Make Me Laugh: The Effects of Laughter and Power on Social Impressions

Breanne B. Huber

Marietta College
Make Me Laugh: The Effects of Laughter and Power on Social Impressions

Breanne B. Huber
Marietta College

This thesis has been approved for the Department of Psychology of Marietta College by

________________________________________
Dr. Mark Sibicky, Ph.D.
Thesis Committee Advisor

________________________________________
Dr. Alicia Doerflinger, Ph.D.
Thesis Committee Member
Acknowledgements

I would like to thank Dr. Mark Sibicky for being my advisor throughout this process. His patience and advice have been the backbone of this experience. I appreciate his willingness to read similar revisions over and over, to make countless corrections, and to offer encouraging words just when I needed them the most. I would also like to thank Dr. Jennifer McCabe and Dr. Alicia Doerflinger for giving advice and suggestions for the experimental design and for assisting in final editing. Finally, I would like to thank Leigh Sites and Erin Boyle for putting in endless hours as my confederates. I could not have completed this without their help and dedication.
Abstract

Laughter is an innate and universal expression that serves social functions. The current study was conducted to investigate the social implication of laughter in varying power situations. Previous research suggests that subordinate laughter increases when an authority figure is present, but little is known concerning why. It was hypothesized that high-power participants would more positively evaluate the confederate who laughed during the activity than the confederate who didn’t laugh. Participants were partnered with a laughing or non-laughing confederate during the experiment. No significant difference was found between high- and low-power participants in their evaluations. Further research would be beneficial in understanding how ingratiation using laughter influences social impressions.
Make Me Laugh: The Effects of Laughter and Power on Social Impressions

Laughter is a perplexing mystery that philosophers and social scientists have attempted to unravel for centuries. Laughter has been described as a dissociation to stress (Keltner & Bonanno, 1997), a signal of false alarm (Ramachandran, 1998), an expression of joy, happiness, and play (Darwin, 1872), a method to enhance social bonds (Coser, 1960), and a way to elicit emotional affect in listeners (Bachorowski & Owren, 2001). In a more general sense, though, laughter has puzzled researchers because of its apparent innateness and universality. All humans exhibit laughter (Apte, 1985; Lefcourt, 2001), regardless of ethnicity or cultural identity. In addition, laughter is one of the first social vocalizations following crying, typically observed by four months of age (McGhee, 1979). Also, some infants exhibit gelastic (laughter-producing) epilepsy that indicates the mechanism for laughter is most likely present at birth (Sher & Brown, 1976).

Laughter may not only be innate and universal in humans, but is also present in other primates. Charles Darwin (1872) first observed laughing behavior in young chimpanzees and since then, researchers have further investigated signs of humor and laughter in non-human primates. For example, in order to study the evolutionary origins of human laughter, Vettin and Todt (2005) conducted a study in which the researchers observed a group of chimpanzees and Barbary macaques (a type of monkey that is known for its soft laughter in response to wrestling, tickling, or other forms of play). As the animals engaged in play interactions, Vettin and Todt (2005) recorded that chimpanzees vocalized while tickling and wrestling 39% of the time. Similarly, Barbary macaques vocalized in 77% of play encounters, specifically in those involving wrestling, chasing, and jumping. Through further investigation, the researchers found that chimpanzees’ vocalizations were characterized by clear frequency and alternating expiration
and inspiration, similar to human laughter. The researchers concluded that it appears logical that human laughter has a direct evolutionary link to the laughter of some primates, specifically Barbary macaques and chimpanzees. Recently, researchers have even begun investigating the laughing behavior of rats (Abumrad & Krulwich, 2008). It appears that rats make a high-pitched squeaking sound when tickled. By extending these theories, it could be hypothesized that humans use laughter to indicate intentions of play rather than hostility.

In addition to being universal among humans and perhaps innate, laughter is inherently social (Owren & Bachorowski, 2003; Russell, Bachorowski, & Fernandez-Dols, 2003), and serves many social functions, such as establishing and maintaining social relationships, enhancing desirability, and coordinating activities that benefit both parties (Shiota, Campos, Keltner, & Hertenstein, 2004). Originally, researchers believed in a representational approach to understanding the construct of laughter. The representational approach, usually employed when studying facial expressions, is based on the assumption that outward signals, in this case laughter, must stand for something (Keltner & Ekman, 2000; Keltner, Ekman, Gonzaga, Beer et al., 2003). For example, one student smiles at another student as they pass one another. One of the students concludes that the smile must be a result of his peer feeling happy or flirtatious. Using the representational approach, this example would be explained by stating that the reason for the smile is an absolute, internal feeling (i.e., happy, flirtatious).

Contrary to the representational approach, some researchers believe that laughter is a social response rather than a simple outward expression of an inward emotion. Owren and Bachorowski (2003) oppose the representational approach because primates and humans alike frequently use nonverbal signals that may be incongruent with internal feelings. Instead, the researchers suggest that nonverbal behavior is more associated with affecting the arousal,
attention, motivation, and emotion of another organism. Owren and Bachorowski (2003), therefore, propose that:

Signals are used not to convey information about underlying state, but rather to influence perceiver affect and associated behavior…We therefore expect humans to produce laughter in virtually any situation where the effect of its affect-inducing features on perceivers can benefit the vocalizer. (p. 195)

The affect-induction effect has been illustrated in the work of Fridlund (1991). In his experiment, volunteers completed a modified version of the Differential Emotions Scale (DES) and watched a pleasant video in one of four conditions: the participant arrived alone and watched alone, two participants arrived but only one watched and was told that their partner was completing a separate study down the hall, two participants arrived but only one completed the experiment (told that their partner was completing the same study down the hall), and both participants watching the pleasant video in the same room. As these conditions were run, the participants wore electromyographic (EMG) electrodes to measure facial behavior. Following the video, viewers once again completed the modified DES.

Fridlund (1991) found that the EMG data for subjects who participated alone or who believed their friends were completing unrelated tasks down the hall, showed weak but visible smiling. On the other hand, among those subjects who viewed the videotape with a friend or who believed their friend was viewing the same tape in a different room, EMG levels yielded moderate to strong smiling. Fridlund (1991) concluded that viewing the video with a partner, whether that partner was in the room or down the hall completing the same study, yielded higher levels of smiling. If his results were consistent with the representational approach discussed above, the participants’ happiness differences should parallel EMG differences (greater
happiness equals greater smiling), but no such correlation was found. While viewing condition accounted significantly for the participants’ EMG levels, happiness did not account for the EMG recordings. Fridlund (1991) analyzed participants who viewed the videotape alone since they should have been least impacted by the social aspect of the conditions. Once again, viewing condition was found to significantly account for EMG levels, but happiness ratings were not correlated with EMG output. Fridlund’s (1991) results lend themselves more readily to the affect-induction approach in that the participants were not smiling because of an internal feeling of happiness, but were instead smiling to elicit a social connection between themselves and a visible or imagined partner.

The affect-induction effect has also been demonstrated by Devereux and Ginsburg (2001). The researchers conducted a study where participants were assigned to watch a video in one of three conditions (alone, stranger, or friend). Prior to watching the videoclip, participants in the dyadic conditions completed the DES. Following the completion of the videoclip, participants completed the DES again, were asked how they felt while watching the clip, and were asked to rate the relationship with their partner (in the dyadic conditions). Devereux and Ginsburg (2001) found that respondents in the stranger condition laughed the longest, followed by the friend condition, and finally the alone condition. Additionally, participants in the dyadic conditions spent twice as much time laughing as those in the alone condition. From the DES measurements, the experimenters found no significant difference among conditions on the post-videoclip self-reports (including amusement, happiness, and anxiousness). These results suggest that laughter may not be the result of an internal emotional process but primarily serves as a social bonding, communicative signal used to create solidarity and affiliation (Devereux & Ginsburg, 2001).
A growing body of research now suggests that laughter is not an individualistic mechanism portraying a person’s inner feelings, but rather that laughter serves an interpersonal social function. For example, laughter is viewed as highly social in that it occurs more often when others are present than when one is alone. In 1977, Foot, Chapman, and Smith conducted a study to investigate how much laughter increases or decreases depending on the relationship type between children. Dyads of friends or strangers in three sex-pairings (boy-boy, girl-girl, and boy-girl) watched a “Tom and Jerry” cartoon while concealed cameras and microphones videotaped the amount of looking, laughing, smiling, talking, and touching. Results showed that laughing was essentially nonexistent when participants were alone. Companionship appeared to facilitate the production of expressive behaviors, like laughing, even when the companion was a stranger. In a second study by Foot et al. (1977), the children laughed, smiled, looked, and talked more with a friend than they did with a stranger.

In addition to the research that suggests people laugh more when in the presence of others, other research has shown that laughter is contagious. Laughter’s infectious nature is yet another reason why it may serve the function of strengthening social bonds. For example, “canned” laughter in television show sitcoms is an attempt to capitalize on the contagious aspects of laughter in order to maximize the amount of audience laughter. Platow, Haslam, Both, Chew, et al. (2005) studied the effectiveness of “canned” laughter on audience laughter depending on whether the listeners thought the laughter came from in-group or out-group members. Participants laughed longer when the audiotape included canned laughter than when it did not. Additionally, participants smiled and laughed nearly four times as often when the audience was perceived to be in-group members rather than out-group members. Finally, participants rated the audiotape and quality of the comedian better when they perceived the comedian was performing
for in-group members. The researchers concluded that “humor not only serves important group functions...but can also be the outcome of group processes (such as social influence) in itself” (Platow et al., 2005, p. 549).

In addition to laughter being more common in the presence of company and being contagious, people also enjoy being around others who laugh and feel closer to those with whom they’ve laughed. Sprecher and Regan (2002) investigated the social function of laughter by conducting a study examining how the preferences of men and women change depending on the relationship being considered. They hypothesized that both genders would make a distinction between traits they were looking for in a casual sex partner and those they were seeking in a serious romantic partner. Through surveying students about their preferences, Sprecher and Regan (2002) found no support for this hypothesis. Instead, the researchers discovered that “men and women emphasized such intrinsic characteristics as warmth and kindness, expressiveness and openness, and humor” in both relationship types (Sprecher & Regan, 2002, p. 476). Their results suggest that intrinsic characteristics, like humor, are fundamental components of interpersonal relationships.

Similarly, Reysen (2005) conducted a study in which he hypothesized that individuals who laugh would receive higher likeability scores. Participants were asked to watch 12 videotapes of an individual reading a paragraph from a children’s story. In the clips, the individual was genuinely laughing, faking laughter, or not laughing. After watching each 30-second clip, the participants were asked to complete the likeability survey. Reysen (2005) found that participants rated the individuals who genuinely laughed or fake laughed significantly higher on the likeability scale than those who did not laugh. It appears that people like people who laugh more than those who do not laugh, regardless of whether it’s genuine or phony.
More recently, Reysen (2006) presented participants with a videotaped recording of individuals who laughed genuinely, faked laughter, or did not laugh at all. Participants then rated their likeability of the individual in the video, and women were found to be rated higher on likeability than men with both genuine and fake laughter. Overall, participants liked individuals who genuinely laughed more than those who faked laughter and, in turn, more than those who did not laugh at all. In a subsequent study, participants viewed still photographs of people genuinely laughing, faking laughter, or not laughing at all. Similarly, participants rated the individuals as more likeable whether the laughter was genuine or fake. The presence of laughter may play a large social role in anticipating how much another individual will like the laugher. Essentially, the more laughter present, whether genuine or fake, the more another person will like the laugher.

As research suggests, it is apparent that people like people who laugh, but laughter may also play a role in how close two people feel. In a study by Fraley and Aron (2004), same-sex stranger pairs participated in a shared activity that was or was not humorous and then completed a measure of how close they felt to their partner. Fraley and Aron (2004) found that closeness scores were higher for participants in the humor condition than in the no-humor condition, with the humor condition having a greater effect on those participants with a good sense of humor. The researchers concluded that humor should be viewed as an important variable in considering how close relationships develop.

In summary, many different theories to explain laughter have been proposed. Today, most researchers suggest that laughter may not necessarily be an outward sign of an inward emotion, but instead may function as a way of establishing social relationships and influencing others’ actions. To reiterate, laughter serves important social functions, as is evident by it being
more common when someone else is present, by its contagiousness, and by people liking people who laugh.

Researchers have studied the effects of laughter in many social situations, but a much needed and intriguing area of study is its relationship with power dynamics within a group. Power is defined as an individual’s capacity to impact others by either providing or withholding resources or administering punishments (Keltner, Gruenfeld, & Anderson, 2003). Resources and punishments can include things like food, money, and physical harm. In order for the person to maintain power by administering resources and punishments, the subordinate person must value those resources highly and they must not be able to obtain those resources through alternative means. A theory of power has emerged that examines power’s impact on an individual’s and others’ laughter.

People who maintain high power are approach-oriented because they have access to increased resources (i.e., financial, food, physical comforts, flattery, esteem, praise), and because they feel they have the freedom to act as they wish with little or no serious social consequence (Galinsky, Gruenfeld, & Magee, 2003). Conversely, people who possess little power exhibit less approach-oriented behavior because they have less access to material, social, and cultural resources. They pay close attention to threats, have negative emotion, controlled cognition, and their behaviors are inhibited by social situations. Therefore, low power individuals are more sensitive to evaluations from others and potential social constraints (Keltner, Gruenfeld, & Anderson, 2003).

In 1998, Keltner, Young, Heerey, Oemig, and Monarch published a study in which they began investigating the power approach theory. The researchers hypothesized that targets of teasing would experience greater negative facial emotion and less positive emotion than those
who were doing the teasing. Through a method involving participants creating nicknames about one another and telling embarrassing stories behind the creation of those nicknames, Keltner et al. (1998) found that low-status participants displayed increased facial embarrassment, pain, fear, and fewer Duchenne smiles when being teased by a high-status participant. In essence, a Duchenne smile is thought of as a genuine, felt smile that is composed of a smile and the crinkling of the eyes, lasts between one-half to four seconds, and is usually accompanied by humorous laughter (see Harris & Alvarado, 2005, for recent definition). Further, in the conditions where the low-status participant was doing the teasing or was being teased by another low-status participant, more Duchenne smiles were expressed and recorded. Similarly, high-status participants showed more Duchenne smiles when teasing or being teased by the other high-status participant. Overall, “low-status teasers showed more negative emotion than high-status teasers” (Keltner et al., 1998). High-status participants smiled more often, while low-status participants displayed more embarrassment, fear, and pain (negative affect). When in positions of high power, the participants were less inhibited by showing increased positive facial expression than when they were in positions of low power.

Further research has indicated that people in positions of low power also work harder to make a good impression on someone of higher power. De Dreu and Van Kleef (2004) found that low power participants asked questions directed at learning the higher power person’s beliefs as well as questions meant to aid in creating an accurate impression of their high power partners. By paying greater attention and manipulating the situation in a way that increases the likelihood of creating a good impression, a low power individual could be capable of acquiring a small amount of control.
Traditionally, high power has been associated with the expression of positive emotions and approach tendencies while low power involves expressing more negative emotions and attention to threat (Keltner, Gruenfeld, & Anderson, 2003). According to this theory, laughter would trickle down from individuals maintaining high power to those of lower power. According to the previous research, though, people in lower positions of power focus extra attention on those who maintain greater power, so laughter could be used as a means to ingratiate or affiliate themselves with high power individuals. Therefore, low power individuals may not laugh because they think the high power individual is funny but because laughter is a way to gain affiliation and acceptance.

Moreover, the power position that an individual occupies may improve affect in and of itself (Kipnis, 1976; Kipnis & Vanderveer, 1971). A person in a high position of power feels a greater sense of authority, control, and exhibits positive affect, and when in the presence of an ingratator, would evaluate the ingratator more favorably than a person in low power. Laughter may amplify that ingratiating response.

To test this theory, Stillman, Baumeister, and DeWall (2007) conducted a study investigating the effects of power on laughter. The researchers hypothesized that participants would laugh most when in a low-power position. Each participant arrived under the impression that they would be interviewed about the spending habits of college students. Two research assistants were present, one who acted as the experimenter and one as the interviewer. To manipulate power, two groups were created. The experimenter told the first group, comprised of the low-power participants, that one of the interviewees would receive a substantial cash prize, that it would not be randomly selected, and that the only condition for receiving the money would be for the participant to tell the experimenter how they intended to spend the money.
Essentially, the mention of the cash prize established a hierarchy of power between the interviewer and interviewee. The participants in the low-power condition were aware that they would be interviewed by someone who had the power to dispense money and that their performance in the interview could win them the cash prize. In the second group, the control condition, there was no mention of money and, therefore, no establishment of a power difference. Prior to meeting the interviewer, participants made a list of items they would like to purchase if they had more money, but only the low-power group was aware that they would be meeting someone that could potentially help them obtain those items.

To ensure that the interviewer did not tell the jokes differently based on the participants’ expectations, she was kept blind to the condition. The interviewer began asking the participant questions, occasionally inserting a range of unfunny to funny jokes throughout the conversation. After the interview was complete, the interviewer left and the experimenter returned to debrief the participant, to reveal the camera, and to pay the participant (both those that were and were not aware of the possibility of a cash prize prior to completion of the experiment). To measure laughter, three research assistants, blind to the experimental hypothesis and condition, rated each instance of laughter on a scale from 1 (very weak or inaudible) to 21 (very loud, boisterous laughter). Prior to measuring laughter in this experiment, the research assistants examined several hundred instances of laughter and discussed their laughter ratings with one another. Thus, high interrater reliability was obtained (Stillman et al., 2007).

Stillman et al. (2007) concluded that low-power participants laughed more than control participants, and that participants laughed more at the funny jokes. In other words, low-power positions appear to amplify the laughter response, especially in response to a funny joke.
Stillman et al. (2007) conducted a second study to evaluate whether people who lack power were more willing to laugh in general or if their laughter seemed to occur primarily when in the presence of an individual with greater power. In order to test this, the researchers removed the possibility of direct ingratiation by having participants watch a prerecorded videotape of another participant introducing herself. To manipulate power, Stillman et al. (2007) told the participants that they would assume the role of “boss” (watch the introduction and decide how much money to award the participant in the video), the role of “underling” (the person in the video would watch their introduction and control the money), or the role of “coworker” (the experimenter was the boss and would decide how the money was distributed). Essentially, the participant maintained higher power than the video person in one condition (boss), lower power than the video person in another condition (underling), and equal power to the video person in the third condition (coworker) because the experimenter assumed the role of “boss.”

Stillman et al. (2007) found that power had a significant effect on laughter, in that participants in the underling condition laughed more than participants in the boss condition. Likewise, participants in the coworker condition laughed more than those in the boss condition. The results of Study 1 and Study 2 suggest that being in a position of low power invokes a willingness to laugh.

The findings suggest that when under the impression that an authority figure is going to determine their reward (i.e., high power), people may laugh as a way to ingratiate themselves and hopefully earn favor with the person in authority. A remaining question, though, is whether laughter works to elicit liking. Do people in positions of power form positive impressions of people who laugh? Laughter and humor induce positive affect so laughter may serve as an effective way to influence how one is treated by another person. Essentially, laughter could
induce another person to view the laugher more favorably (Stillman et al., 2007; Cooper, 2005). The current study further examined the interaction between the effects of laughter and authority, and possible effects on perceptions of likeability.

Similar to the procedures of Stillman et al. (2007), the present study used a 2 (Power: high-power, low-power control) X 2 (Laughter: laugh, no laugh) experimental design. Participants arrived at the laboratory under the impression that they were going to be tested on basic language skills and memory. Instead, participants were randomly assigned to one of four conditions: high-power laugh (high/laugh), high-power no laugh (high/no), low-power laugh (low/laugh), and low-power no laugh (low/no). The high-power participants had the opportunity to allocate a monetary reward to the interviewee (a confederate), and were notified that the interviewee was aware of a possible reward. In the low-power control conditions, participants conducted the same interview, but there was no mention of a monetary reward. In reality, the interviewee was a confederate of the experiment who maintained consistency across conditions of high- and low-power. The confederate did not laugh at all during the no laugh condition, but laughed frequently (10 times while the participant was reading the paragraph) during the laugh condition. After the conclusion of the interview activity, participants responded to the Reysen Likeability Scale (Reyson, 2005), a survey used to measure likeability. It was predicted that there would be a significant main effect of laughter and also a significant interaction between laughter and power. To further explain, it was predicted that high-power participants would significantly like the confederate who laughs throughout the interview much more than the confederate in the no laugh condition. Low-power participants would like the confederate who laughs more than the confederate who did not laugh, but the effect will be much smaller than in the high-power condition.
Method

Participants

A total of 61 undergraduate students were recruited from the psychology participant pool. The participants were offered one credit hour for their participation, towards fulfilling a three-hour research participation requirement. In addition, prior to beginning the research activity, the experimenter explained that both the participant and the confederate would be entered into a drawing for a $25 gift card.

Materials

The participants completed a Mad Lib (Teacher Vision, 2008) to use as the memory test for the confederate. Mad Libs are typically humorous word games that ask a partnered pair to fill in the blanks of sentences. A Mad Lib was chosen because it is an easy, quick, and humorous activity that would incorporate the participant directly into the method of the study (see Appendix A for an example of the Mad Lib).

In addition, the Reysen Likeability Scale (RLS) (Reysen, 2005) was used in order to reliably measure how much the low- or high-power interviewers liked the confederate who either laughed or did not laugh. The RLS is found to be internally consistent, and validity was measured against Goldberg’s 100-Adjective Personality Test (Goldberg, 1992). Cronbach’s standardized reliability coefficient for the RLS was .91 (Reysen, 2005).

For the current study, a modified RLS was used. The participant responded to three additional statements and rated their agreement (“I would enjoy working with this person on a group project”; “This person is nice”; This person is genuine or true to themselves’). An example of the modified RLS is included in Appendix B.
In addition to the RLS, three manipulation checks were added to ensure that the participants were aware of the confederate laughing or not, to establish how much control the participant felt during the session, and to clarify how much power participants felt they had.

Procedure

Prior to beginning the study, each individual participant was met by the experimenter and asked to read and sign an informed consent form.

Participants arrived at the laboratory under the impression that they were going to be tested on basic language components or asked to “learn” a paragraph that would be read to them. In essence, the participant was under the impression that they would either be the teacher (completing the Mad Lib and testing the confederate) or the student (asked to “learn” the Mad Lib as it was read). After a brief introduction of the participant and the confederate, the experimenter explained that the study was focusing on language comprehension and memory recall and how those things play a role in first impressions. Participants were then instructed to choose a slip of paper from the center of the table that would assign them as the “teacher” or the “student.” In actuality, both slips read “teacher,” but the confederate pretended to have received the “student” slip. The confederate was then dismissed to another room and told that the experimenter would be in to explain their task. After the confederate left the room, the participants were instructed to complete a Mad Lib activity at their own pace, with no time limits given. Mad Libs are word games where a person sees a list of items (i.e., noun, verb, place) and must come up with an example of each. Once the person provides a list of words, they fill in the blanks of a story with those words. Since the individual is not aware of the context of the story, typically it is humorous and nonsensical when read. An example of a Mad Lib is included in Appendix A.
After completing the Mad Lib, the participants were told to enter an adjacent room so that they could hear but could not see the confederate. Then, the participants were instructed to read the Mad Lib paragraph to their partner, the confederate, and then ask them a series of three fill-in-the-blank statements (to satisfy the memory recall aspect of the cover story). Despite previous findings that laughter increases when participants are in the same room, it was important to separate the participant and the confederate in this experiment because the confederates needed to accurately record the words chosen by the participant, so that across all conditions they consistently answered the three fill-in-the-blank statements correctly. When the three statements were complete, the experimenter entered the participants’ room. In the high-power condition, the experimenter reminded the participant that their partner was aware of possible chances in a drawing and gave them the RLS to complete. In the low-power condition, no mention of control of the number of chances given to the confederate was mentioned and the participants simply completed the RLS. Once the RLS was completed, participants were told they could exit the experimental room and were then thanked and dismissed from the experiment.

The confederate responded to the Mad Lib differently depending on condition. In the no laughter condition, the confederate did not laugh at all when the participant read the Mad Lib. In the laughter condition, the confederate laughed on 10 out of 12 words that the participant used while reading the Mad Lib. While the participant read the Mad Lib to the confederate, the confederate recorded the key words that the participant was going to ask for at the end of the activity. Words that elicited laughter are marked with an asterisk on the example of the Mad Lib in Appendix A. The three target statements that the confederate used as a guide to remember are also shown in Appendix A.
To score the RLS, the experimenter summed and then averaged the scores for the first 11-items to get an overall likeability rating. The additional three statements that were added to the RLS were analyzed separately since they were not part of the original questionnaire. For high-power participants, the number of chances for the drawing given to the confederate was recorded. Therefore, the dependent measure was the RLS in both the high-power and low-power conditions. Finally, participants responded to the three manipulation checks by recording whether the confederate laughed or not, how much control they felt they had during the experiment, and how much power they felt they had. An example of the RLS and manipulation checks are available in Appendix B.

At the conclusion of the session, all participants were thanked and instructed that they would be emailed or called with the complete results of the study.

**Results**

This study was conducted to examine the individual and combined effect of power and laughter on likeability. It was hypothesized that participants would report greater likeability in high-power laugh situations, as compared to the other conditions. As a manipulation check concerning the levels of power, two independent-sample t-tests were conducted to examine whether participants in high positions of power felt they had more control and power than participants in low-power. The alpha level for all analyses was set at .05. Participants answered the two manipulation checks with a score from 1 to 7, with higher scores indicating greater sense of control and power. The participants in low-power actually reported feeling more control ($M = 5.87, SD = 1.20$) during the experiment than those in high-power ($M = 5.57, SD = 1.14$) (see Table 1). This difference between power level was not significantly different, $t(59) = -1.02, p = .314$. The data showed a small effect size ($r^2 = .02$). The participants in the low-power condition
also reported feeling more powerful ($M = 5.65, SD = 1.02$) than the participants in high-power ($M = 5.00, SD = 1.53$) (see Table 1). This difference between participants was not significant, $t(59) = -1.93, p = .059$, and showed a small effect size ($r^2 = .06$). These results suggest that the manipulation of power was not successful in that the power condition did not influence how much control or power the participants felt during the experiment. Graphical representations of these relationships are presented in Figure 5 and Figure 6.

Further exploratory analyses were conducted to examine whether there was a significant difference despite the manipulation of power being unsuccessful. Likeability was measured using the RLS 7-point scale, with higher numbers indicating greater likeability. A 2 (Power: high, low) X 2 (Laughter: laugh, no laugh) between-subjects analysis of variance (ANOVA) was conducted on the likeability rating from the RLS scale. Fourteen participants were included in the high-power no laugh condition, 16 in the high-power laugh, 15 in the low-power no laugh, and 16 in the low-power laugh condition, for a total of 61 participants. The high/laugh group had the highest rating of likeability ($M = 5.63, SD = .65$), followed by the high/no laugh group ($M = 5.52, SD = .98$), the low/no laugh group ($M = 5.49, SD = .83$), and finally the low/laugh group ($M = 5.31, SD = 1.59$). A two-way ANOVA did not reveal a significant main effect of the power and laughter manipulations, $F(1, 57) = .27, p = .603, \eta^2 = .005$ (see Table 2). These results suggest that participants reported no significant difference in reported likeability between the high/laugh, high/no laugh, low/laugh, and low/no laugh conditions (see Figure 1).

Additional 2 (Power: high, low) X 2 (Laughter: laugh, no laugh) between-subjects ANOVAs were conducted on the supplemental statements added to the RLS. For the first statement, “I would enjoy working with this person on a group project,” no significant difference was found across conditions. The low/no laugh group had the highest rating of willingness to
work on a group project ($M = 6.27, SD = .80$), followed by the high/no laugh group ($M = 6.14, SD = .95$), the high/laugh group ($M = 5.81, SD = 1.11$), and finally the low/laugh group ($M = 5.44, SD = 1.63$). The analysis did not reveal a significant main effect of the power and laughter manipulations on willingness to work together in a group, $F(1, 57) = .68, p = .412, \eta^2 = .012$ (see Table 3). These results suggest that there is no difference in the degree of willingness to work together on a group project across the power and laughter conditions (see Figure 2).

For the second statement, “This person is nice,” no significant difference was found across conditions. The low/no laugh group had the highest rating of niceness ($M = 6.40, SD = .74$), followed by the high/no laugh group ($M = 6.14, SD = 1.03$), the high/laugh group ($M = 6.13, SD = .96$), and finally the low/laugh group ($M = 5.94, SD = 1.61$). This analysis did not reveal a significant main effect of the power and laughter manipulations on whether the confederate was considered nice, $F(1, 57) = .58, p = .450, \eta^2 = .010$ (see Table 4). These results suggest that power and laughter did not have an effect on whether the participant considered the confederate to be nice or not (see Figure 3).

Finally, the third statement, “This person is genuine or true to themselves,” did not yield a significant difference across conditions. The low/no laugh group had the highest rating of genuineness ($M = 5.53, SD = 1.51$), followed by the high/no laugh group ($M = 5.50, SD = 1.09$), the high/laugh group ($M = 5.31, SD = 1.30$), and finally the low/laugh group ($M = 5.25, SD = 1.39$). This analysis did not reveal a significant main effect of the power and laughter manipulations on how genuine the participants perceived the confederates, $F(1, 57) = .02, p = .889, \eta^2 < .001$ (see Table 5). These results suggest that power and laughter did not influence how genuine the confederate was perceived (see Figure 4).
Discussion

This study was conducted to investigate whether laughter is a helpful ingratiation tool when in the presence of someone with higher power. In other words, will a person in high-power evaluate a laughing partner more favorably than a person in low-power? The results failed to confirm the hypothesis that level of power and the presence or absence of laughter would have a significant effect on reported likeability of another person. It was hypothesized that there would be a significant interaction between between laughter and power on ratings of likeability and a significant main effect of laughter on likeability, but none were found. There are several possible explanations for the failure to confirm the hypothesis.

First, a manipulation check was conducted to examine whether high-power participants felt greater power than low-power participants. The results of the analysis show that the power manipulation was unsuccessful. High-power participants and low-power participants reported feeling similar levels of control and power during the experiment. There was no difference in a sense of control or power between the conditions, and the participants were generally consistent in their ratings of likeability for the confederate.

Second, it is likely that the cover story was not adequately developed and not very convincing. By attempting to combine three concepts (language comprehension, memory recall, and impression formation), several participants were skeptical of exactly what the study was investigating.

Third, the use of the Mad Lib may not have been the most effective device to generate the perception of genuine laughter in the confederates. It was practical, but some participants did not appear to view it as a humorous activity. A better activity would be one in which the participants are permitted to come up with a humorous joke or story on their own. In this situation, the
participants would have a personal investment in the activity and the laughing or no laughing may make a greater impact on their ratings of likeability for the laugher or non-laugher.

Fourth, in the high-power condition, the participants were asked to decide how many chances at the drawing the confederate deserved based on how much the participants liked the confederates. For the most part, though, participants gave the confederates close to the maximum number of tickets because they answered all the memory recall, fill-in-the-blank questions correctly. Instead of basing their decision on how much they liked the confederate, it appears that the participants based their judgments on how “smart” the confederate was.

Finally, a confounding variable that contributed to the failure to find significance was familiarity with the confederate. Many participants were familiar with the confederates prior to participating in the study, so their responses were based not on the ten minute exchange during the Mad Lib, but instead on their previous interactions with the confederates. One way to combat this issue altogether would be to have a confederate that is not a student at the college. This would eliminate the possibility that the participant would have any preconceived notions of the confederate’s character.

If this study is conducted again, it would be beneficial to develop a stronger cover story to encourage the participants to feel invested in the experiment. Also, the experiment would be more valid if the participants had to use their own humor to elicit laughter from the confederate. By doing this, the participant may show a greater liking for those who laugh at their jokes but show much less liking for those who do not laugh. It would also be advantageous for the confederate to be a student from a different college or university, or to conduct the study at the beginning of a semester when underclassman are less familiar with upperclassman.
As a whole, the results of this experiment do not support the conclusions of previous research. Many researchers have discovered a correlation between laughter and likeability, the greater the laughter, the higher the evaluation of the laugh (Sprecher & Regan, 2002; Reysen, 2005; Reysen, 2006; Fraley & Aron, 2004). In addition, some studies have reported a relationship between who is present and the amount of laughter (Erber & Fiske, 1984; Stillman et al., 2007). In particular, Stillman et al. (2007) found that people who are in lower positions of power laugh more when in the presence of a high-power individual than when in the presence of someone who is of similar or lower power. This experiment sought an explanation for this occurrence—that laughter has some ingratiatory influence on a person with high-power. Unfortunately, this experiment did not reveal that relationship. The data suggest that laughter does not influence ratings of likeability, however an improved study should be conducted.

Since no significant differences were found within the current study, the question of whether laughter influences an evaluator’s opinion of someone else is still unanswered. This study should be conducted again, with the appropriate corrections and changes, to evaluate how much ingratiatory power laughter exerts.
References


Journal of Diseases of Childhood, 130, 1126-1131.


Appendix A

Mad Lib Example

Step 1: The participant completed this worksheet by giving an example of each of the items listed on the left.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Participant’s Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Last name of a person</td>
<td></td>
</tr>
<tr>
<td>2. Last name of a person</td>
<td></td>
</tr>
<tr>
<td>3. Adjective</td>
<td></td>
</tr>
<tr>
<td>4. Plural noun</td>
<td></td>
</tr>
<tr>
<td>5. Plural noun</td>
<td></td>
</tr>
<tr>
<td>6. Animal (plural)</td>
<td></td>
</tr>
<tr>
<td>7. Celebrity</td>
<td></td>
</tr>
<tr>
<td>8. Plural noun</td>
<td></td>
</tr>
<tr>
<td>9. Plural noun</td>
<td></td>
</tr>
<tr>
<td>10. Noun</td>
<td></td>
</tr>
<tr>
<td>11. Noun</td>
<td></td>
</tr>
<tr>
<td>12. Plural noun</td>
<td></td>
</tr>
</tbody>
</table>

Step 2: After completing the previous task, the participant read the story to the confederate with the words he/she provided. In the laugh condition, the confederate laughed when 10 of the 12 blanks were filled in with the participants’ responses. In the no laugh condition, the confederate did not laugh in any instances.
The participant reads the following story to the confederate:

Young people today would rather listen to a good rock music concert than to Johann Sebastian _____1.*_____ or Ludwig von _____2.*_____. Rock music is played by _____3.*_____ groups of young men who wear their hair below their _____4.*_____. They also wear very odd and colorful _____5.*_____ and often have beards. The groups have attractive names such as “The _____6.*_____” or “_____7.*_____ and the Three _____8.*_____.” They usually play electric _____9.*_____ by beating his _____10.*_____. The songs they sing are mostly about some fellow who has been rejected by his _____11.*_____. They are very sad, and when young girls hear them, they often get tears in their _____12.*_____.


*Step 3. The participant was instructed to read the following statements to their partner (the confederate) and allow him or her to fill in the blank. Then, the participant was to write the confederate’s responses in the spaces provided.*

1. Rock music is played by ______________________ groups of young men…

2. They usually play electric ______________________.

3. They are very sad, and when young girls hear them, they often get tears in their __________________.
Appendix B
Reysen Likeability Scale (RLS) (Reysen, 2005)

Instructions: *Circle* how strongly you agree with each statement (1 = very strongly disagree, 7 = very strongly agree).

<table>
<thead>
<tr>
<th>Very strongly disagree</th>
<th>Very Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This person is friendly.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>2. This person is likeable.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>3. This person is warm.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>4. This person is approachable.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>5. I would ask this person for advice.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>6. I would like this person as a coworker.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>7. I would like this person as a roommate.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>8. I would like to be friends with this person.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>9. This person is physically attractive.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>10. This person is similar to me.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>
11. This person is knowledgeable.

1 2 3 4 5 6 7

12. I would enjoy working with this person on a group project.

1 2 3 4 5 6 7

13. This person is nice.

1 2 3 4 5 6 7

14. This person is genuine or true to themselves.

1 2 3 4 5 6 7

15. Did your partner laugh during the activity? (circle)  Yes  No

16. How much control did you feel you had during the interview? (1 = none, 7 = a great deal)

1 2 3 4 5 6 7

17. How much power did you feel you had during the interview session? (1 = none, 7 = a great deal)

1 2 3 4 5 6 7
Table 1

Means (Standard Deviations) for Control and Power Checks in High- and Low-Power Conditions

<table>
<thead>
<tr>
<th>Manipulation Check</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>5.57 (1.14)</td>
<td>5.87 (1.20)</td>
</tr>
<tr>
<td>Power</td>
<td>5.00 (1.53)</td>
<td>5.65 (1.02)</td>
</tr>
</tbody>
</table>

*Note.* The differences between the power conditions on the means and standard deviations for the manipulation checks were not significant according to two independent-samples *t*-tests with an alpha of .05.
Table 2

*Analysis of Variance Statistics for Overall Likeability*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>$\eta^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (P)</td>
<td>1</td>
<td>.40</td>
<td>.007</td>
<td>.529</td>
</tr>
<tr>
<td>Laugh (L)</td>
<td>1</td>
<td>.01</td>
<td>&lt;.001</td>
<td>.906</td>
</tr>
<tr>
<td>P X L</td>
<td>1</td>
<td>.27</td>
<td>.005</td>
<td>.603</td>
</tr>
<tr>
<td>Error</td>
<td>57</td>
<td></td>
<td>(1.16)</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Value enclosed in parenthesis represents mean square error. $\alpha = .05$
Table 3

Analysis of Variance Statistics for Willingness in a Group Together

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>$\eta^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (P)</td>
<td>1</td>
<td>.17</td>
<td>.003</td>
<td>.679</td>
</tr>
<tr>
<td>Laugh (L)</td>
<td>1</td>
<td>3.69</td>
<td>.061</td>
<td>.060</td>
</tr>
<tr>
<td>P X L</td>
<td>1</td>
<td>.68</td>
<td>.012</td>
<td>.412</td>
</tr>
<tr>
<td>Error</td>
<td>57</td>
<td>(1.39)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Value enclosed in parenthesis represents mean square error. $\alpha = .05$
Table 4

*Analysis of Variance Statistics for How Nice a Person is Perceived as Being*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>$\eta^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (P)</td>
<td>1</td>
<td>.01</td>
<td>&lt;.001</td>
<td>.906</td>
</tr>
<tr>
<td>Laugh (L)</td>
<td>1</td>
<td>.68</td>
<td>.012</td>
<td>.415</td>
</tr>
<tr>
<td>P X L</td>
<td>1</td>
<td>.58</td>
<td>.010</td>
<td>.450</td>
</tr>
<tr>
<td>Error</td>
<td>57</td>
<td>(1.30)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Value enclosed in parenthesis represents mean square error. $\alpha = .05$
Table 5

*Analysis of Variance Statistics for How Genuine a Person is Perceived as Being*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>$F$</th>
<th>$\eta^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (P)</td>
<td>1</td>
<td>&lt;.01</td>
<td>&lt;.001</td>
<td>.966</td>
</tr>
<tr>
<td>Laugh (L)</td>
<td>1</td>
<td>.47</td>
<td>.008</td>
<td>.495</td>
</tr>
<tr>
<td>P X L</td>
<td>1</td>
<td>.02</td>
<td>&lt;.001</td>
<td>.889</td>
</tr>
<tr>
<td>Error</td>
<td>57</td>
<td>(1.78)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Value enclosed in parenthesis represents mean square error. $\alpha = .05$
Figure Captions

*Figure 1.* The effect of laughter and no laughter on the likeability scores given by participants in high- and low-power.

*Figure 2.* The effect of power and laughter on willingness to work in a group together.

*Figure 3.* The effect of power and laughter on how nice a person is perceived as being.

*Figure 4.* The effect of power and laughter on how genuine a person is perceived as being.

*Figure 5.* Manipulation check of how much control participants felt in high- versus low-power.

*Figure 6.* Manipulation check of how much power participants felt in high- versus low-power.