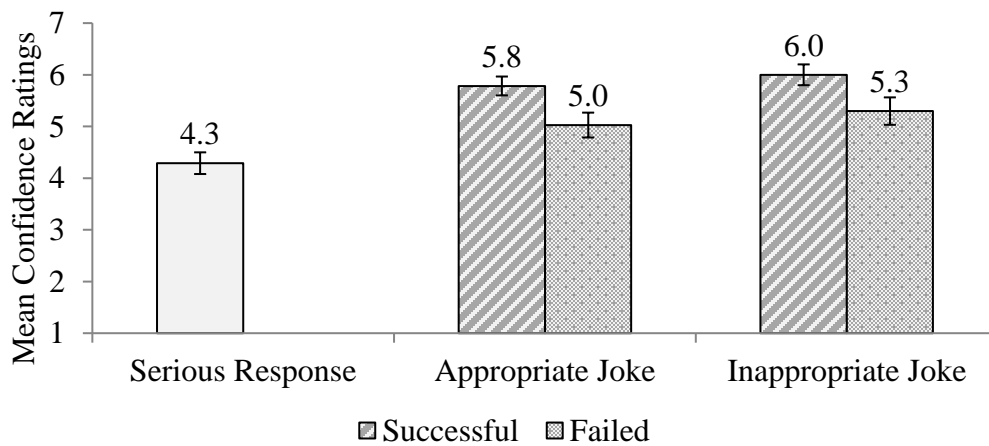
**Panel A. Joke Teller Status in Study 4a**



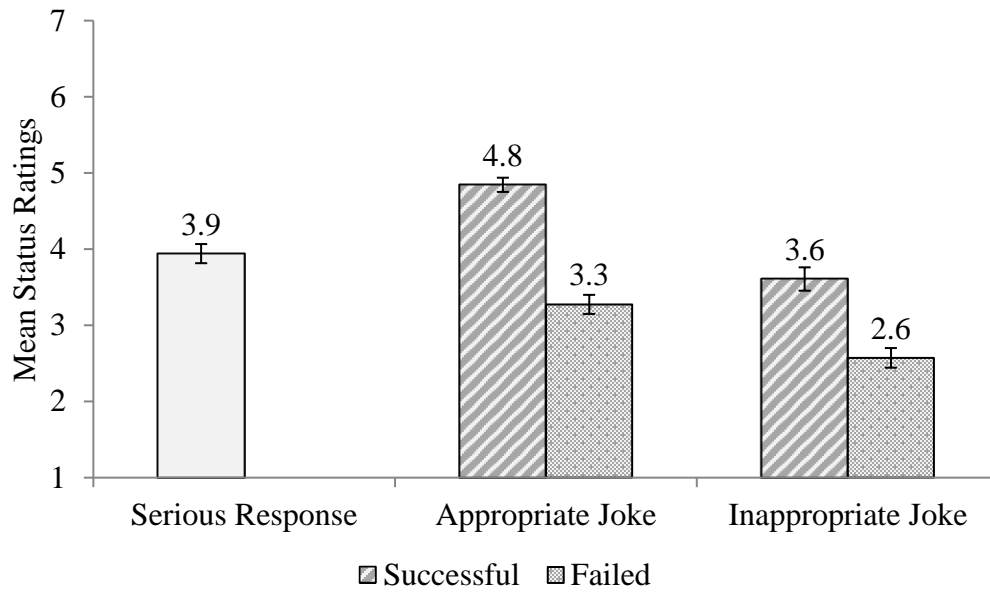
**Panel B. Joke Teller Competence in Study 4a**



**Panel C. Joke Teller Confidence in Study 4a**



**Figure 9. Joke Teller Status in Study 4b**



## **Appendix A: Jokes Used in Studies**

In Studies 1a and 1b, participants saw another participant (who was actually a confederate) deliver either a humorous or serious testimonial for a hypothetical online pet waste removal service, FastScoop.com. In Studies 2-4, participants were presented with a scenario of an interview between a manager and a job candidate. In the scenario, the manager asks the candidate a question. The candidate then responds with either a joke or a serious response.

### **Study 1a**

**Humorous Testimonial:** Very professional. After cleaning up the poop, they weren't even upset when they found out that I don't have a pet! But seriously, this service is reliable and always leaves the yard spotless!

**Serious Testimonial:** Very professional. This service is reliable and always leaves the yard spotless!

### **Study 1b**

**Question:** What made you fall in love with Switzerland?

**Humorous Testimonial:** The mountains are great for skiing and hiking, and the flag is a big plus! Seriously, it's amazing!

**Serious Testimonial:** The mountains are great for skiing and hiking! It's amazing!

### **Study 2b**

**Manager's Question:** Where do you see yourself in five years?

**Joke Response:** Celebrating the fifth year anniversary of you asking me this question.

**Serious Response:** Continuing to work in this field in a role like this one.



### **Study 3a**

Manager's Question: Are you looking for a challenging position?

Joke Response: That's what she said!

Candidate's Serious Response: Yes. I am a hard worker and like challenges.

### **Study 3b**

Manager's Question: What do you see yourself doing within the first 30 days of this job?

Joke Response: The receptionist I saw on the way in.

Serious Response: Getting to know the team and up to speed.

### **Study 4a**

Manager's Question: What would you do if you won the lottery?

Appropriate Joke Response: When I die, I would want my last words to be, "I left on million dollars under the..."

Inappropriate Joke Response: I'll tell you what I'd do, two chicks at the same time.

Serious Response: I would probably go on a vacation to Hawaii.

### **Study 4b**

Manager's Question: What is a creative use for an old tire?

Appropriate Joke Response: Someone doing CrossFit could use it for 30 minutes, then tell you about it forever.

Inappropriate Joke Response: Melt it down, make 365 condoms, and call it a GOODYEAR!

Serious Response: Make a tire swing out of it.

**Appendix B: Sample Stimuli (Study 1a)**



**Appendix C: Sample Stimuli (Study 1b)**



**What made you fall in love with Switzerland?**

### **Appendix D: Leadership Election Instructions (Study 1b)**

At the end of this lab session, you will be asked to engage in a group task with other study participants. In this task, you will complete a team exercise in a small group of 3-6 participants and compete against other small groups in this lab session.

One person in each group will be the group leader. That person will lead the group in the team exercise. You will elect the group leader by transferring points to each presenter. Every participant has 25 points and has the opportunity to keep some points for him/herself and transfer some points to other presenters. The person who ends up with the most points will become the group leader.

The presenters you just saw may be assigned to your group.

You have 25 points. Please indicate how many points you would like to assign to each presenter. The remaining points will be allotted to you. Remember that the person with the most points will become the group leader and will guide your group in the competition, so please answer this question thoughtfully.

**How many of your 25 points would you like to assign to each presenter?**

## Appendix E: Sample Stimuli (Study 2b)



Additional photos follow with text below:

Manager: I'm going to ask a few questions to get to know more about you.

Candidate: Sounds good.

Manager: Where do you see yourself in five years?

In the joke condition, the candidate responds with the following:

Candidate: Celebrating the fifth year anniversary of you asking me this question.

And participants then read: "The manager and candidate both laugh."

The photos shown above are very similar to the ones used in the study (the originals are available upon request from the authors).

## Appendix F: Mediation Analyses for Studies 1-4

We conducted both Baron and Kenny (1986) and bootstrap analyses (Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008) to test for mediation. We report the Baron and Kenny (1986) analysis below and report the results of the bootstrap analysis in Table 5.

*Study 1a.* Perceptions of confidence and competence mediated the relationship between the second presenter's testimonial and status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included competence ratings for the second presenter in our model, with status and competence ratings for the first presenter as covariates, the effect of the condition was reduced (from  $\beta = .67, p < .0001$  to  $\beta = .43, p < .01$ ), and the effect of competence remained significant ( $\beta = .41, p < .0001$ ). When we included confidence ratings for the second presenter in our model, with status and confidence ratings for the first presenter as covariates, the effect of the condition was reduced (from  $\beta = .60, p < .0001$  to  $\beta = .18, p = .08$ ), and the effect of confidence remained significant ( $\beta = .39, p < .0001$ ).

*Study 1b.* Perceptions of competence mediated the relationship between the second presenter's testimonial and our behavioral and attitudinal measures of status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). Perceptions of confidence mediated the relationship between the second presenter's testimonial and our attitudinal, but not our behavioral, measure of status.

*Behavioral Measure of Status.* For the allocation of leader points to the second presenter, our behavioral measure of status, when we included competence ratings of the second presenter in our model, with leader points allocated to the first presenter and competence ratings of the first presenter as covariates, the effect of the condition was reduced (from  $\beta = 1.64, p < .01$  to  $\beta = 1.31, p < .05$ ), and the effect of competence was marginally significant ( $\beta = 1.13, p = .07$ ). When we included confidence ratings of the second presenter in our model, with leader points allocated to the first presenter and confidence ratings of the first presenter as covariates, the effect of the condition was reduced (from  $\beta = 1.38, p < .05$  to  $\beta = 0.96, p = .14$ ), and the effect of confidence was not significant ( $\beta = 0.50, p = .30$ ).

*Attitudinal Measure of Status.* We next consider attitudinal ratings of status of the second presenter. When we include the competence ratings of the second presenter in our model, with status and competence ratings of the first presenter as covariates, the effect of the condition was reduced (from  $\beta = .38, p < .001$  to  $\beta = .17, p < .01$ ), and the effect of competence remained significant ( $\beta = .60, p < .0001$ ). When we included confidence ratings of the second presenter in our model, with status and confidence ratings of the first presenter as covariates, the effect of the condition was reduced (from  $\beta = 0.38, p < .01$  to  $\beta = 0.06, p = .48$ ), and the effect of confidence remained significant ( $\beta = 0.37, p < .001$ ).

*Study 2a.* Affect did not significantly mediate the relationship between a successful humor attempt and status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included positive affect in our

model, included negative affect as a covariate, and compared the Successful Joke condition with the Serious Comment condition, the effect of the Successful Joke condition remained significant and was only slightly reduced (from  $\beta = .77, p < .05$  to  $\beta = .68, p < .05$ ), and the effect of positive affect remained significant ( $\beta = 0.35, p < .001$ ). When we included negative affect in our model, included positive affect as a covariate, and compared the Successful Joke condition with the Serious Comment condition, the effect of the Successful Joke condition remained significant and was very slightly reduced (from  $\beta = .678, p < .05$  to  $\beta = .677, p < .05$ ), and the effect of negative affect was not significant ( $\beta = -0.02, p = .82$ ).

*Study 2b.* Perceptions of confidence and competence mediated the relationship between the successful use of humor and status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included competence in our model and compared the Successful Joke condition with the Serious Response condition, the effect of the Successful Joke condition was reduced (from  $\beta = .79, p < .0001$  to  $\beta = .43, p < .0001$ ) and the effect of competence remained significant ( $\beta = .76, p < .0001$ ). When we included confidence in our model and compared the Successful Joke condition with the Serious Response condition, the effect of the Successful Joke condition was no longer significant (from  $\beta = .79, p < .0001$  to  $\beta = .06, p = .65$ ) and the effect of confidence remained significant ( $\beta = .54, p < .0001$ ).

*Study 3a.* Perceptions of competence fully mediated the relationship between the failed use of humor and status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included competence



in our model and compared the Failed Joke condition to the Serious Response condition, the effect of the Failed Joke condition was no longer significant (from  $\beta = -1.27, p < .0001$  to  $\beta = -.11, p = .37$ ) and the effect of competence remained significant ( $\beta = .64, p < .0001$ ).

We also tested if perceptions of confidence mediated the relationship between humor and status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included confidence in our model and compared the Failed Joke condition to the Serious Response condition, the effect of the Failed Joke condition increased (from  $\beta = -1.27, p < .0001$  to  $\beta = -1.35, p < .0001$ ) and the effect of confidence remained significant ( $\beta = .37, p < .001$ ).

*Study 3b.* Perceptions of competence fully mediated the relationship between the failed joke and decreased status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included competence in our model and compared the Failed Joke condition with the Serious Response condition, the effect of the Failed Joke condition was significantly reduced (from  $\beta = -.93, p < .0001$  to  $\beta = 0.00, p = .97$ ) and the effect of competence remained significant ( $\beta = .59, p < .0001$ ).

We also tested if confidence mediated the relationship between the failed joke and decreased status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included confidence in our model and compared the Failed Joke condition with the Serious Response condition, the effect of the Failed Joke condition increased (from  $\beta = -.93, p < .0001$  to  $\beta = -$

1.21,  $p < .0001$ ) and the effect of confidence remained significant ( $\beta = .38$ ,  $p < .0001$ ).

*Study 4a.* Perceptions of confidence and competence fully mediated the relationship between the Appropriate Successful Joke condition and status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included competence in our model and compared the Appropriate Successful Joke condition with the Serious Response condition, the effect of the Appropriate Successful Joke condition was no longer significant (from  $\beta = .55$ ,  $p < .01$  to  $\beta = .25$ ,  $p = .10$ ), and the effect of competence remained significant ( $\beta = .61$ ,  $p < .0001$ ). When we included confidence in our model and compared the Appropriate Successful Joke condition with the Serious Response condition, the effect of the Appropriate Successful Joke condition was no longer significant (from  $\beta = .55$ ,  $p < .01$  to  $\beta = .11$ ,  $p = .57$ ), and the effect of confidence remained significant ( $\beta = .29$ ,  $p < .0001$ ).

We also tested if confidence and competence mediated the relationship between the Inappropriate Failed Joke condition and status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included competence in our model and compared the Inappropriate Failed Joke condition with the Serious Response condition, the effect of the Inappropriate Failed Joke condition was no longer significant (from  $\beta = -1.11$ ,  $p < .0001$  to  $\beta = -.13$ ,  $p = .46$ ). When we included confidence in our model and compared the Inappropriate Failed Joke condition with the Serious Response condition, the

effect of the Inappropriate Failed Joke condition increased (from  $\beta = -1.11, p < .0001$  to  $\beta = -1.40, p < .0001$ ).

*Study 4b.* Affect did not mediate the relationship between an appropriate humor attempt that succeeds and status (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included positive affect in our model, included negative affect as a covariate, and compared the Appropriate Successful Joke condition with the Serious Response condition, the effect of the Appropriate Successful Joke condition remained significant (from  $\beta = .90, p < .0001$  to  $\beta = .92, p < .0001$ ) and the effect of positive affect remained significant ( $\beta = .31, p < .0001$ ). When we included negative affect in our model, positive affect as a covariate, and compared the Inappropriate Failed Joke condition with the Serious Response condition, the effect of the Inappropriate Failed Joke condition remained significant (from  $\beta = -1.37, p < .0001$  to  $\beta = -1.29, p < .0001$ ) and the effect of negative affect was not significant ( $\beta = .05, p = .41$ ).

CHAPTER 2  
YOU'RE GETTING WARMER:  
THE IMPRESSION MANAGEMENT BENEFITS OF HUMOROUS SELF-  
DISCLOSURE

T. Bradford Bitterly

Maurice E. Schweitzer

Across four studies, we identify humor as a powerful impression management tool. Humorous disclosures signal social competence, enable individuals to project warmth, and mitigate the harmful effects of negative disclosures on perceptions of general competence. The effect of humor on perceptions of general competence, however, is moderated by whether or not the topic of the joke is related to a core competency. We discuss implications of our findings for interpersonal perception and impression management.

## YOU'RE GETTING WARMER:

### THE IMPRESSION MANAGEMENT BENEFITS OF HUMOROUS SELF-DISCLOSURE

*"It was involuntary. They sank my boat." - John F. Kennedy*

Before running for president, John F. Kennedy served in the Navy during World War II. During the war, his patrol boat collided with a Japanese destroyer. His boat sank and he and his men were marooned for six days (Plotkin, 2003). When John F. Kennedy returned from the war, he received the Navy and Marine Corps Medal for his courage and leadership. Years later, on the campaign trail, Kennedy was asked how he became a war hero (Smith, 1991). His response employed a powerful, but uninvestigated, impression management tool: humor.

In this paper, we investigate the relationship between humorous disclosures and impression management. Impression management is an integral part of our interpersonal interactions (Anderson, Hildreth, & Howland, 2015; Baumeister, 1982; Baumeister & Jones, 1978; Baumeister & Leary, 1995; Goffman, 1959; Leary, 1995; Leary & Allen, 2011a, 2011b; Leary & Kowalski, 1990; Leary, Nezlek, Downs, Radford-Davenport, Martin, & McMullen, 1994; Leary, Robertson, Barnes, & Miller, 1986; Schlenker, 1975, 1980, 2003; Schlenker & Pontari, 2000). Though our attempts to create positive impressions are not always successful, effective impression management enables individuals to gain power and status (Anderson, Hildreth, & Howland, 2015; Anderson &

Kilduff, 2009; Jones & Pittman, 1982; Magee & Galinsky, 2008; Swencionis, & Fiske, 2016).

One of the most common impression management strategies involves disclosing self-relevant information (e.g., In an interview, Donald Trump explained, “Part of the beauty of me is that I am very rich.” King, 2011). In addition to changing interpersonal perceptions, these disclosures can also have intrapersonal effects, such as making individuals feel happier and more connected with others (Gable, Gosnell, Maisel, & Strachman, 2012; Gable, Reis, Impett, & Asher, 2004; Gable & Reis, 2010; Langston, 1994). We investigate impression management with respect to two fundamental dimensions of person perception: warmth and competence (Cuddy, Glick, and Beninger, 2011; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Kervyn, Bergsieker, & Fiske, 2012; Kervyn, Bergsieker, Grignard, & Yzerbyt, 2016; Kervyn, Judd, & Yzerbyt, 2009; Kervyn, Yzerbyt, Judd, & Nunes, 2009; Kervyn, Yzerbyt, & Judd, 2010, 2011; Scopelliti, Loewenstein, & Vosgerau, 2015), and we investigate how humor influences both of these dimensions.

Surprisingly, no prior work has examined the relationship between impression management and humor. This is striking, because humor is both ubiquitous and very likely to influence interpersonal impressions. In fact, our work is the first to identify humor as a foundational component of impression management. Specifically, our work is the first to demonstrate that the use of humor projects warmth, boost perceptions of social competence, and mitigates the harmful effects of disclosing negative information. In our investigation, we are

also the first to distinguish between disclosures related to core and non-core competencies. Together, our results demonstrate that humor is a very powerful impression management tool.

### **Impression Management**

A substantial literature has documented the beneficial effects of creating positive impressions (Baumeister, 1992; Baumeister & Jones, 1978; Baumeister & Leary, 1995; Goffman, 1959; Leary, 1995; Leary & Allen, 2011a, 2011b; Leary & Kowalski, 1990; Leary, Nezek, Downs, Radford-Davenport, Martin, & McMullen, 1994; Leary, Robertson, Barnes, & Miller, 1986; Schlenker, 1975, 1980, 2003). Individuals who manage to create positive impressions gain admiration, status, and power (Anderson, Hildreth, & Howland, 2015; Anderson & Kilduff, 2009; Magee & Galinsky, 2008).

To create a positive impression, individuals engage in a wide range of self-presentation strategies; these include wearing specific clothing (e.g., clean clothing, displaying luxury goods), making prosocial statements (e.g., expressing gratitude, delivering apologies), using nonverbal cues (e.g., smiling), engaging in social networking (e.g., posting to social media), reframing emotions (e.g., reappraising anxiety as excitement, framing emotionality as passion), and engaging in deception (e.g., telling prosocial lies, such as “you look great” or “I really enjoyed reading your manuscript”; Algoe, 2012; Algoe, Fredrickson, & Gable, 2013; Algoe, Gable, & Maisel, 2010; Algoe & Haidt, 2009; Algoe, Haidt, & Gable, 2008; Bodner & Prelec, 2002; Brooks, 2014; Brooks, Dai, &

Schweitzer, 2014; Brooks, Gino, & Schweitzer, 2015; Casciaro, Gino, & Kouchaki, 2014; Forest & Wood, 2012; Gino, Norton, & Ariely, 2010; Huang, Zhao, Niu, Ashford, & Lee, 2013; John, Barasz, & Norton, 2016; Levine & Schweitzer, 2014, 2015; Neel, Neufeld, & Neuberg, 2013; Wilcox, Kim, & Sen, 2009; Wolf, Lee, Sah, & Brooks, 2016).

One particularly common impression management strategy involves self-disclosures. In addition to enhancing personal well-being and boosting perceived closeness, disclosing personal information can fundamentally alter interpersonal impressions (Baumeister, 1982; Gable & Reis, 2010; Gable, Reis, Impett, & Asher, 2004). Prior work has considered moderating factors of the disclosure, such as the style of the disclosure (e.g., asking a question vs. making a statement), the valence of the disclosure (e.g., disclosing positive vs. negative information), and the setting (e.g., at home, at work, on social media; Beals, Peplau, & Gable, 2009; Brooks, Gino, & Schweitzer, 2015; Forest & Wood, 2012; Gable, Gonzaga, & Strachman, 2006; Ilies, Keeney, & Scott, 2011; John, Barasz, & Norton, 2016; Schlenker & Leary, 1982; Slatcher & Pennebaker, 2006). Surprisingly, no prior work has considered humorous disclosures. This omission is striking because humor pervades our interpersonal interactions (e.g., Apte, 1985; Martin, 2007; McGraw & Warner, 2014; McGraw & Warren, 2010; Wyer & Collins, 1992) and can fundamentally shape our interpersonal perceptions (e.g., Bitterly, Brooks & Schweitzer, 2017; Huang, Gino, & Galinsky, 2015).

Much of the impression management literature has focused on two key dimensions of person perception: *warmth* and *competence* (Abele & Wojciszke,



2007; Anderson, Hildreth, & Howland, 2015; Fiske et al., 2007; Holoien & Fiske, 2013; Leary, 1995). Individuals are perceived to be warm if they appear to be friendly, helpful, moral and trustworthy (Cuddy, Glick, & Beninger, 2011; Fiske et al., 2002, 2007). Individuals are viewed as more competent if they appear able, intelligent, creative, and confident (Cuddy, Glick, & Beninger, 2011; Fiske et al., 2002, 2007). To gain status and power, individuals aspire to project both warmth and competence.

In practice, projecting warmth and competence at the same time is difficult, and the extant literature has identified a number of risks inherent to self-disclosure (Bergsieker, Shelton, & Richeson, 2010; Forest & Wood, 2012; Holoien & Fiske, 2013; Kervyn, Judd, & Yzerbyt, 2009; Kervyn, Yzerbyt, Judd, & Nunes, 2009; Kervyn, Bergsieker, & Fiske, 2012; Kervyn, Bergsieker, Grignard, & Yzerbyt, 2016; Swencionis & Fiske, 2016; Yzerbyt, Kervyn, & Judd, 2008). For example, disclosing positive information may project competence and increase subjective well-being (Gable & Reis, 2010; Gable, Reis, Impett, & Asher, 2004; Godfrey, Jones, & Lord, 1986; Lambert, Gwinn, Baumeister, Strachman, Washburn, Gable, & Fincham, 2013; Langston, 1994), but diminish perceptions of warmth. Individuals who self-promote can annoy others, induce envy, and decrease trust (Dunn, Ruedy, & Schweitzer, 2012; Moran & Schweitzer, 2008; Rogers & Feller, 2016; Scopelliti, Loewenstein, & Vosgerau, 2015; Sezer, Gino, & Norton, 2015). Similarly, there are benefits and costs to disclosing negative information. Though several scholars have recommended negative self-disclosures as a tool to boost perceptions of warmth and curtail

envy, these disclosures can diminish perceptions of competence (Aronson, Willerman, & Floyd, 1966; Dunn, Ruedy, & Schweitzer, 2012; Kervyn et al., 2009a, 2009b, 2012, 2016; Swencionis & Fiske, 2016; Yzerbyt, Kervyn, & Judd, 2008).

The existing literature suggests that individuals face a tradeoff with respect to projecting warmth and competence. Rather than using disclosures to boost perceptions of both, scholars have identified strategies for projecting either warmth *or* competence. In fact, prior work suggests that warmth and competence are inversely related; elevating perceptions along one dimension diminishes perceptions along the other (the compensation effect; e.g., Judd et al., 2005; Kervyn, Bergsieker, & Fiske, 2012; Kervyn, Bergsieker, Grignard, & Yzerbyt, 2016; Kervyn, Judd, & Yzerbyt, 2009; Kervyn, Yzerbyt, Judd, & Nunes, 2009; Kervyn, Yzerbyt, & Judd, 2010, 2011). For example, Swencionis and Fiske (2016) find that individuals who make downward comparisons attempt to appear warm by downplaying their competence, whereas individuals who make upward comparisons attempt to appear competent by downplaying their warmth. In related work, Scopelliti, Loewenstein, and Vosgerau (2015) find that attempts to enhance perceptions of competence come at a cost to perceived warmth; individuals who make positive disclosures are less well liked. Consistent with the notion of a compensatory relationship between warmth and competence, Kervyn, Bergsieker, Grignard, and Yzerbyt (2016) find that individuals who are described as both warm and competent are seen as *less* competent than individuals who are described as cold and competent.

Prior research in impression management suggests that individuals face a dilemma during self-disclosure. Increasing perceived warmth harms competence, and increasing perceived competence harms warmth. Positive self-disclosures may boost perceptions of competence, but harm perceptions of warmth, and negative self-disclosures may boost perceptions of warmth, but harm perceptions of competence. We challenge this presumption and integrate the growing body of humor research into the impression management literature. Our findings demonstrate that humorous self-disclosures can boost perceived warmth without harming perceived competence.

## **Humor**

We build on prior humor research to define humor as a benign violation (McGraw, Schiro, & Fernbach, 2015; McGraw & Warner, 2014; McGraw & Warren, 2010; McGraw, Warren, & Kan, 2015; McGraw, Warren, Williams, & Leonard, 2012; McGraw, Williams, & Warren, 2014; Veatch, 1998; Warren & McGraw, 2013, 2015, 2016a, 2016b). Humor involves a violation of psychological safety or expectations (e.g., social or moral norms), but is non-threatening. We experimentally manipulate the use of humor in both positive and negative disclosures, and explore how humorous disclosures influence impression management.<sup>4</sup>

*Humorous Disclosure and Warmth.* We develop our first hypothesis with respect to humor and warmth. We expect humor to increase perceptions of

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<sup>4</sup> We use the term “humorous disclosure” to include both positive and negative disclosures.

warmth for four reasons. First, humor promotes liking (Cooper, 2002, 2005, 2008; Strick, Holland, van Baaren, & van Knippenberg, 2012; Strick, van Baaren, Holland, & van Knippenberg, 2009). For example, Cooper (2002) found that employees' liking of their manager was significantly related to how often their manager used humor. Second, humor increases positive affect (Carnevale & Isen, 1986; Cooper 2005; Isen, Daubman, & Nowicki, 1987; Strick, Holland, van Baaren, & van Knippenberg, 2012), which can boost trust (Dunn & Schweitzer, 2005). Third, the use of humor has been tied to a main component of warmth—providing emotional and social support (Kurtz & Algoe, 2015; Lehmann-Willenbrock & Allen, 2014). For example, Lehmann-Willenbrock and Allen (2014) found that teams that used humor and laughed together were more forthcoming with praise and encouraging statements. Fourth, shared laughter, a common outcome of successful humor, is associated with interpersonal closeness and relationship well-being (Kurtz & Algoe, 2015, 2016).

No prior work has identified a causal link between the use of humor and perceptions of warmth. We draw on prior work that has linked humor with the related constructs of liking, trust, support, and closeness, to predict that the successful use of humor will project warmth. That is, we postulate that individuals who humorously disclose information will be perceived to be warmer than individuals who seriously disclose information.

*Hypothesis 1:* Compared to serious disclosures, humorous disclosures increase perceptions of warmth.

*Humorous Disclosures and Perceptions of Social Competence.* We develop our next hypothesis with respect to humorous disclosures and perceptions of social competence. We expect these constructs to be closely related, because individuals who effectively use humor (e.g., tell a joke that others find to be funny) demonstrate social fluency. When an individual discloses positive information (e.g., “I am very successful.”) they might annoy their audience or induce envy (Lange & Crusius, 2015; Scopelliti, Loewenstein, & Vosgerau, 2015). In contrast, when a person discloses negative information (e.g., “I am addicted to crack.”), they might disclose information that harms perceptions general competence and makes the audience feel uncomfortable.

Disclosures are risky, but humorous disclosures may mitigate the risks of both positive and negative disclosures. By construction, humor is benign (McGraw & Warren, 2010; Warren & McGraw, 2016a, 2016b). When a target finds a positive disclosure to be funny, the target signals that the discloser has revealed positive information without annoying the target. When a target finds a negative disclosure to be funny, the target signals that the discloser has revealed negative information without making the target uncomfortable. The signal is particularly clear when the humorous disclosure elicits laughter. Laughter signals amusement and approval (Sauter, Eisner, Ekman, & Scott, 2010). Taken together, we predict that observers will infer that an individual has greater social competence after they make a humorous disclosure than after they make a serious disclosure.

*Hypothesis 2:* Compared to serious disclosures, humorous disclosures increase perceptions of social competence.

*Humorous Disclosures and Perceptions of General Competence.* The successful use of humor requires general competence (e.g., intelligence). Eliciting a positive response, such as laughter, necessitates both anticipating what an individual would view as funny and successfully delivering humorous content (e.g., a joke). Forecasting what another individual will view as funny is extremely difficult (Kruger & Dunning, 1999); it requires understanding the boundary of another individual's sense of safety, crossing that boundary, but doing so in a way that is not overtly offensive or threatening (McGraw & Warren, 2010; McGraw, Warren, & Kan, 2015; McGraw, Warren, Williams, & Leonard, 2012; McGraw, Williams, & Warren, 2014; McGraw, Schiro, & Fernbach, 2015; Veatch, 1998; Warren & McGraw, 2013, 2015, 2016a, 2016b). Consistent with prior research that has connected the successful use of humor with perceptions of general competence (Bitterly, Brooks, & Schweitzer, 2017; Huang, Gino, & Galinsky, 2015; Lehmann-Willenbrock & Allen, 2014; Martin, 2007), we predict that individuals will be perceived to have a higher level of general competence after delivering a humorous disclosure than after delivering a serious disclosure.

*Hypothesis 3:* Compared to a serious disclosure, a humorous disclosure will increase perceptions of general competence.

*Mediating Role of Social competence on Perceptions of General Competence.* When an individual makes a disclosure that is funny, they signal

social competence. We predict that social competence will mediate the relationship between humorous disclosures and perceptions of general competence.

*Hypothesis 4:* Social competence mediates the relationship between humorous disclosure and general competence.

*Moderating Role of Core vs. Non-Core Competence.* We next consider how the nature of the disclosure might moderate the relationship between humor and perceptions of general competence. Specifically, we consider how fundamental the topic of the disclosure is to perceptions of general competence. Consistent with Galinsky and Schweitzer (2015), we define a core competency as an essential trait for effective performance. For example, a chef who cannot cook or a statistician with limited mathematical ability are examples of violations of a core competency. Conversely, a chef's limited knowledge about mathematics or a statistician's limited cooking ability are examples of non-core competencies. Disclosing negative information about a core competence demonstrates a lack of social competence by revealing damaging information likely to create a negative impression. In general, we predict that perceptions of social competence will be lower when an individual makes a negative disclosure about a core competency, even when the disclosure is humorous, than when they make a negative disclosure about a non-core competency.

*Hypothesis 5:* Perceptions of social competence will be lower after the negative disclosure of a core competency than after the negative disclosure of a non-core competency.

We expect the use of humor to moderate the influence of core disclosures on perceptions of social competence. Specifically, we expect the use of humor to be more beneficial to mitigating the harmful effects on perceptions of social competence after a negative core disclosure than after a negative non-core disclosure. Humor makes comments appear less serious and more benign (McGraw & Warren, 2010; McGraw, Warren, & Kan, 2015). Although a negative disclosure about a core competence (e.g., a chef who cannot cook) is a greater violation than a negative disclosure about a non-core competence (e.g., a chef who cannot do statistical computations), compared to a serious-negative-disclosures, we expect a humorous-negative-disclosure about a core competence to be taken less seriously and to signal a higher level of social competence. We predict that whether the disclosure is about core or non-core competence will moderate the effect of humorous disclosures on perceptions of social competence.

*Hypothesis 6:* The benefit to using humor when making a negative disclosure will be greater for a core violation than it is for a non-core violation.

Our research advances our theoretical and practical understanding of humor and impression management in several ways. First, we introduce humor to the impression management literature. We are the first to document the causal



link between humor and warmth. Second, we are the first to show that humor increases perceptions of social competence. Third, we show that perceptions of social competence mediate the influence of humor on perceptions of general competence. Fourth, we describe how the influence of humor on perceptions of general competence is moderated by whether or not the topic of the joke is related to a core competency. Taken together, we identify humor as a foundational concept in impression management.

### **Overview of Current Work**

We investigate the influence of humor on impression management by testing the effect of humorous disclosures on perceptions of warmth, general competence, and social competence. Across our studies, we vary the nature of the interaction, the context, and the type of joke. In Study 1, we examine the influence of humorous disclosures in in-person interactions. In Studies 2 and 3, we examine the influence of humorous disclosures of both positive and negative information. In Studies 3 and 4, we consider the mediating effect of perceptions of social competence on perceptions of general competence. In Study 4, we consider the moderating effect of the type of disclosure – whether or not the disclosure is about a core competence. We present a complete list of the humorous and serious disclosures we used in all of our studies in Appendix A.

### **Study 1: Humorous Self-Disclosures and Perceptions of Warmth and General Competence**

In Study 1, we investigate the influence of humorous self-disclosures on perceptions of warmth and general competence.

## **Method**

**Participants.** We recruited 214 adults from a city in the northeastern United States to participate in a behavioral lab study in exchange for \$10. A total of 188 people completed the study and were included in our analyses (26.7% male,  $M_{\text{age}} = 22.82$  years,  $SD = 7.92$ )<sup>5</sup>. The modal session included 18 participants and 2 confederates. Across the 11 sessions we analyzed, the number of participants per session ranged from 12 to 18.

**Design and Procedure.** Participants completed the study in a classroom, where we sat each participant at their own desk with a packet of materials. We instructed participants to imagine that they were writing testimonials for the university's Writing Center, a resource on campus that helps students develop their written communication skills. We asked participants to help attract attention to the Writing Center by answering the question, "How has the Writing Center helped you?" We presented participants with an advertisement for the Writing Center (we include the stimuli in Appendix B), and we gave participant 3 minutes to write a short (1-3 sentences) testimonial.

We told participants that they would each, individually present their testimonials to the entire group. We explained that participants would present in a

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<sup>5</sup> We did not analyze the results of one session because one of our confederates deviated from our protocol and forgot to present.

random order, and we had each participant draw a number from an envelope to determine the order in which they would present. The envelope contained pieces of paper numbered 3 to 22. We intentionally omitted the numbers 1 and 2 from the envelope so that the first two presenters would be our confederates. Across all twelve sessions, we used eleven confederates (4 male, 7 female). We report results both controlling for and not controlling for confederate fixed effects in our analyses, and we include the confederate schedule in Appendix C.

After each participant drew a number, the experimenter instructed the individual who drew the number 1 to come to the front of the room and present their testimonial. The first confederate went to the front of the room, placed their testimonial on a document camera, which projected the testimonials in the front of the classroom, and read their testimonial out loud. The first confederate always delivered a serious testimonial, “Using the Writing Center really improved my writing. The staff are very knowledgeable and patient. I highly recommend using this service.”

Next, the experimenter instructed the individual who drew the number 2 to present their testimonial. We varied by session whether the second confederate delivered a serious or a humorous testimonial which contained a negative self-disclosure. Half of the time, the second confederate delivered a serious negative self-disclosure, “I do not write well. The Writing Center helps me communicate my ideas more effectively. It is a great resource on campus!” For the other half of the sessions, the second confederate delivered a humorous negative self-disclosure, “I don't write good. The Writing Center helps me write more good,

and can help you write gooder to! But seriously, the Writing Center helps me communicate my ideas more effectively. It is a great resource on campus!”

After each presentation, participants rated the presenter on the following dimensions: “competent”, “confident”, “intelligent”, “capable”, “skillful”, “certain”, “self-assured”, “well-intentioned”, “good-natured”, “friendly”, and “warm” (7-point scales). We used the items “competent”, “intelligent”, “capable”, “confident”, “self-assured”, “certain”, and “skillful” to measure general competence (adapted from Bitterly, Brooks, & Schweitzer, 2017; Fiske, Cuddy, Glick, & Xu, 2002;  $\alpha = .96$ ); and the remaining four items to measure warmth (adapted from Fiske, Cuddy, Glick, & Xu, 2002;  $\alpha = .94$ ).

Participants rated the testimonials on the following qualities: engaging, appropriate, entertaining, suitable, succinct, clear, memorable, humorous, amusing, and effective (7-point Likert, 1 = “Not at all”, 7 = “Extremely”). We used the items “humorous” and “amusing” to measure funniness ( $r = .96$ ), which served as our manipulation check. We used the items “appropriate” and “suitable” to measure the appropriateness of the testimonials ( $r = .76$ ). We were interested in the appropriateness of the testimonials because perceptions of appropriateness in the joke condition could impact ratings of the joke teller (Bitterly, Brooks, & Schweitzer, 2017). We included the other items to mask the purpose of the study.

The experimenter stopped presentations after the second confederate, and explained to participants that the study needed to be cut short due to time constraints. Before participants left the classroom, we had participants complete

attitudinal and behavioral measures of status for the presenters. Each participant had 25 “leader points” to allocate to each of the presenters or themselves, based on the extent to which they would like that individual to be the leader of their group. We used the number of points the participants gave to each presenter as a behavioral measure of status (adapted from Bitterly, Brooks, & Schweitzer, 2017; Halevy, Chou, Cohen, & Livingston, 2012). We also asked participants to rate the extent to which each presenter was “respected”, “admired”, and “influential” for an attitudinal measure of status (adapted from Anderson, Kraus, Galinsky, & Keltner, 2012; Bitterly, Brooks, & Schweitzer, 2017; Kilduff & Galinsky, 2013;  $\alpha = 0.94$ ). Finally, participants provided demographic information.

## Results

We report all results controlling for confederate fixed effects, ratings of the first presenter, and clustering standard errors by session<sup>6</sup>. For completeness, we also report our results without these controls.

*Manipulation Check.* The manipulation checks confirmed that our humor manipulation was successful. Participants rated the humorous disclosure ( $M = 6.07$ ,  $SD = 1.10$ ) as significantly funnier than the serious disclosure ( $M = 3.00$ ,  $SD = 1.73$ ),  $t(10) = 15.20$ ,  $p < .001$ ,  $t(184) = 14.06$ ,  $p < .001$  (without controls). The humorous disclosure ( $M = 5.35$ ,  $SD = 1.33$ ) was not rated as less appropriate ( $M = 5.28$ ,  $SD = 1.09$ ) than the serious testimonial,  $t(10) = -.87$ ,  $p = .40$ ,  $t(184) = .38$ ,  $p$

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<sup>6</sup> We cluster the standard errors by session because the randomization occurred at the session level and the responses of the participants in each session may not be independent (e.g., hearing another participant laugh might impact the response of a participant).

= .71 (without controls). Neither age nor sex of the participant influenced how funny and appropriate participants rated the humorous and serious disclosures of the second presenter<sup>7</sup>.

*Main Results.* We find that the second presenter was rated as higher in warmth, competence, and status after a humorous disclosure than a serious disclosure. We find that the second presenter was even more likely to be elected as a group leader for a subsequent lab task after a humorous disclosure than after a serious disclosure. We depict our results in Figure 1 and summarize the results in Table 1.

*Warmth.* We find that the second presenter was rated as higher in warmth when they delivered a humorous disclosure ( $M = 6.04, SD = .97$ ) than when they delivered a serious disclosure ( $M = 5.29, SD = 1.12$ ),  $t(10) = 3.55, p < .01, t(184) = 4.83, p < .001$  (without controls). Neither age nor sex of the participant influenced ratings of warmth.

*General Competence.* Ratings of general competence of the second presenter were also significantly higher when the confederate delivered the humorous disclosure ( $M = 5.66, SD = 1.00$ ) than when the confederate delivered the serious disclosure ( $M = 4.89, SD = 1.19$ ),  $t(10) = 2.48, p < .05, t(184) = 4.75$ ,

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<sup>7</sup> When we do not control for participant ratings of the first presenter, do not cluster by session, and do not control for confederate fixed effects, we find a significant effect of sex of the participant on ratings of funniness. Without our control variables, men rated the second presenter's disclosures significantly funnier than women ( $t(182) = 2.49, p < .05$ ).

$p < .001$  (without controls). Neither age nor sex of the participant influenced ratings of competence.

*Status.* The number of leader points allocated to the second presenter was significantly higher when the confederate delivered the humorous disclosure ( $M = 10.83$ ,  $SD = 7.29$ ) than when the confederate delivered the serious disclosure ( $M = 8.51$ ,  $SD = 7.20$ ),  $t(10) = 2.98$ ,  $p < .05$ ,  $t(184) = 2.03$ ,  $p < .05$  (without controls). Attitudinal ratings of status of the second presenter were higher when they delivered the humorous disclosure ( $M = 5.23$ ,  $SD = 1.23$ ) than when they delivered the serious disclosure ( $M = 4.62$ ,  $SD = 1.19$ ),  $t(10) = 1.82$ ,  $p = .099$ ,  $t(184) = 3.42$ ,  $p < .01$  (without controls). Neither age nor sex of the participant influenced the results for our behavioral or attitudinal measure of status.

## **Discussion**

In Study 1, individuals disclosed negative information about their writing ability. Individuals who used humor were viewed as warmer and more competent than those who did not. In addition, compared to the serious discloser, the humorous discloser was accorded higher status and more likely to be elected as the group leader for a subsequent group task. These findings reveal that humor is an essential component of impression management. This is also the first study to demonstrate the causal link between humor and perceptions of warmth.

### **Study 2: Humorous Self-Disclosures of Positive and Negative Information**

In Study 2, we extend our investigation in several ways. First, we examine both positively and negatively valenced disclosures. Second, we consider a

different type of disclosure (public speaking ability). Third, we investigate impression management effects in an interview setting; and fourth, we use a different sample population.

## **Method**

**Participants.** We recruited 406 adults from Amazon Mechanical Turk to participate in a short study in exchange for \$0.45 (57% male,  $M_{\text{age}} = 35.33$  years,  $SD = 17.08$ ).

**Design and Procedure.** We randomly assigned participants to one of four between-subjects conditions from a 2 (Humorous v. Serious) x 2 (Positive v. Negative) design: *Humorous Positive Disclosure vs. Serious Positive Disclosure vs. Humorous Negative Disclosure vs. Serious Negative Disclosure*.

In this study, we asked participants to imagine a job candidate interviewing with a manager. Across all conditions, the manager asked the candidate a question, “What do you like to do in your free time?” The candidate responded, “I like running and going to the movies.”

Next, we had participants in all conditions rate the candidate on warmth and general competence. We collected these baseline ratings so that we could control for participant level differences in our analyses. We asked participants to rate, using a 7-point Likert (1 = “Not at all”, 7 = “Extremely”), the candidate on the following items: “warm”, “good-natured”, “friendly”, “sincere”, “competent”, “confident”, “capable”, and “intelligent”. We combined the first four items to form an index of warmth (adapted from Fiske, Cuddy, Glick, & Xu, 2002;  $\alpha =$



0.91). We combined the remaining four items to form an index of general competence (adapted from Fiske, Cuddy, Glick, & Xu, 2002;  $\alpha = 0.92$ ).

After rating warmth and general competence of the candidate, participants then saw another round of the interview in which the manager asked a question and the candidate answered the question. To create a scenario in which the candidate would disclose either positive or negative information, we manipulated whether or not the manager asked the question about a strength or a weakness. In the Positive Disclosure conditions, the manager asked the candidate, “What would you say is your greatest strength?” In the Negative Disclosure conditions, the manager asked the candidate, “What would you say is your greatest weakness?”

To manipulate whether the candidate made a serious or humorous disclosure, we varied the candidate’s response to the second question. In the Serious Disclosure conditions, the candidate replied, “My public speaking skills. Joining Toastmasters really helped me. Almost everyone was engaged during my last presentation.” In the Humorous Disclosure conditions, the candidate replied, “My public speaking skills. Joining Toastmasters really helped me. Hardly anyone fell asleep during my last presentation.” To make the use of humor unambiguous, we informed participants that the manager and candidate both laughed after this disclosure. We include example screenshots from this scenario in Appendix D.

Next, we had participants rate the candidate again on warmth and general competence. Then, we asked participants to complete a manipulation check. We

had participants rate to what extent the candidate's disclosure was "funny", "humorous", "appropriate", and "suitable". We used the first two items to measure funniness ( $r = .95$ ) and the last two items to measure appropriateness ( $r = .82$ ).

## Results

*Manipulation Check.* Our humor manipulation was successful.

Participants rated the humorous disclosures as significantly funnier than the serious disclosures ( $\beta = 1.55, p < .001$ ). Participants also rated the humorous disclosures as less appropriate than the serious disclosures ( $\beta = -.16, p < .01$ ).

*Main Results.* We conducted ordinal least squares regression analyses on warmth and general competence as a function of the use of humor (whether or not the candidate made a serious or humorous disclosure; *hum*; -1 = serious disclosure, 1 = humorous disclosure), the valence of the disclosure (if the candidate disclosed a weakness or a strength; negatively valenced disclosure; *val*; -1 = negatively valenced, 1 = positively valenced), and the interaction between the use of humor (humorous vs. serious disclosure) and disclosure valence (positively vs. negatively valenced; *hum x val*). For our results for warmth and general competence, we present our analyses controlling for ratings of the candidate after their answer to the first question. We summarize the results in Table 2, where we present our analyses with and without controlling for initial ratings of the candidate.

*Warmth.* We find a significant effect of whether the disclosure was humorous or serious on perceptions of warmth of the candidate ( $\beta = .26, p < .001$ ). The candidate was viewed as significantly warmer when he made a humorous disclosure than when he made a serious disclosure. We do not find a significant effect of disclosure valence – the candidate was not viewed as warmer when he disclosed a weakness than when he disclosed a strength ( $\beta = -.04, p = .15$ ). We do not find a significant interaction between disclosure valence (positive disclosure vs. negative disclosure) and the use of humor (humorous vs. serious disclosure;  $\beta = -.03, p = .38$ ).

*General Competence.* We find a significant effect of whether the disclosure was humorous or serious on perceptions of general competence of the candidate ( $\beta = .07, p = .04$ ). The candidate was viewed as having greater general competence when he made a humorous disclosure than when he made a serious disclosure. We do not find a significant effect of disclosure valence – the candidate was not viewed as having greater general competence when he disclosed a strength than when he disclosed a weakness ( $\beta = .03, p = .48$ ). We do not find a significant interaction between disclosure valence (positive disclosure vs. negative disclosure) and the use of humor (humorous vs. serious disclosure ;  $\beta = -.02, p = .54$ ).

## **Discussion**

As in Study 1, we find that the use of humor significantly influences impression management, and we document the causal link between the use of

humor and perceptions of warmth. We also find that the use of a humorous disclosure increased the perceived general competence of the discloser, but that the effect was much weaker than for perceived warmth. Humorous disclosures shift perceptions of both competence and warmth, and we speculate that the relative strength of these shifts in perception will depend upon the context and the nature of the joke.

In Study 3, we investigate the underlying mechanism linking the use of humor to perceptions of competence. Although humorous-negative-disclosures may harm perceptions of competence with respect to the focal ability (disclosure specific competence), we expect humorous disclosure to boost perceptions of social competence. As a result, we predict that humorous-negative-disclosures, compared to serious-negative-disclosures, will cause less harm to perceptions of general competence.

### **Study 3: The Mediating Role of Social Competence**

In Studies 1 and 2, we find that the use of humor significantly influences global perceptions of warmth and competence. In Study 3, we extend our investigation to explore the relationship between humor and perceptions of two specific dimensions of competence: social competence and the focal skill described in the disclosure (disclosure specific competence).

#### **Method**

**Participants.** We recruited 403 adults from Amazon Mechanical Turk to participate in a short study in exchange for \$0.45 (58% male,  $M_{\text{age}} = 34.83$  years,  $SD = 10.89$ ).

**Design and Procedure.** We randomly assigned participants to one of four between-subjects conditions from a 2 (Humorous v. Serious) x 2 (Positive v. Negative) design: *Humorous Positive Disclosure vs. Serious Positive Disclosure vs. Humorous Negative Disclosure vs. Serious Negative Disclosure*.

Study 3 differed from Study 2 in several ways. First, we measured social competence. Second, we asked participants to rate the candidate's disclosure specific competence (i.e., the competence described in the disclosure). Third, we expanded the dialogue between the manager and the candidate. Fourth, we asked participants to rate how annoying they thought the candidate was. (Prior work has found that self-promotion can annoy others; Scopelliti, Loewenstein, & Vosgerau, 2015).

In this study, we asked participants to imagine a job candidate interviewing with a manager. Across all conditions, the manager asked the candidate, "What do you like to do in your free time?" The candidate responded, "I like running and going to the movies." The manager then asked the candidate a second question, "What do you do in a typical evening?" The candidate responded, "I'll grab a pizza and watch some TV."

Next, we had participants in all conditions rate the candidate's warmth and general competence. We used the same items to measure warmth ( $\alpha = 0.91$ ) and

general competence ( $\alpha = 0.93$ ) as we used in Study 1. Using the same 7-item scale, we had participants rate to what extent they viewed the candidate as “annoying” and “irritating”. We combined these items into an index of annoyingness ( $r = .92$ ) to test if the positive self-disclosure (self-promotion) made the candidate appear more annoying.

After rating the warmth and general competence of the candidate, participants then read another exchange between the manager and the candidate. To create a scenario in which the candidate would disclose either positive or negative information, we manipulated whether or not the manager asked the question about a strength or a weakness. In the Positive Disclosure conditions, the manager asked the candidate, “What would you say is your greatest strength?” In the Negative Disclosure conditions, the manager asked the candidate, “What would you say is your greatest weakness?”

To manipulate whether the candidate made a serious or humorous disclosure, we varied the candidate’s response to the second question. In the Serious Disclosure conditions, the candidate answered the manager’s question by replying, “My memory. I signed up for Lumosity. And I think it really improved my memory.” In the Humorous Disclosure conditions, the candidate answered the manager’s question by replying, “My memory. I signed up for Lumosity. But I kept on forgetting to use it.” To make the use of humor unambiguous, we informed participants that the manager and candidate both laughed after this disclosure.

Next, we had participants rate the candidate's warmth, general competence, annoyingness, social competence, and disclosure specific competence. Specifically, in addition to the other measures, to measure disclosure specific competence we asked participants, "Imagine that you are the manager. If you asked the candidate to complete a memory test, how well do you think he would do?" To measure social competence, we then asked participants, "How well do you think the candidate does in social situations?" The response scales for both questions ranged from 1 = "Not at all" to 7 = "Extremely". Finally, we asked participants to complete the same funniness ( $r = .94$ ) and appropriateness ( $r = .85$ ) manipulation check items that we used in Study 2.

## **Results**

*Manipulation Check.* Our humor manipulation was successful. Participants rated the humorous disclosures as significantly funnier than the serious disclosures ( $\beta = 1.15, p < .001$ ). Participants also rated the humorous disclosures as less appropriate than the serious disclosures ( $\beta = -.21, p < .01$ ).

*Main Results.* We conducted our analyses as we did in Study 2. We conducted ordinal least squares regression analyses on warmth, general competence, and annoyingness controlling for ratings of the candidate after their answer to the initial questions. We summarize the results in Table 3, where we present our analyses with and without controlling for initial ratings. We also depict our results in Figure 2.

*Warmth.* We find that the use of humor significantly influenced perceptions of the candidate's warmth ( $\beta = .17, p < .001$ ). The candidate was viewed as significantly warmer when he made a humorous disclosure than when he made a serious disclosure. We do not find a significant effect of disclosure valence (whether or not the candidate disclosed a strength or a weakness) on perceptions of warmth— the candidate was not viewed as warmer when he disclosed a weakness than when he disclosed a strength ( $\beta = .00, p = .97$ ). We also do not find a significant interaction between disclosure valence (positive disclosure vs. negative disclosure) and the use of humor (humorous vs. serious disclosure;  $\beta = .04, p = .27$ ).

*General Competence.* The valence of the disclosure (whether the disclosure was about a strength or a weakness) significantly influenced perceptions of general competence of the candidate ( $\beta = .19, p < .001$ ). The candidate was viewed as more generally competent when he made a positive disclosure than when he made a negative disclosure. We do not find a significant effect of the use of humor – the candidate was not viewed as more generally competent when he made a humorous disclosure than when he made a serious disclosure ( $\beta = -.00, p = .94$ ). We also do not find a significant interaction between disclosure valence (positive disclosure vs. negative disclosure) and the use of humor (humorous vs. serious disclosure;  $\beta = .04, p = .32$ ).

*Annoyingness.* We find no significant effect of the use of humor (humorous vs. serious disclosure;  $\beta = -.03, p = .41$ ) or disclosure valence (strength vs. weakness;  $\beta = .01, p = .73$ ) on how annoying the candidate is viewed. We do



not find a significant interaction between disclosure valence and disclosure type ( $\beta = -.05, p = .20$ ).

*Disclosure Specific Competence.* The valence of the disclosure (whether the disclosure was about a strength or a weakness) significantly influenced perceptions of disclosure specific competence of the candidate ( $\beta = .49, p < .001$ ). The candidate was viewed as having a better memory when he made a positive disclosure than when he made a negative disclosure. We also find a significant effect for the use of humor– the candidate was viewed as having a worse memory when he made a humorous disclosure than when he made a serious disclosure ( $\beta = -.28, p < .001$ ). We do not find a significant interaction between disclosure valence and the use of humor ( $\beta = -.02, p = .77$ ).

*Social Competence.* We find a significant effect of the use of humor on perceptions of the candidate's social competence ( $\beta = .29, p < .001$ ). The candidate was viewed as having greater social competence when he made a humorous disclosure than when he made a serious disclosure. We do not find a significant effect of disclosure valence – the candidate was not viewed as having greater social competence when he disclosed a strength than when he disclosed a weakness ( $\beta = .02, p = .75$ ). We also do not find a significant interaction between disclosure valence and the use of humor ( $\beta = .05, p = .42$ ).

*Mediation.* We find that perceptions of social competence and disclosure specific competence (the candidate's memory ability) mediate the effect of humorous disclosure on perceptions of general competence (Baron & Kenny,

1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we include social competence and disclosure specific competence in our model, we find that the effect of the joke remains insignificant (from  $\beta = -.003, p = .94$  to  $\beta = -.003, p = .94$ ), and the effects of social competence ( $\beta = .23, p < .001$ ) and disclosure specific competence ( $\beta = .26, p < .001$ ) remain significant. We ran a 5000-sample bootstrap testing for simultaneous mediation (Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). We found a standardized indirect effect of 0.07 (95% bias-corrected CI [0.04, 0.11]) for social competence and a standardized indirect effect of -0.07 (95% bias-corrected CI [-0.12, -0.04]) for disclosure specific competence.

## **Discussion**

In Study 3, we find that that humorous disclosures significantly influence impression management by increasing perceptions of warmth and social competence. We also show that perceptions of social competence mediate the relationship between humorous disclosures and perceptions of general competence. Humorous disclosures increase perceptions of the candidate's social competence, which in turn boosts perceptions of general competence.

As expected, that the candidate was viewed as having greater general competence after disclosing a strength than after disclosing a weakness. More interestingly, the humorous-negative-disclosure diminished perceptions of disclosure specific competence (e.g., the candidate's memory), but boosted perceptions of social competence. In this study, the two impression management

strategies negated each other's influence on the measure of general competence. More broadly, however, our findings suggest that telling a self-deprecating joke may be less risky than people fear, because of the costs of harming perceptions of disclosure specific competence may be offset by a boost to perceptions of social competence. In Study 4, we consider a boundary of this compensatory relationship and consider the relative importance of the focal domain.

#### **Study 4: Core Violations**

In Study 4, we extend our investigation to consider the importance of the focal domain of the disclosure. Specifically, we explore the impact of whether or not the topic of the disclosure is related to a core competency for the discloser on perceptions of the discloser's social competence, disclosure specific competence (competence in the focal domain), and general competence.

We postulate that perceptions of general competence will be significantly harmed by a negative disclosure about a core competency. Humor, however, may be particularly beneficial in muting the effects of these disclosures, because the use of humor may cause a disclosure to appear benign and less serious. In this study, we explore these issues within the context of negative disclosures.

#### **Method**

**Participants.** We recruited 402 adults from Amazon Mechanical Turk to participate in a short study in exchange for \$0.45 (61% male,  $M_{\text{age}} = 34.57$  years,  $SD = 11.06$ ).

**Design and Procedure.** We randomly assigned participants to one of four between-subjects conditions from a 2 (Humorous v. Serious) x 2 (Core v. Non-Core) design: *Humorous-Core-Disclosure vs. Serious-Core-Disclosure vs. Humorous-Non-Core-Disclosure vs. Serious-Non-Core-Disclosure*.

As in Studies 2 and 3, we asked participants to imagine a job candidate interviewing with a manager. Across all conditions, the manager asked the candidate a question, “Do you want water or coffee before we start?” The candidate responded, “I’m good, but thanks for offering.”

Next, we had participants in all conditions rate the candidate on warmth and general competence. We used the same items to measure warmth ( $\alpha = 0.93$ ) and general competence ( $\alpha = 0.90$ ) that we used in Studies 2 and 3.

After providing initial ratings of warmth and general competence of the candidate, participants then read another exchange between the manager and the candidate. Across all conditions, the manager asked the candidate, “What would you say is your greatest weakness?” In the Serious Disclosure conditions, the candidate responds, “I can’t make sushi. But I think with some training I’d be able to make it.” In the Humorous Disclosure conditions, the candidate responds, “I can’t make sushi. But I think with some training I’d be on a roll.” To make the use of humor unambiguous, we informed participants that the manager and candidate both laughed after this disclosure.

To manipulate whether the disclosure was about a Core or Non-Core competency we varied the type of position for which the candidate was

interviewing. In the Core Disclosure conditions, we informed participants at the beginning of the study that the candidate was interviewing for a position as a sushi chef at a Japanese restaurant. In the Non-Core Disclosure conditions, we informed participants that the candidate was interviewing for a position as a bartender at a Japanese restaurant.

Next, we had participants rate the candidate a second time with respect to warmth and general competence. To measure disclosure specific competence, we asked participants, “How well do you think the candidate would do if he was asked to make sushi right after the interview?” To measure social competence, we also asked participants, “How well do you think the candidate does in social situations?” The response scales for both questions ranged from 1 = “Not at all” to 7 = “Extremely”.

We asked participants to complete the same funniness ( $r = .93$ ) and appropriateness ( $r = .85$ ) manipulation check that we used in Studies 1 and 2. As a manipulation check of the extent to which participants viewed the disclosure as core to their job performance, we asked participants, “How important is making sushi for the job the candidate is interviewing for?”

## **Results**

*Manipulation Check.* Our humor manipulation was successful.

Participants rated the humorous disclosures as significantly funnier than the serious disclosures ( $p < .001$ ). Participants also rated the humorous disclosures as more appropriate than the serious disclosures ( $p < .001$ ) and the core disclosures

as less appropriate than the non-core disclosures ( $p < .001$ ). Participants rated the core disclosure (the chef's ability to make sushi) as significantly more important than a non-core disclosure ( $p < .001$ ). We report these results in Table 4.

*Main Results.* We conducted ordinal least squares regression analyses on warmth and general competence as a function of the use of humor (whether or not the candidate made a serious or humorous disclosure; *hum*; -1 = serious disclosure, 1 = humorous disclosure), the centrality of the disclosure (whether or not the candidate made a disclosure about a core or non-core competency; *core*; -1 = non-core, 1 = core), and the interaction between the use of humor (humorous vs. serious) and the disclosure centrality (core weakness vs. non-core weakness; *hum x core*). We present our analysis for warmth and general competence controlling for ratings of the candidate after their answer to the first question. We summarize our results in Table 4, and we present our analyses with and without controlling for initial ratings. We also depict the results of Study 4 in Figure 3.

*Warmth.* We find a significant effect of whether the disclosure was humorous or serious on perceptions of warmth of the candidate; the candidate was viewed as warmer after a humorous disclosure than after a serious disclosure ( $\beta = .16, p < .001$ ). We find a marginal effect of disclosure centrality (whether the disclosure topic was a core weakness or a non-core weakness) on perceptions of warmth; the candidate was viewed as slightly less warm after a core disclosure ( $\beta = -.07, p = .075$ ). We do not find a significant interaction between disclosure centrality and the use of humor ( $\beta = .05, p = .23$ ).

*General Competence.* We find significant effects of both the use of humor and the disclosure centrality on perceptions of competence for the candidate. The candidate was seen as more competent when he made a humorous disclosure than when he made a serious disclosure ( $\beta = .20, p < .001$ ). The candidate was also seen as generally less competent when he disclosed a core weakness than when he disclosed a non-core weakness ( $\beta = -.28, p < .001$ ). We find a significant interaction between disclosure centrality and the use of humor ( $\beta = .10, p < .05$ ) – the increase in competence after a humorous disclosure was greater for disclosures about a core competence than it was for disclosures about a non-core competence. In other words, the use of humor had a greater positive impact on perceptions of general competence for the candidate interviewing to be a chef than it did for the candidate interviewing to be a bartender.

*Disclosure Specific Competence.* We find a significant effect of whether the disclosure was serious or humorous on perceptions of the candidate's ability to make sushi ( $\beta = .23, p < .01$ ). Participants rated the candidate's ability to make sushi as greater when he made a humorous disclosure than when he made a serious disclosure. We do not find a significant effect of disclosure centrality ( $\beta = .11, p = .126$ ) nor an interaction between disclosure centrality and the use of humor ( $\beta = .11, p = .135$ ).

*Social Competence.* We find a significant effect of whether the disclosure was humorous or serious on perceptions of the candidate's social competence. The candidate was viewed as having far greater social competence after a humorous disclosure than a serious disclosure ( $\beta = .28, p < .001$ ). We find a

marginal effect of the centrality of the disclosure (whether the disclosure was a core weakness or a non-core weakness) on perceptions of the candidate's social competence. The candidate was viewed as having slightly less social competence after a core disclosure than a non-core disclosure ( $\beta = -.11, p = .088$ ). We find a significant interaction between the use of humor and disclosure centrality ( $\beta = .13, p < .05$ ); humorous disclosures boosted perceptions of social competence more for disclosures related to a core competency than for disclosures related to a non-core competency.

*Mediation.* We find that perceptions of social competence and disclosure specific competence mediate the effect of humorous disclosure on perceptions of general competence (Baron & Kenny, 1986; Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008). When we included perceptions of social competence and disclosure specific competence in our model, we find that the effect of the joke is no longer significant (from  $\beta = .20, p < .001$  to  $\beta = .06, p = .16$ ), but the effects of social competence ( $\beta = .34, p < .001$ ) and disclosure specific competence ( $\beta = .20, p < .001$ ) remain significant. We ran a 5000-sample bootstrap testing for simultaneous mediation (Hayes & Preacher, 2014; Preacher & Hayes, 2004, 2008), we found a standardized indirect effect of 0.10 (95% bias-corrected CI [0.05, 0.15]) for social competence and a standardized indirect effect of 0.05 (95% bias-corrected CI [0.02, 0.08]) for disclosure specific competence.

## **Discussion**



As in Studies 1, 2, and 3, we find that the use of humor profoundly shapes perceptions of warmth and competence. In Study 4, we show that this is true even when the disclosure relates to a core competency. In this study, disclosures about a core competency substantially harmed perceptions of general competence, but *humorous* disclosures boosted perceptions of warmth and social competence and muted the harmful effects of a disclosure about a core competency.

### **General Discussion**

Our work is the first to document the relationship between the use of humor and impression management by identifying a causal link between humor and perceptions of warmth and competence. Our findings reveal that these are powerful relationships. The use of humor boosts perceptions of warmth, boosts perceptions of social competence, and influences perceptions of general competence.

In Study 1, we demonstrate that individuals project greater warmth and greater general competence when they disclose negative information using humor than when they disclose the same information without humor. In Study 2, we examine both positive and negative self-disclosures and find that the use of humor boosts perceptions of warmth and general competence. In Study 3, we find that the use of humor increases perceptions of social competence for both positive and negative self-disclosures, and we find that social competence mediates the relationship between humor and general competence.

In Study 4, we again document the robust relationship between the use of humor and perceptions of warmth and general competence. In this study, we consider the centrality of the disclosure (whether a negative disclosure is about a core or a non-core competency). We find that individuals who make negative disclosures about core competencies are perceived to have lower social competence than individuals who make negative disclosures about non-core competencies. However, for negative disclosures, humor boosts perceptions of general competence and social competence more for disclosures about a core competency than for disclosures about a non-core competency.

### *Theoretical Implications*

Our investigation makes several important theoretical contributions to the impression management literature. First, we are the first to document the powerful connection between humor and impression management. Individuals dedicate vast amounts of psychological, physical, and financial resources to make positive impressions. Our research demonstrates that humor plays a significant role in the impression management process, and we call for future work to broaden and deepen our understanding of the relationship between humor and impression formation.

Second, we identify a causal relationship between the use of humor and perceptions of warmth. Third, we demonstrate that humor significantly influences perceptions of social competence. Fourth, whereas prior work has presumed that impression formation is characterized by a warmth-competence tradeoff, our work

identifies humorous disclosures as a method to increase perceived warmth *without harming perceived general competence*. Fifth, we introduce an important moderator to the self-disclosure and impression management literature: whether or not a disclosure is a core competency. We find that core disclosures are more harmful to perceived competence than non-core disclosures, but that the use of humor substantially mitigates the harmful effects of disclosing negative information about a core competency.

Our findings also make an important contribution to the humor literature. We are the first to experimentally manipulate humor to examine its impact on perceptions of warmth, general competence, disclosure specific competence, and social competence. We are also the first to examine how the use of self-deprecating humor mitigates the harmful effects of negative disclosures about a core weakness.

### *Prescriptive Advice*

Our findings reveal that to understand impression formation, we need to understand that critical role that humor plays. Prior work demonstrates that individuals frequently self-promote and disclose a wide range of self-relevant information in important settings (e.g., new jobs, interviews, dates; Jones & Pittman, 1982; Leary et al., 1994; Rudman, 1998; Scopelliti, Loewenstein, & Vosgerau, 2015). We reveal that humor is a powerful tool for navigating these situations, and we assert that individuals keen to create a positive impression should prepare to use humor.

### *Future Directions*

We call for future research to deepen our understanding of the relationship between humor, impression management, and the nature of self-disclosures. First, we call for future work to explore a broader range of humorous stimuli. For example, we postulate that other forms of humor, such as other-deprecating humor and sarcasm, may influence impression formation very differently than the self-deprecating form of humor we investigated.

Future work should also investigate the risks of using humor. Factors such as the domain of the core violation (e.g., integrity violations such as assault), the frequency with which humor is used (e.g., repeated use may diminish credibility), the power and status of the discloser, the gender and race of the discloser, the history between the discloser and the recipient, and whether or not the humorous disclosure is viewed as funny and appropriate are all likely to influence perceptions of the discloser.

Although there are risks to using humor, our results demonstrate that humor can be extremely useful as an impression management tool. In the cases we investigated, humorous disclosures were less risky than serious disclosures. This finding challenges lay perceptions regarding the use of humor in novel settings. For example, we contacted the career services departments of the top 60 U.S. universities ranked in the U.S. News and World Report 2015 Rankings (“National Universities Rankings”, 2014) and asked advisors at each university what recommendations they give students regarding the use of humor in

interviews. Only 10% of the advisors endorsed the use of humor in interviews, whereas 75% advised against telling jokes. In a follow-up question, we asked advisors if they knew of a student who had lost a job prospect because of a joke that they had told, and only two advisors (7%) could recall an example of this occurring. We report details of this study in Appendix E.

Future work should explore why lay beliefs stifle the use of humor despite the potential benefits. Quite possibly, the accidental use of an offensive joke that harms—or even ruptures—relationships may be sufficient justification to discourage the use of humor in professional settings.

## **Conclusion**

Humor plays an essential role in impression management. Just as the role of emotions in decision making was once overlooked by social psychologists, the impact of humor on impression management has been overlooked by prior scholars (who have investigated the topic of impression management—seriously).

Humor pervades our daily lives and significantly influences the two fundamental dimensions by which we evaluate others – warmth and competence. By introducing humor to our understanding of impression management, we gain a fuller understanding of the mechanics of interpersonal perceptions and impression management. We still have a great deal to learn, but when it comes to developing a complete understanding of the relationship between humor and impression management, we are getting warmer.

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## Tables

**Table 1. Summary of Results for Study 1.**

Variable	<i>F</i>	$\eta^2$	Disclosure			
			Serious		Humorous	
			<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )
Warmth	$F(5, 10) = 196.86^{***}$	0.48	5.29 <sub>a</sub>	(1.12)	6.04 <sub>b</sub>	(0.97)
General Competence	$F(5, 10) = 73.09^{***}$	0.37	4.89 <sub>a</sub>	(1.19)	5.66 <sub>b</sub>	(1.00)
Leader Points	$F(5, 10) = 9.04^{**}$	0.21	8.51 <sub>a</sub>	(7.20)	10.83 <sub>b</sub>	(7.29)
Status	$F(5, 10) = 40.11^{***}$	0.45	4.62 <sub>a</sub>	(1.19)	5.23 <sub>a</sub>	(1.23)
Funniness	$F(5, 10) = 111.01^{***}$	0.61	3.00 <sub>a</sub>	(1.73)	6.07 <sub>b</sub>	(1.10)
Appropriateness	$F(5, 10) = 9.95^{**}$	0.28	5.28 <sub>a</sub>	(1.09)	5.35 <sub>a</sub>	(1.33)
<b><u>Without Controls</u></b>						
Warmth	$F(1, 184) = 23.36^{***}$	0.11	5.29 <sub>a</sub>	(1.12)	6.04 <sub>b</sub>	(0.97)
General Competence	$F(1, 184) = 22.54^{***}$	0.11	4.89 <sub>a</sub>	(1.19)	5.66 <sub>b</sub>	(1.00)
Leader Points	$F(1, 159) = 4.10^*$	0.03	8.51 <sub>a</sub>	(7.20)	10.83 <sub>b</sub>	(7.29)
Status	$F(1, 184) = 11.66^{***}$	0.06	4.62 <sub>a</sub>	(1.19)	5.23 <sub>b</sub>	(1.23)
Funniness	$F(1, 184) = 197.68^{***}$	0.52	3.00 <sub>a</sub>	(1.73)	6.07 <sub>b</sub>	(1.10)
Appropriateness	$F(1, 184) = 0.14$	0.00	5.28 <sub>a</sub>	(1.09)	5.35 <sub>a</sub>	(1.33)

**Table 1.** Means in each row with different subscripts were significantly different at the  $p < .05$  level. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . We report all results with and without controlling for confederate fixed effects, ratings of the first presenter, and clustering standard errors by session.

**Table 2. Summary of Results for Study 2.**

Variable	F	$\eta^2$	Positive Disclosure				Negative Disclosure			
			Serious		Humorous		Serious		Humorous	
			M	(SD)	M	(SD)	M	(SD)	M	(SD)
Warmth	$F(4, 401) = 126.98^{***}$	0.56	5.35 <sub>a</sub>	(1.06)	5.69 <sub>b</sub>	(0.76)	5.33 <sub>a</sub>	(0.90)	5.85 <sub>b</sub>	(0.76)
General Competence	$F(4, 401) = 56.18^{***}$	0.36	5.61 <sub>a</sub>	(1.03)	5.56 <sub>a</sub>	(0.84)	5.46 <sub>a</sub>	(0.89)	5.54 <sub>a</sub>	(0.83)
<b><u>Without Controls</u></b>										
Warmth	$F(3, 402) = 8.78^{***}$	0.06	5.35 <sub>a</sub>	(1.06)	5.69 <sub>b</sub>	(0.76)	5.33 <sub>a</sub>	(0.90)	5.85 <sub>b</sub>	(0.76)
General Competence	$F(3, 402) = 0.49$	0.00	5.61 <sub>a</sub>	(1.03)	5.56 <sub>a</sub>	(0.84)	5.46 <sub>a</sub>	(0.89)	5.54 <sub>a</sub>	(0.83)
Funniness	$F(3, 402) = 163.99^{***}$	0.55	2.34 <sub>a</sub>	(1.56)	5.57 <sub>b</sub>	(1.05)	2.69 <sub>a</sub>	(1.76)	5.67 <sub>b</sub>	(1.18)
Appropriateness	$F(3, 402) = 3.94^{**}$	0.03	5.55 <sub>ab</sub>	(1.22)	5.32 <sub>a</sub>	(1.09)	5.82 <sub>b</sub>	(1.07)	5.41 <sub>a</sub>	(1.09)

**Table 2.** We present the results for Warmth and Competence with and without controlling for participant initial ratings for Warmth and Competence. Means in each row with different subscripts were significantly different at the  $p < .05$  level.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Table 3. Results from Study 3.**

Variable	F	$\eta^2$	Positive Disclosure				Negative Disclosure			
			Serious		Humorous		Serious		Humorous	
			M	(SD)	M	(SD)	M	(SD)	M	(SD)
Warmth	$F(4, 398) = 129.50^{***}$	0.57	5.18 <sub>a</sub>	(0.97)	5.50 <sub>b</sub>	(0.89)	5.07 <sub>a</sub>	(1.16)	5.42 <sub>b</sub>	(0.96)
General Competence	$F(4, 398) = 97.16^{***}$	0.49	5.09 <sub>a</sub>	(1.11)	5.07 <sub>a</sub>	(0.97)	4.71 <sub>b</sub>	(1.21)	4.68 <sub>b</sub>	(1.16)
Annoyingness	$F(4, 398) = 121.36^{***}$	0.55	2.06 <sub>a</sub>	(1.33)	1.71 <sub>a</sub>	(1.01)	1.89 <sub>a</sub>	(1.27)	1.90 <sub>a</sub>	(1.21)
<b><u>Without Controls</u></b>										
Warmth	$F(3, 399) = 4.00^{**}$	0.03	5.18 <sub>ab</sub>	(0.97)	5.50 <sub>c</sub>	(0.89)	5.07 <sub>a</sub>	(1.16)	5.42 <sub>bc</sub>	(0.96)
General Competence	$F(3, 399) = 4.01^{**}$	0.03	5.09 <sub>a</sub>	(1.11)	5.07 <sub>a</sub>	(0.97)	4.71 <sub>b</sub>	(1.21)	4.68 <sub>b</sub>	(1.16)
Social Competence	$F(3, 399) = 7.49^{***}$	0.05	4.43 <sub>a</sub>	(1.26)	5.12 <sub>b</sub>	(1.21)	4.49 <sub>a</sub>	(1.30)	4.98 <sub>b</sub>	(1.29)
Disclosure Specific Competence	$F(3, 399) = 31.66^{***}$	0.19	5.32 <sub>a</sub>	(0.94)	4.73 <sub>b</sub>	(1.16)	4.31 <sub>c</sub>	(1.16)	3.79 <sub>d</sub>	(1.38)
Annoyingness	$F(3, 399) = 1.46$	0.01	2.06 <sub>a</sub>	(1.33)	1.71 <sub>b</sub>	(1.01)	1.89 <sub>ab</sub>	(1.27)	1.90 <sub>ab</sub>	(1.21)
Funniness	$F(3, 399) = 80.99^{***}$	0.38	2.78 <sub>a</sub>	(1.51)	4.99 <sub>b</sub>	(1.23)	2.65 <sub>a</sub>	(1.73)	5.02 <sub>b</sub>	(1.38)
Appropriateness	$F(3, 399) = 3.32^*$	0.02	4.66 <sub>a</sub>	(1.40)	4.32 <sub>abc</sub>	(1.31)	4.66 <sub>ab</sub>	(1.39)	4.15 <sub>c</sub>	(1.44)

**Table 3.** We present the results for Warmth, Competence, and Annoyingness with and without controlling for participant initial ratings for Warmth, Competence, and Annoyingness. Means in each row with different subscripts were significantly different at the  $p < .05$  level. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Table 4. Results from Study 4.**

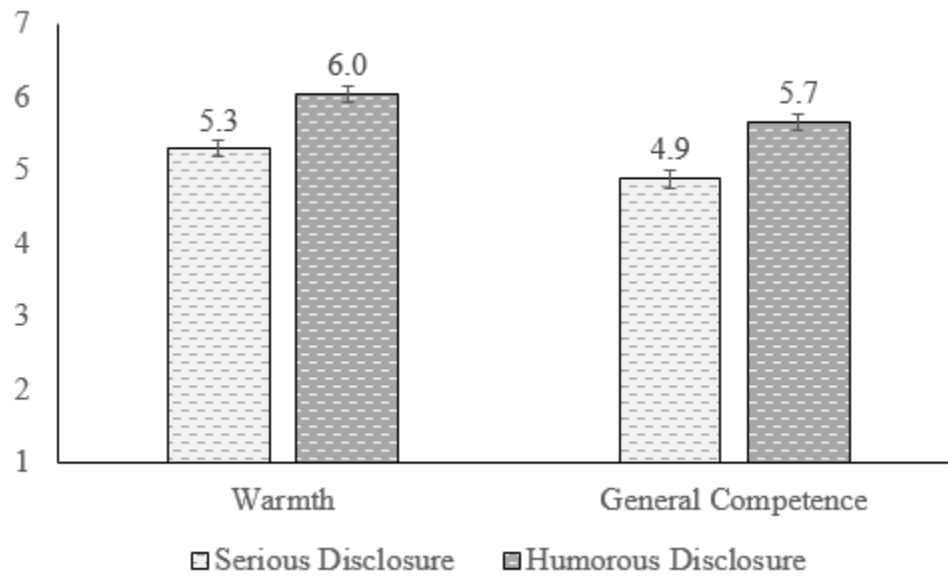
Variable	F	$\eta^2$	Core Disclosure		Non-Core Disclosure	
			Serious M (SD)	Humorous M (SD)	Serious M (SD)	Humorous M (SD)
Warmth	$F(4, 397) = 78.39^{***}$	0.44	5.04 <sub>a</sub> (1.07)	5.47 <sub>b</sub> (1.06)	5.31 <sub>b</sub> (1.08)	5.46 <sub>b</sub> (1.00)
General Competence	$F(4, 397) = 49.73^{***}$	0.33	4.13 <sub>a</sub> (1.32)	4.76 <sub>b</sub> (1.28)	4.93 <sub>bc</sub> (1.17)	5.13 <sub>c</sub> (0.95)
<b><u>Without Controls</u></b>						
Warmth	$F(3, 398) = 3.56^*$	0.03	5.04 <sub>a</sub> (1.07)	5.47 <sub>b</sub> (1.06)	5.31 <sub>b</sub> (1.08)	5.46 <sub>b</sub> (1.00)
General Competence	$F(3, 398) = 13.17^{***}$	0.09	4.13 <sub>a</sub> (1.32)	4.76 <sub>b</sub> (1.28)	4.93 <sub>bc</sub> (1.17)	5.13 <sub>c</sub> (0.95)
Social Competence	$F(3, 398) = 9.49^{***}$	0.07	4.49 <sub>a</sub> (1.35)	5.32 <sub>b</sub> (1.27)	4.97 <sub>c</sub> (1.14)	5.27 <sub>bc</sub> (1.21)
Disclosure Specific Competence	$F(3, 398) = 4.96^{**}$	0.04	2.48 <sub>a</sub> (1.52)	3.17 <sub>b</sub> (1.69)	2.48 <sub>a</sub> (1.29)	2.72 <sub>a</sub> (1.34)
Funniness	$F(3, 398) = 27.21^{***}$	0.17	3.57 <sub>a</sub> (1.97)	5.21 <sub>b</sub> (1.41)	3.75 <sub>a</sub> (1.84)	5.13 <sub>b</sub> (1.45)
Appropriateness	$F(3, 398) = 11.00^{***}$	0.08	3.37 <sub>a</sub> (1.64)	4.16 <sub>b</sub> (1.63)	4.27 <sub>b</sub> (1.52)	4.57 <sub>b</sub> (1.34)

**Table 4.** We present the results for Warmth and Competence with and without controlling for participant initial ratings for Warmth, Competence, and Annoyingness. Means in each row with different subscripts were significantly different at the  $p < .05$  level. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .



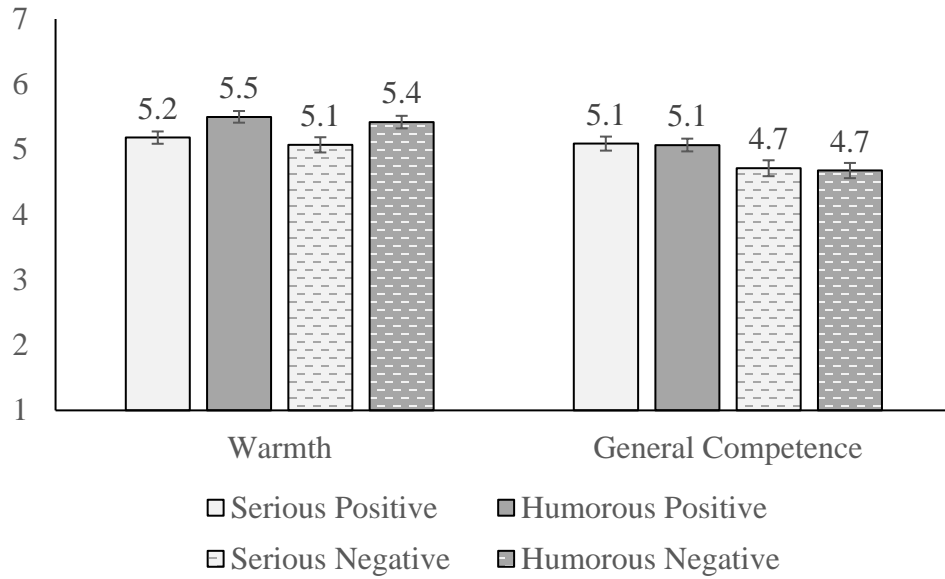
## Figures

**Figure 1. Study 1 Results**

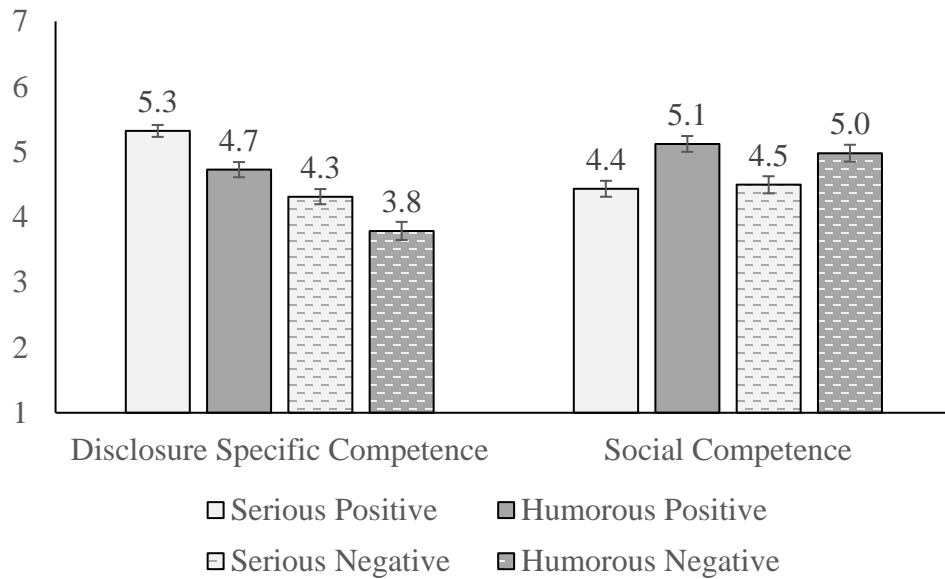


**Figure 2. Study 3 Results**

**Panel A.**

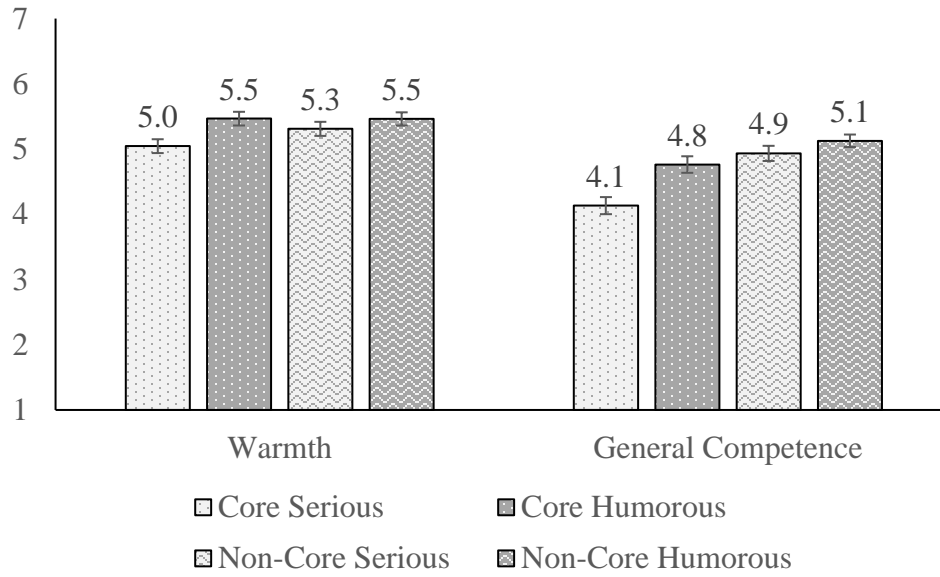


**Panel B.**

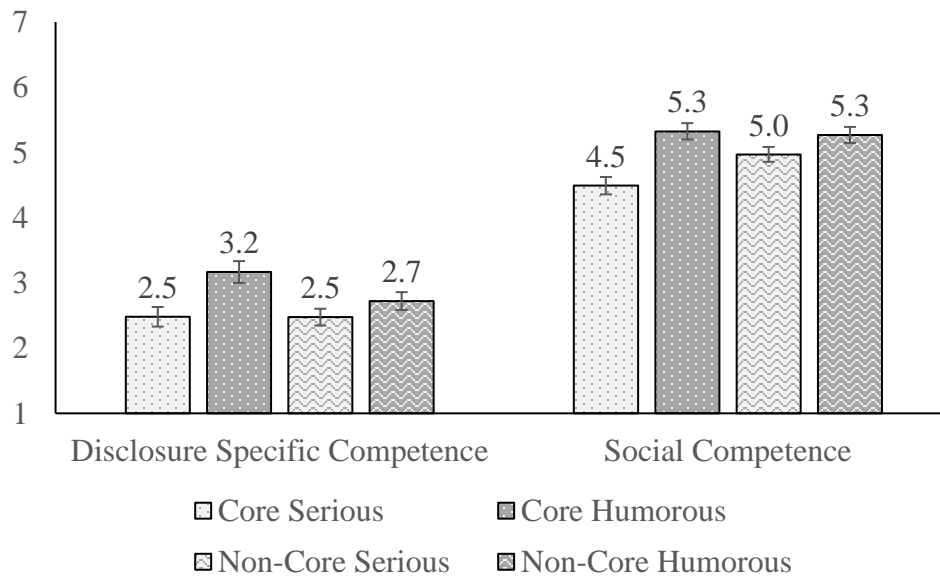


**Figure 3. Study 4 Results**

**Panel A.**



**Panel B.**



## Appendix A: Disclosures Used in Studies

In Study 1, a participant (who was actually a confederate) made either a serious or humor negative self-disclosure while delivering a testimonial for the university writing center. In Studies 2-4, participants were presented with a scenario of a meeting between a manager and a job candidate or employee. During the scenario, the candidate either made a serious or humorous self-disclosure of negative information.

### Study 1

**Humorous Self-Disclosure:** I don't write good. The Writing Center helps me write more good, and can help you write gooder to! But seriously, the Writing Center helps me communicate my ideas more effectively. It is a great resource on campus!

**Serious Self-Disclosure:** I do not write well. The Writing Center helps me communicate my ideas more effectively. It is a great resource on campus!

### Study 2

In the Positive Disclosure conditions, the manager asked the candidate, "What would you say is your greatest strength?" In the Negative Disclosure conditions, the manager asked the candidate, "What would you say is your greatest weakness?"

**Humorous Self-Disclosure:** My public speaking skills. Joining Toastmasters really helped me. Hardly anyone fell asleep during my last presentation.

**Serious Self-Disclosure:** My public speaking skills. Joining Toastmasters really helped me. Almost everyone was engaged during my last presentation.

### **Study 3**

In the Positive Disclosure conditions, the manager asked the candidate, “What would you say is your greatest strength?” In the Negative Disclosure conditions, the manager asked the candidate, “What would you say is your greatest weakness?”

**Humorous Self-Disclosure:** My memory. I signed up for Lumosity. But I kept on forgetting to use it.

**Serious Self-Disclosure:** My memory. I signed up for Lumosity. And I think it really improved my memory.

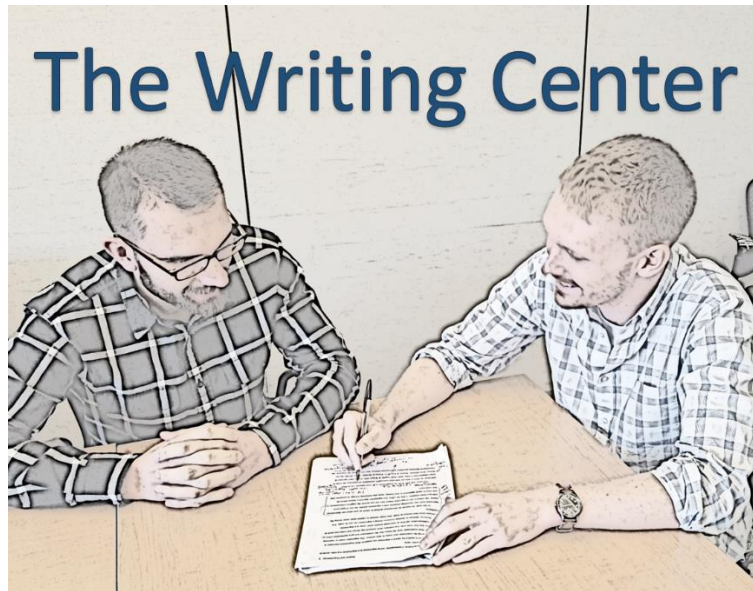
### **Study 4**

In all conditions, the manager asked the candidate, “What would you say is your greatest weakness?” In the Core Disclosure conditions, the candidate is interviewing to be a Sushi Chef at a Japanese restaurant. In the Non-Core Disclosure conditions, the candidate is interviewing to be a Bartender at a Japanese restaurant.

**Humorous Self-Disclosure:** I can’t make sushi. But I think with some training I’d be on a roll.

**Serious Self-Disclosure:** I can’t make sushi. But I think with some training I’d be able to make it.

**Appendix B: Sample Stimuli (Study 1)**



**How has the Writing Center helped you?**

**Appendix C: Confederate Schedule (Study 1)**

In Study 1, we used 11 confederates. We present their schedule below, with the names of the confederates removed. We had four confederates (3 female, 1 male) alternate delivering the second testimonial in order to allow us to control for confederate fixed effects. During the 12-1pm Wednesday session, Confederate 10 forgot to present, so we did not analyze the data from that session.

<b>Time</b>	<b>Presenter</b>	<b>Condition</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>
12-1pm	1	Control	Confederate 5	Confederate 7	Confederate 10
	2	Joke	Confederate 1	Confederate 3	Confederate 1
1-2pm	1	Control	Confederate 4	Confederate 8	Confederate 11
	2	Serious	Confederate 1	Confederate 3	Confederate 4
2-3pm	1	Control	Confederate 5	Confederate 9	Confederate 2
	2	Joke	Confederate 2	Confederate 3	Confederate 4
3-4pm	1	Control	Confederate 6	Confederate 6	Confederate 6
	2	Serious	Confederate 2	Confederate 3	Confederate 2

## Appendix D: Sample Stimuli (Study 2)





## Appendix E: Career Services Advice on Humor

We conducted a pilot study by contacting, via telephone and email, the career services departments of the top 60 U.S. universities ranked in the U.S. News and World Report 2015 Rankings (“National Universities Rankings”, 2014). We asked career service advisors at each university the following questions to ascertain the advice they give students regarding the use of humor in interviews:

- 1. Consider a student who plans to go into an interview. When it comes to telling jokes in an interview, what advice do you give students?*
- 2. Have you ever heard of someone who lost a job prospect because of a joke they told in an interview?*

Twenty-nine of the career services departments answered our questions. Only four advisors (10%) recommended using humor, while 22 (76%) advised against telling jokes. However, when asked if they knew of a student who had lost a job prospect because of a joke that they had told, only two advisors (7%) could recall an example of this occurring.

## CHAPTER 3

### SHOCK AND HA!

#### HOW POWER INFLUENCES THE USE OF HUMOR

T. Bradford Bitterly

Across three studies, we examine how power fundamentally influences the use of humor. Using field data of actual corporate communication and a series of experiments, we find that low power individuals are less likely to use humor than high power individuals. Together, our studies demonstrate that humor is pervasive in organizational communication and is intricately tied to power and hierarchy.

## SHOCK AND HA!

### HOW POWER INFLUENCES THE USE OF HUMOR

Humor has a profound impact on interpersonal perception and behavior. Humor can have vast benefits for individuals and teams within organizations (Avolio, Howell, & Sosik, 1999; Decker & Rotondo, 2001; Cooper, 2005, 2017; Cooper & Sosik, 2012; Hughes & Avey, 2009; Vecchio, Justin, & Pearce, 2009). Recent work on humor in organizations has found that the use of humor improves leader member exchange, leads to greater employee engagement, and enables the individuals who use it to achieve elevated status (Bitterly, Brooks, & Schweitzer, 2017; Cooper, 2017; Yam, Christian, Wu, Liao, & Nai, 2017). Although the use of humor can be extremely beneficial, no prior work has explored how frequently it occurs in organizations, nor has it explored which individuals are most likely to use it.

In this work, we explore the relationship between power and the use of humor. In doing so, we make several important theoretical and practical contributions to the organizational research on hierarchy, power, and humor. First, this work demonstrates that humor pervades corporate communication. Second, this is the first work to demonstrate a connection between power and the use of humor. Third, using both real corporate communications and experiments, this work elucidates where humor is likely to occur within organizations. Whereas recent research has explored the impact of humor on hierarchy (Bitterly et al.,

2017; Cooper et al. 2017, Yam et al., 2017), no prior work has explore how the hierarchy influences the use of humor.

## **Power**

Power is one of the most impactful and definitive social dimensions. Consistent with prior literature, we define power as control over valued resources (Fiske, 1993; Galinsky, Rucker, & Magee, 2015; Keltner, Gruenfeld, & Anderson, 2003; Magee and Galinsky, 2008; Van Kleef, Oveis, Homan, van der Lowe, Keltner, 2015). Power has significant psychological and social benefits for those who possess it, while the consequences of not having it can be devastating (Blau, 1964, 1977; Dépret & Fiske, 1993; Fiske, 1993; Keltner, Gruenfeld, & Anderson, 2003; Pfeffer and Salancik, 1978; Thibaut & Kelley, 1959; Magee and Galinsky, 2008). The pursuit of power and status has been argued to be a fundamental human motive (Anderson, 2015).

Power is important. Practically every professional and personal social interaction is characterized by hierarchy and power disparities (Anderson, Hildreth, & Howland, 2015; Galinsky, Rucker, & Magee, 2015; Magee & Galinsky, 2008). Individual at the top of the hierarchy enjoy many psychological benefits, such as an enhanced self-perception (e.g., confidence, optimism), improved cognition (e.g., creativity, abstract thought), and a greater resistance to influence (e.g., lower pressure to conform, less influence from persuasion; Galinsky, Rucker, & Magee, 2015).

The psychological effects of power significantly shape the way that individuals act and behave. First, high power individuals are more confident and

less inhibited (Galinsky, Rucker, & Magee, 2015; Fast, Sivanathan, Mayer, & Galinsky, 2012). This, in turn, causes high power individuals to be more likely to take action and more likely to engage in risky behavior. Second, compared to low power individuals, high power individuals are more self-focused and less concerned with the thoughts and emotions of others (Galinsky, Magee, Inesi, & Gruenfeld, 2006; Galinsky, Rucker, & Magee, 2015; Gruenfeld, Inesi, Magee, & Galinsky, 2008). Third, the experience of power causes individuals to view their actions more favorably (Galinsky, Rucker, & Magee, 2015; Pettit & Sivanathan, 2012). Combined, these factors should cause high power individuals to be more likely to say what they are thinking, even if the comment is risky. In this work, we examine how power may influence a specific type of risky communication:

humor.

### **Humor**

Humor is a pervasive and important part of communication (Apte, 1985; Wyer and Collins, 1992; Martin, 2007). We define humor as an event between two or more individuals in which at least one individual experiences amusement and appraises the event as funny (adapted from Cooper, 2005, 2008; Gervais & Wilson 2005; Martin 2007; McGraw & Warren, 2010; McGraw, Warren, & Kan, 2015; Warren & McGraw, 2015a, 2015b).

Humor is a social tool, providing multiple intrapsychic and interpersonal benefits. At the individual level, the effective use of humor aids in creativity, aids in psychological resilience to stress, and help individuals build bonds and increase their status (Bitterly, Brooks, & Schweitzer, 2017; Bradney, 1957; Cooper, 2005;

Gervais & Wilson, 2005; Huang, Gino, & Galinsky, 2015; Isen, Daubman, and Nowicki, 1987; Keltner, Capps, Kring, Young, & Heerey, 2001; Martin, 2007; Newman and Stone, 1996). At the group level, the use of humor has been shown to make teams more supportive and productive (Lehmann-Willenbrock & Allen, 2012).

Although there are many benefits to humor, attempting to use humor can be socially risky. Failed jokes may harm status (Bitterly, Brooks, and Schweitzer, 2017), and the use of humor by managers can increase deviant behavior in their employees (Yam et al., 2017). Humor is risky because humor occurs when something is a benign-violation (McGraw & Warren, 2010; McGraw, Warren, Williams, & Leonard, 2012; McGraw, Williams, & Warren, 2011; McGraw & Warner, 2014; Veatch, 1998). That is, for something to be appraised as funny, it must violate the status quo, but do so in a way that is not offensive. In many social situations, getting the balance correct can be extremely difficult.

Given that attempting to use humor is an inherently risky behavior (McGraw & Warren, 2010; McGraw, Warren, Williams, & Leonard, 2012; McGraw, Williams, & Warren, 2011; McGraw & Warner, 2014; Veatch, 1998), we hypothesize that high power individuals will be more likely to use humor than low power individuals for three reasons. First, having high power has been shown to lower individuals' inhibitions. This, in turn, causes high power individuals to be more likely to take action and leads them to take greater risks (Anderson and Galinsky, 2006; Galinsky, Gruenfeld, and Magee, 2003; Guinote, 2007; Lammers, Galinsky, Gordijn, & Otten, 2008; Magee, Galinsky, & Gruenfeld,

2007; Van Kleef, et al., 2015). Second, high power individuals are less concerned by or influenced by the emotions of others than low power individuals, which causes high power individuals to be more likely to express their private thoughts and opinions (Anderson & Berdahl, 2002; Anderson, Keltner, & John, 2003; Berdahl & Martorana, 2006; Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2007; Magee & Galinsky, 2008; Van Kleef, De Dreu, & Manstead, 2004; Van Kleef et al., 2008; Van Kleef, et al., 2015). Third, high power individuals tend to view their own actions in a more favorable light, which could lead high power individuals to be more confident in their ability to use humor than low power individuals (Humphrey, 1985; Sande et al., 1986; Magee & Galinsky, 2008). Combined, we believe these factors will cause high power individuals to be more likely to engage in the use of humor than low power individuals.

In this work, we examine how power influences the use of humor. In doing so, we make several novel and important contributions to both the power and humor literatures. First, we demonstrate that humor is a pervasive in organizational communication. Second, we find that the use of humor is fundamentally tied to power. Third, we make a contribution to the power literature by introducing a new method of experimentally manipulating power, the use of a shock machine. Combined, our studies demonstrate that humor is a pervasive behavior that is fundamentally tied to power, and that in order to fully understand power, we need to understand humor.

### **Overview of Current Work**

Across three studies, using both field and experimental data, we explore how the use of humor is tied to power. In Study 1, we examine the relationship between power and the use of humor using field data from actual corporate communications. We find that humor is pervasive in corporate communications and is tied to the power of the sender. In Study 2, we experimentally manipulate power using a new method of inducing power (a shock machine), and we examine how manipulated power influences humor generation. In Study 3, we replicate the results of Study 2 and examine two potential mediators of the relationship between power and the use of humor: impression management concerns and cognitive load.

### **Study 1**

In Study 1, we examine how power influences the use of humor using field data; real email communications within an organization. We gathered hierarchical information on the individuals in the dataset, and grouped them according to whether they fell at the bottom (low power) or top of the hierarchy (high power).

#### **Method**

We examined data from the Enron email corpus. This dataset contains emails from the mailboxes of about 150 Enron employees. The uncleaned dataset contains over half a million emails sent between 1997 and 2002.

For our analysis, we used a copy of the corpus provided by Cohen (2015). The dataset contained duplicate emails. We found duplicate emails by searching



for emails that had the same sender, subject, and identical timestamps. We then removed any duplicate emails. Our final dataset contained 242,629 unique emails.

Our independent variable was the power of the email sender. To examine the influence of power on communication, we focused on emails sent by senders we were able to map to the Enron hierarchy. We began with job title data for 132 employees taken from prior research (Mitra and Gilbert, 2012; Shetty & Adibi, 2004). We had research assistants search LinkedIn and the emails themselves to obtain the job titles of other senders in the dataset with an enron.com email address. The research assistants were able to obtain and verify the job title information for 234 senders. Based on their job title, we then grouped the senders as being low (e.g., Administrative Assistant, Analyst), medium (e.g., Lawyer, Trader), or high power in the organization (e.g., Managing Director, CEO). We based this categorization on the categorization used in prior research (Gilbert, 2012; Mitra & Gilbert, 2012), which categorized the employees according to six levels of power (1 = "Employee", 2 = "Specialist/Analyst", 3 = "Manager/Trader", 4 = "Lawyer", 5 = "Vice President/Director", 6 = "CEO/President"). We focus our analysis on the individuals in the low and high power groups because it is clear that the individuals in the high power group have positions with more organizational power than individuals in the low power group.

For our dependent variable, we examined the use of humor in the dataset. To create a training set, we had participants from Amazon's Mechanical Turk (MTurk) tag the use of humor in 7996 randomly drawn sent emails. We asked

participants to think about whether or not the sender of the email thought part or all of the email was funny when they sent it. If the email was an original message or a reply, we asked the participants to look at if the email contained a joke. If the email was a forwarded email, we asked participants to consider if the sender thought the recipient would think it was funny. We present the instructions we presented to the MTurk participants in Appendix A.

We had 5 MTurk participants label each email. The participants were given 3 practice emails to train on. After the three practice emails, the participants reviewed 16 emails. The MTurk participants had perfect agreement on 6,367 emails. Then, we had three research assistants rate the use of humor in the 1,629 emails where the MTurk participants did not have complete agreement. For the 754 emails where the research assistants did not have perfect agreement, we resolved the disagreement through discussion.

To label the use of humor in the emails, we created an algorithm using a convolutional neural network for text analysis. Prior research has shown this type of deep learning algorithm to be highly accurate at text classification (Kim, 2014). The engine we used to create the algorithm was TensorFlow. We trained the algorithm on a sample of 1,902 labeled emails (l2 regularization = 1.0, dropout rate = .5). We used word2vec for word and phrase vectors pretrained on the Google News dataset (Google, 2017). Our training and test sets were created by randomly selecting humorous and serious emails from our labeled emails. We biased our training sample so that it contained 1268 serious emails (66.67%) and 634 emails containing humor (33.33%). We tested our algorithm on a holdout

sample that the algorithm had not trained on (630 serious, 70 humorous). The algorithm achieved an accuracy of 89.7% on our holdout sample. We then used the algorithm to label the use of humor in the other emails in our cleaned dataset.

We focus our analysis on the 108,851 emails for which we have the job title and power level of the sender.

## **Results**

We found that humor is a pervasive behavior in the emails. Of our sample of 108,851 emails, 11% contained humor.

*Power and the Use of Humor.* Using an average of averages, we measured the degree to which the use of humor varied with power. We first looked at the average rate of humor for each individual for which we had organizational title. The average rate of humor across all senders was 11.31%.

We then examined the degree to which the average use of humor varied according to power. We found that the average rate of use of humor was significantly lower for low power individuals (6.7%) than high power individuals (11.5%;  $t(161) = 3.13, p < .01$ ). We depict these results in Figure 1.

## **Discussion**

In Study 1, we examine the frequency of the use of humor in real corporate communication. We find that humor is pervasive in organizational communication. We also find a significant relationship between power and the use of humor. Low power individuals used humor in their communication at a significantly lower rate than high power individuals.

### **Study 2: Manipulated Power and the Creation of Jokes**

In Study 1, we found a significant association between power and the use of humor. In Study 2, we extend these findings by experimentally manipulating power and examining how it influences the likelihood that an individual will use humor.

## **Method**

**Participants.** We recruited 187 adults from to participate in a behavioral lab study in exchange for \$10.00 (36% male,  $M_{\text{age}} = 23.90$  years,  $SD = 9.84$ ). Two participants left the study; since these participants did not complete the dependent measures, they have been excluded from our analysis.

**Design and Procedure.** We randomly assigned participants to one of two between-subjects conditions: *High Power vs. Low Power*. We collected participants during 12 one-hour sessions across two days. The modal session contained 18 participants ( $N_{\text{min}} = 7, N_{\text{max}} = 20$ ).

When participants checked into the lab we informed them that the study would involve electric shocks. We instructed participants who were pregnant, had a pre-existing heart condition, or had a medical condition that would be adversely influenced by receiving an electric shock that they should not participate in the study. We then informed participants that they would be completing an activity in pairs, where they would be randomly assigned to either deliver or receive electric shocks.

Next, we had participants roll three dice to determine their role for the study. A research assistant recorded the die role for each participant. Participants who rolled in the top half of all participants were assigned to the High Power

condition. We informed these participants that they would be delivering electric shocks during the study. Participants who rolled in the bottom half of all participants were assigned to the Low Power condition. We informed these participants that they would be receiving electric shocks during the study. We had research assistants place electrodes on the forearm of the non-dominant arm of the participants who were told that they would receive electric shocks.

Then, we asked the participant who rolled the lowest number to come to the front of the lab to demonstrate the shock apparatus to the other participants. We asked the other participants to gather around this participant while they demonstrated the calibration processes of the shock machine. We connected the electrodes of the demonstrator to the machine and asked the participant to turn up the current of the machine until they reached their maximum pain tolerance. As the demonstrator turned up the current of the machine, the electrical current would cause their arm and hand to involuntarily shake and contract. After the demonstrator reached their maximum pain tolerance, we then set the current to 80% of the demonstrator's maximum threshold and administered one more shock. We informed participants that the shock apparatus would be set at 80% of the recipient's maximum pain tolerance during the study.

Next, we asked participants to return to their seats. We handed participants a form with the following instructions:

*In the next part of the study, you will share jokes with your partner. Please spend the next 5 minutes writing as many jokes as you can think of.*

*The jokes can be:*

1. *Original jokes that you have created, or*
2. *Jokes you remember from another source (e.g., a friend, a movie, a comedy special).*

We then gave participants 5 minutes to write their jokes. The number of jokes each participant wrote served as our primary dependent variable.

Then, we had participants complete a “Pre-Shock Evaluation Form”. On this form, we asked participants to rate the extent to which they felt “Powerful”, “In Control”, “Funny”, “Humorous”, “Interested”, “Distressed”, “Excited”, “Upset”, “Strong”, “Guilty”, “Scared”, “Hostile”, “Enthusiastic”, “Proud”, “Irritable”, “Alert”, “Ashamed”, “Inspired”, “Nervous”, “Determined”, “Attentive”, “Jittery”, “Active”, and “Afraid” (7-point Likert; 1 = “Not at all”, 7 = “Extremely”). The first two items, “Powerful” and “In Control” served as our manipulation check ( $r = .77$ ). We collected the next two items, “Funny” and “Humorous”, to see if individuals across conditions differed in how funny they rated themselves ( $r = .94$ ). We predicted that individuals in the High Power condition would rate themselves as funnier than individuals in the Low Power condition. The remaining items were taken from the Positive and Negative Affect Schedule (PANAS, Watson, Clark, & Tellegen, 1988) and were used to mask the purpose of the study.

After participants completed the “Pre-Shock Evaluation Form”, we collected all materials from participants. We then informed them that the study was over and that no other participants would be shocked. We distributed

defriefing forms and exit questionnaires, which asked participants to provide their gender and age. Finally, participants were dismissed from the session.

**Results.** We find that power significantly influences the use of humor, with high power individuals creating more jokes than low power individuals. Consistent with our preregistration plan, we report our analysis clustering the stand errors by session<sup>8</sup>. We depict our main results in Figure 2.

*Power.* Our manipulation check confirmed that our power manipulation was successful. Individuals assigned to the high power condition reported feeling significantly more power than individual in the low power condition ( $t(11) = 4.04$ ,  $p < .01$ ). We find significant effects of age and sex on ratings of power, with males rating themselves as feeling more powerful than females ( $t(11) = 2.90$ ,  $p = .014$ ) and older individuals rating themselves as feeling more powerful than younger individuals ( $t(11) = 2.56$ ,  $p = .027$ ). Controlling for age and gender does not significantly change our results; we still find that individuals in the high power condition rated themselves as feeling more powerful than individuals in the low power condition ( $t(11) = 4.14$ ,  $p < .01$ ).

*Humor.* We find that individuals assigned to the high power condition created significantly more jokes than individuals assigned to the low power condition ( $t(11) = 2.59$ ,  $p = .025$ ). We do not find a significant effect of age on the number of jokes written ( $t(11) = -3.53$ ,  $p < .01$ ), but we do not find a significant effect of gender ( $t(11) = -0.55$ ,  $p = .595$ ). Controlling for age and gender does not

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<sup>8</sup> We cluster the standard errors by session because reactions to the power manipulation are likely to be correlated within each session; based on the reaction of the individual demonstrating the shock machine and fellow participants reactions to the demonstration.

significantly change our results; we still find that individuals in the high power condition wrote significantly more jokes than individuals in the low power condition ( $t(11) = 2.78, p = .018$ ).

Counter to our prediction, individuals in the high power condition did not rate themselves as funnier than individuals in the low power condition ( $t(11) = -0.75, p = .47$ ). When we control for age and gender, we find that men rated themselves as significantly funnier than females ( $t(11) = 3.00, p = .012$ ), but we do not find a significant effect of age on self-ratings of funniness ( $t(11) = 0.31, p = .761$ ).

## **Discussion**

In Study 2, we again find high power individuals engage in more humor than low power individuals do. We manipulated power by telling participants that they would either receive or deliver electric shocks. We found that individuals who we told would deliver electric shocks (high power condition) wrote significantly more jokes than individuals we told would receive electric shocks (low power condition). Contrary to our expectations, we did not find that high power individuals rated themselves as funnier than low power individuals.

### **Study 3: Manipulated Power and the Willingness to Share a Funny Story**

In Study 2, we manipulated power and found that individuals assigned to the high power condition created more humor than individuals assigned to the low power condition. In Study 3, we extend our prior studies by exploring two potential mechanisms for why high power individuals may be creating more humor than low power individuals. First, low power individuals may have greater



impression management concerns than high power individuals, which causes them to be less likely to share a joke that they think of. Second, low power individuals may experience greater cognitive load and be less able to think of jokes.

## **Method**

**Participants. Participants.** We recruited 265 adults from to participate in a behavioral lab study in exchange for \$10.00 (48% male,  $M_{\text{age}} = 22.54$  years,  $SD = 7.37$ ). Five participants left the study; since these participants did not complete the dependent measures, they have been excluded from our analysis.

**Design and Procedure.** The design of Study 3 was almost identical to Study 2, except for 2 main differences. First we gave participants 5 minutes to brainstorm jokes before they were given 5 minutes to create their final list of jokes. Second, we added two additional questions to the study to assess to what extent participants had difficulty thinking of jokes and to what extent they were concerned about what their partner would think of their jokes.

As in Study 2, we randomly assigned participants to one of two between-subjects conditions: *High Power* vs. *Low Power*. We collected participants during 17 one-hour sessions across three days. The modal session contained 16 participants ( $N_{\text{min}} = 13$ ,  $N_{\text{max}} = 18$ ).

When participants checked into the lab we informed them that the study would involve electric shocks. We instructed participants who were pregnant, had a pre-existing heart condition, or had a medical condition that would be adversely influenced by receiving an electric shock that they should not participate in the

study. We then informed participants that they would be completing an activity in pairs, where they would be randomly assigned to either deliver or receive electric shocks.

Next, we had participants roll three dice to determine their role for the study. A research assistant recorded the die role for each participant. Participants who rolled in the top half of all participants were assigned to the High Power condition. We informed these participants that they would be delivering electric shocks during the study. Participants who rolled in the bottom half of all participants were assigned to the Low Power condition. We informed these participants that they would be receiving electric shocks during the study. We had research assistants place electrodes on the forearm of the non-dominant arm of the participants who were told that they would receive electric shocks.

Then, we asked the participant who rolled the lowest number to come to the front of the lab to demonstrate the shock apparatus to the other participants. We asked the other participants to gather around this participant while they demonstrated the calibration processes of the shock machine. We connected the electrodes of the demonstrator to the machine and asked the participant to turn up the current of the machine until they reached their maximum pain tolerance. As the demonstrator turned up the current of the machine, the electrical current would cause their arm and hand to involuntarily shake and contract. After the demonstrator reached their maximum pain tolerance, we then set the current to 80% of the demonstrator's maximum threshold and administered one more shock.

We informed participants that the shock apparatus would be set at 80% of the recipient's maximum pain tolerance during the study.

Next, we asked participants to return to their seats. We handed participants a form with the following instructions:

*In the next part of the study, you will share jokes with your partner.*

*The jokes can be:*

*(1) Original jokes that you have created or*

*(2) Jokes you remember from another source (e.g., a friend, a movie, a comedy special).*

*When you write the jokes, please:*

*(1) Number the jokes and*

*(2) Describe each joke in enough detail that anyone reading the joke can understand it.*

*Please use the space on next page to brainstorm jokes and the space on the following page to write your final list of jokes that you will share with your partner.*

*You have 10 minutes to create your list of jokes. Please use the first 5 minutes to brainstorm and the final 5 minutes writing your final list.*

We then gave participants 5 minutes to brainstorm jokes, and then 5 minutes to write their final list of jokes. The final number of jokes each participant wrote served as our primary dependent variable.

Then, we had participants complete a "Pre-Shock Evaluation Form". To examine to what extent participants experienced impression management

concerns, we asked participants to rate their agreement with the statement, “I am worried about what my partner will think of my jokes.” (7-point Likert, 1 = “Not at all”, 7 = “Extremely”). To assess to what extent participants might be experiencing cognitive load, we asked participants to rate their agreement with the statement, “I had difficulty concentrating during the joke writing task.” (7-point Likert, 1 = “Not at all”, 7 = “Extremely”). As in Study 2, we also asked to rate to what extent they felt “Powerful” and “In Control”, which served as our manipulation check ( $r = .79$ ). Once again, we also asked participants to rate to what extent they felt “Funny” and “Humorous”, to see if individuals across conditions differed in how funny they rated themselves (7-point Likert, 1 = “Not at all”, 7 = “Extremely”;  $r = .97$ ). As in our last study, we had participants complete the PANAS (Watson, Clark, & Tellegen, 1988) in order to mask the purpose of the study.

After participants completed the “Pre-Shock Evaluation Form”, we collected all materials from participants. We then informed them that the study was over and that no other participants would be shocked. We distributed defriending forms and exit questionnaires, which asked participants to provide their gender and age. Finally, participants were dismissed from the session.

**Results.** We find that power significantly influences the use of humor, with high power individuals creating more jokes than low power individuals. As

in Study 2 and consistent with our preregistration plan, we report our analysis clustering the standard errors by session<sup>9</sup>. We depict our main results in Figure 3.

*Power.* Our manipulation check confirmed that our power manipulation was successful. Individuals assigned to the high power condition reported feeling significantly more power than individuals in the low power condition ( $t(16) = 3.82$ ,  $p < .01$ ). We find a significant effect of gender on ratings of power, with males rating themselves as feeling more powerful than females ( $t(16) = 2.71$ ,  $p = .015$ ), but we find no significant effect of age ( $t(16) = -0.21$ ,  $p = .84$ ). Controlling for age and gender does not significantly change our results; we still find that individuals in the high power condition rated themselves as feeling more powerful than individuals in the low power condition ( $t(16) = 3.82$ ,  $p < .01$ ).

*Humor.* We find that individuals assigned to the high power condition created significantly more jokes than individuals assigned to the low power condition ( $t(16) = 5.54$ ,  $p < .001$ ). We do not find a significant effect of gender on the number of jokes written ( $t(16) = 0.40$ ,  $p = .69$ ), but we do not find a significant effect of age ( $t(16) = -6.69$ ,  $p < .001$ ). Controlling for age and gender does not significantly change our results; we still find that individuals in the high power condition wrote significantly more jokes than individuals in the low power condition ( $t(16) = 4.75$ ,  $p < .001$ ).

As in Study 2, counter to our prediction, individuals in the high power condition did not rate themselves as funnier than individuals in the low power

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<sup>9</sup> We cluster the standard errors by session because reactions to the power manipulation are likely to be correlated within each session; based on the reaction of the individual demonstrating the shock machine and fellow participants reactions to the demonstration.

condition ( $t(16) = 0.52, p = .61$ ). When we control for age and gender, we find that men rated themselves as significantly funnier than females ( $t(16) = 2.76, p = .014$ ), but we do not find a significant effect of age on self-ratings of funniness ( $t(16) = 0.09, p = .93$ ).

*Impression Management.* Across conditions, we find no significant difference in the degree to which participants reported being concerned about what their partner would think of their jokes ( $t(16) = -0.74, p = .47$ ). We find no significant effects of age or gender on the extent participants reported having difficulty thinking of jokes ( $ps > .06$ ).

*Cognitive Load.* We find that individuals in the low power condition report having more difficulty thinking of jokes than individuals in the high power condition ( $t(16) = -2.45, p = .026$ ). We find no significant effects of age or gender on the extent participants reported having difficulty thinking of jokes ( $ps > .18$ ).

*Mechanism.* Contrary to our predictions, we do not find that impression management concerns or difficulty thinking of jokes mediate the effect of power on telling jokes. This is true for both Baron and Kenny (1986) and bootstrap analyses (Preacher & Hayes, 2004, 2008). When we include impression management concerns and difficulty thinking of jokes in our model, the effect of the manipulation on the number of jokes written remained significant (from  $\beta = .73, p < .001$  to  $\beta = .69, p < .001$ ), while the effects of impression management concerns ( $\beta = .04, p = .467$ ) and difficulty thinking of jokes ( $\beta = -.06, p = .429$ ) were not significant. Using bootstrap analysis (Preacher & Hayes, 2004, 2008), we find insignificant indirect effects for both impression management concerns (bias

adjusted 95% confidence interval = [-.08, .02]) and difficulty thinking of jokes (bias adjusted 95% confidence interval = [-.04, .15]).

## **Discussion**

In Study 3, we again find high power individuals engage in more humor than low power individuals do. We manipulated power by telling participants that they would either receive or deliver electric shocks. We found that individuals who we told would deliver electric shocks (high power condition) wrote significantly more jokes than individuals we told would receive electric shocks (low power condition). Contrary to our expectations, we did not find that impression management concerns or difficulty thinking of jokes mediated the effect of power on telling a joke. Although participants in the low power condition reported having greater difficulty think of jokes, difficulty thinking of jokes does not appear to be the mechanism for why low power individuals are telling fewer jokes.

## **General Discussion**

Our results document an important link between power and humor. In Study 1, we examine actual corporate communication (emails from Enron), and find that the use of humor is less frequent for low power individuals than high power individuals. In Study 2, we experimentally manipulate power by telling participants that they will either receive or deliver electric shocks. We find that individuals in the high power condition, whom we told would deliver electric shocks, created significantly more jokes than individuals in the low power condition, whom we told would receive electric shocks. In Study 3, we replicated

the effects of study 2 and tested for two possible mechanisms for why high power individuals may be telling more jokes than low power individuals: (1) they have lower impression management concerns and (2) they have less difficulty thinking of jokes because of lower cognitive load. Although we found that low power individuals did report experiencing greater difficulty thinking of jokes than high power individuals, we did not find that difficulty thinking of jokes or impression management concerns mediated the effect of power on writing jokes. Together, our results demonstrate that power significantly influences the use of humor.

### *Theoretical Implications*

This work makes several important contributions to humor and power research. First, this work demonstrates that humor is prevalent in organizational communication. Although humor has been largely overlooked by prior management research, our data suggests that humor occurs in 10% of individuals emails. These results highlight that it is essential to understand humor in order to understand how individuals communicate within organizations.

Second, this is the first work to show the causal relationship between power and the use of humor. Whereas prior research has examined how humor changes status and the consequences of the use of humor by leaders (e.g., Bitterly, et al., 2017, Cooper et al., 2017, Yam et al., 2017), no prior research has examined how power influences the use of humor or how frequently leaders use humor. We find that humor is a pervasive behavior, and that individuals at the top of the hierarchy are more likely to use it than individuals at the bottom.



Third, this work introduces a new power manipulation to the power literature. In this work, we experimentally manipulated power using an electric shock apparatus. In two experiments, we find that this is an effective method manipulating power. This manipulation induces negative power, power where an individual has the ability to punish another individual. This is in contrast to prior power research, which has focused primarily on positive power, the ability to reward another individual.

### *Practical Implications*

In this work, we find that individuals at the bottom of the hierarchy are the least likely to use humor. Prior research has demonstrated that humor can increase status and potentially help individuals climb the hierarchy, but that humor is risky, and jokes that fail can cause individuals to lose status (Bitterly, Brooks, & Schweitzer, 2017). Given that low power individuals have potentially the most to gain and the least to lose by using humor, individuals in positions of low power may want to consider increasing their use of humor. On the other hand, high power individuals have much to lose from saying an inappropriate joke and may want to be more constrained in their use of humor.

### *Future Directions*

Future work should identify moderators of the relationship between power and the use of humor. Factors such as characteristics of the joke teller (e.g., race, sex, age), characteristics of the joke recipient (e.g., power of the recipient, the number of recipients, how well the joke teller knows the recipient), the medium of communication (e.g., face to face, email), and the setting (e.g., in the office, at

home) are likely to influence the likelihood that an individual who is high or low power will use humor.

In this work, we use field data from one organization and two experiments. Future work could explore the influence of power on humor in other organizational contexts, since factors such as company culture may matter. For example, companies that strongly encourage humor in their culture might make low power individuals feel more comfortable using humor and increase their use of it.

Future work could also explore the benefits of subordinate humor for leaders. There has been prior work exploring the benefits of leader humor for subordinates (Cooper et al., 2017; Yam, Christian, Wei, Liao, & Nai, 2017). Prior work has ignored the influence of subordinate humor on group performance. Perhaps subordinate use of humor provides an avenue for companies to capture the benefits of humor (e.g., increased positive affect, creativity), with less potential risk (e.g., deviant behavior).

## **Conclusion**

Humor is pervasive in organizations and intrinsically connected to power. In this work, we find that power increases the use of humor. Prior research has found that individuals that effectively use humor gain status and rise in the hierarchy. Shockingly, although individuals at the bottom of the hierarch have much to gain from using humor, they are the least likely to attempt to use it.

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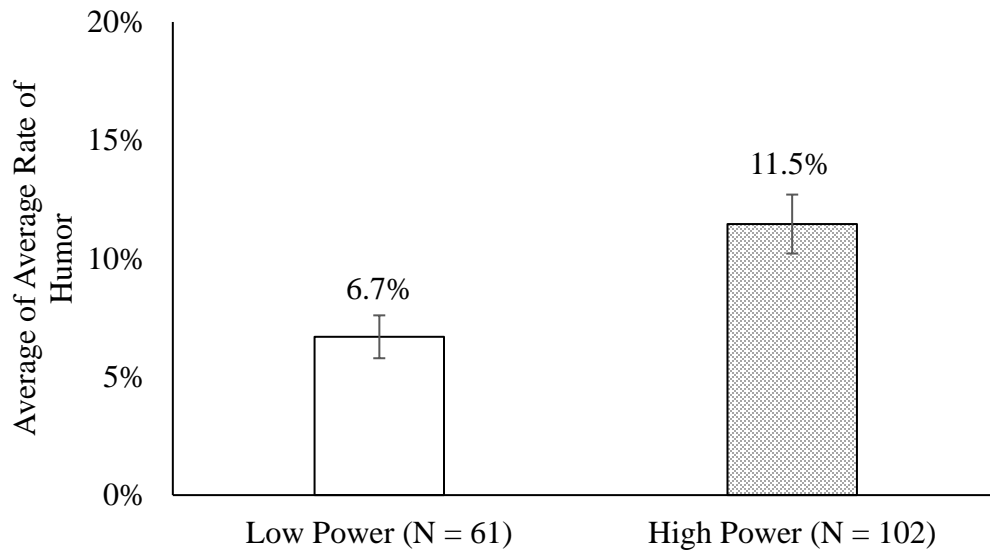
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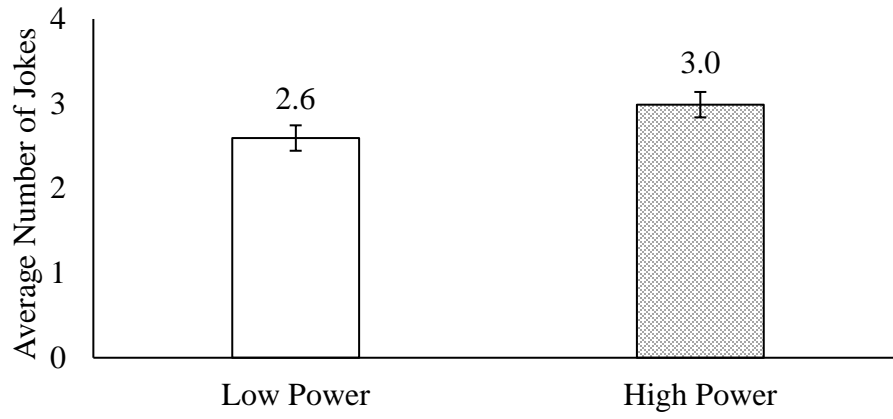
## Figures

**Figure 1. Study 1 Results – Average of Average Rate of Humor by Power of Sender**

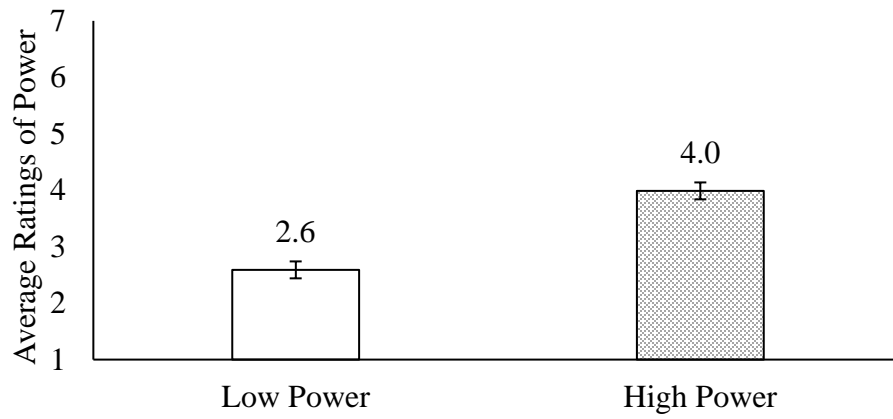


**Figure 2. Study 2 Results**

**Panel A. Use of Humor by Manipulated Power**



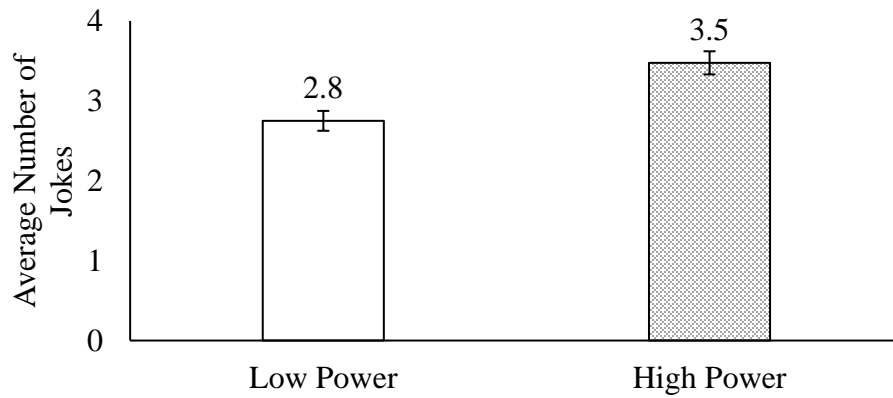
**Panel B. Ratings of Power across Conditions**



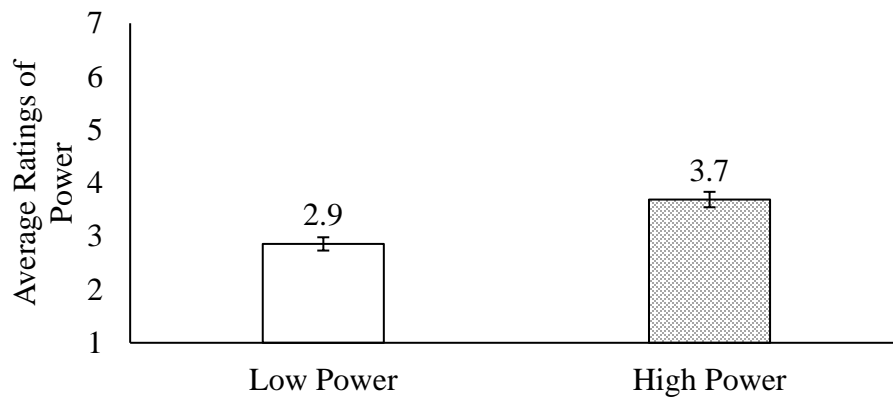


**Figure 3. Study 3 Results**

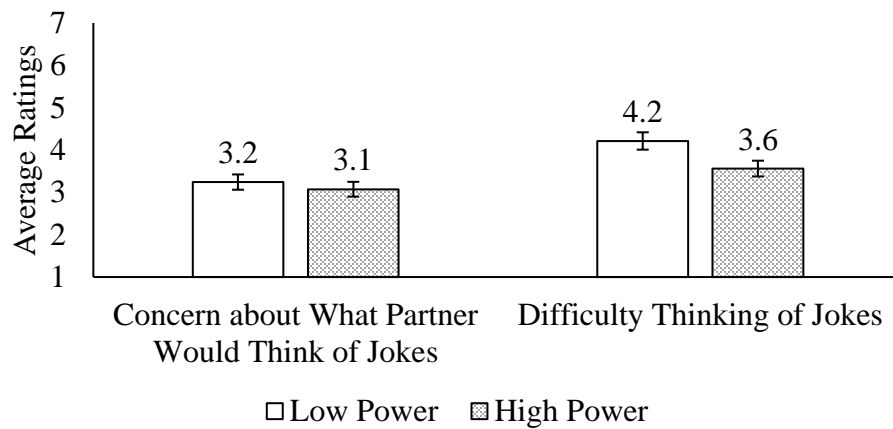
**Panel A. Use of Humor by Manipulated Power**



**Panel B. Ratings of Power across Conditions**



**Panel C. Ratings of Impression Management Concerns and Cognitive Load across Conditions**



## Appendix A

In this study, you will be asked to review emails.

Please review the entire email. If the email is part of an email chain, read through the entire chain so that you gain a full understanding of the email.

After you review the entire email, you will answer the following questions about each email:

- Did the sender of this email think part or all of their email might be funny?
  - Think of the sender. Were they trying to be funny?
  - If they are sending an initial email or a reply, did they include a joke somewhere in the current email (the one appearing at the top of the page)?
  - If they are forwarding an email, did they forward the email because they thought the recipient would find it funny?
  - Focus on the current email, but use any prior emails in a chain for context.
- If the sender did think part of all of their email might be funny, which part of the email did the sender think is funny?
  - You will be asked to copy and paste that portion of the email into your response.

On the next pages, you will review three practice emails. After the three practice emails, you will review 16 emails.