

Laughing All the Way to the Questionnaire Bank: A Mixed Methods Examination of Humor Appreciation after a Brief Communication

Andrew Dix*

Abstract

The current investigation employed a mixed methods design to analyze humor appreciation within the framework of interpersonal communication. Study participants completed a quantitative humor appreciation pre-test that assessed another individual, engaged in a distraction task, and then completed a quantitative humor appreciation post-test that re-assessed the same individual. Observations of interpersonal dyads were also undertaken to provide understanding of humor appreciation during initial interaction. The observed three-way interaction revealed that communication diminished the effects of personality information in the context of humor appreciation. Findings also suggested that individuals who telegraph a flattering persona are open to appreciating the humor of others. Future research should examine what other variables could potentially alter the construct of humor appreciation.

Keywords: humor appreciation, interpersonal, laughter, communication

Introduction

A famed proverb by an anonymous author provides a unique perspective on humor via offering the following insight:

"As I stumble through this life help me to create more laughter than tears,
dispense more cheer than gloom, spread more cheer than despair.....

* **Dr. Andrew Dix** Middle Tennessee State University, U.S.A. E-mail address: andrew.dix@mtsu.edu

Never let me forget that my total effort is to cheer people, make them happy, and forget momentarily, all the unpleasantness in their lives. And in my final moment may I hear you whisper: 'When you made my people smile, you made me smile.'

While religious overtones highlight the closing verse of the renowned clown's prayer, the aforementioned poem effectively highlights the empirical phenomenon of reflecting on how others appreciate humor in everyday life. Indeed, the construct of humor appreciation has been prevalent in academic scholarship as researchers have investigated humor appreciation amongst intellectually disabled children (Degabriele & Walsh, 2010), analyzed the function of humor appreciation in individuals with Parkinson's disease (Thaler, Posen, Giladi, Manor, Mayanz, Mirelman, & Gurevich, 2012), and dissected the correlation between humor appreciation and epilepsy (Suits, Tulviste, Ong, Tulviste, & Kolk, 2012). Although the aforesaid studies have specifically centered on humor amid those afflicted with a medical condition, it is imperative to consider other avenues of research that focus on the appreciation of humor.

This social experiment explored the constructs of humor appreciation and interpersonal communication. The specific purpose of this study was to examine whether humor appreciation was influenced by personality information and social interaction. A review of extant literature was completed to highlight previous findings on the appreciation of humor as well accentuate the function of interpersonal communication within the arena of humor appreciation. Mixed methods were then employed to measure and analyze the evaluations of others. In short, this analysis was designed to examine whether communication and personality information could manipulate the variable of humor appreciation.

Literature Review

The concept of humor appreciation has captured the attention of researchers for numerous years. Seminal scholarship devoted to humor appreciation employed the use of cartoons and limericks to examine various types of humor (Andrews, 1943). It was along a similar line that

Zigler, Levine, and Gould (1966) reported less mirth and humor appreciation were measured in children after viewing cartoons in relation to other mediums because cartoons were not cognitively taxing. It was almost a year later that Singer, Gollob, and Levine (1967) suggested that inhibition affected whether participants appreciated or did not appreciate aggressive humor in cartoons. McGhee (1971) was one of the first researchers to apply theoretical discussion to cartoon research and reported that “there appears to be no consistent relationship between age and humor appreciation for either novelty or incongruity humor” (p. 134). Burns and Tyler (1976) revealed evidence that gender differences existed between women and men with regard to appreciating humor in risqué cartoons. While the aforementioned studies employed cartoons to investigate the appreciation of humor, subsequent research on humor appreciation has employed more complex methodological designs.

Contemporary research devoted to humor appreciation often reports correlation analyses via utilizing a quantitative scale. For example, Galloway and Chirico (2008) reported that increased levels of neuroticism were more positively correlated with an appreciation for incongruity humor as opposed to nonsense humor. Sar-El, Mikulincer, and Doron (2013) reported that “participants who scored higher on avoidant attachment showed a weaker tendency to appreciate humor and were less likely to endorse social and self-defeating styles of humor” (p. 43). A separate study by Samson, Lackner, Weiss, and Papousek (2012) found evidence that lower levels of humor appreciation were associated with high levels of social anxiety if participants were required to simultaneously process social cues. Research has also yielded evidence that a correlation exists between interpersonal aggression and individuals who appreciate hostile humor (Weinstein, Hodgins, & Ostvik-White, 2011). Taken together, it appears that many variables are correlated with humor appreciation.

A secondary construct that is particularly germane to this investigation is the role of personal judgments in the extant humor literature. It is interesting to note that Samson and Hempelmann (2011) reported in their investigation that evaluations of nonsensical humor were more appreciated and rated higher than evaluations of incongruity-resolution humor. A novel investigation focused on language by Antonini (2005) revealed that individuals did not

appreciate verbal humor that was translated into subtitles in Italian in various movies and cinema. Similarly, a cultural study on humor by Yue (2011) found that Chinese students appreciated humor in their interpersonal interactions yet rated themselves low on personal measures of self-humor. It was along a different line that Kelly, Knox, Gekoski, and Evans (1987) found that opinions of age-related humor differed between younger individuals and older individuals. All things considered, it appears that humor evaluations are vulnerable to humor type, cultural considerations, and age related factors.

A final variable of interest to this investigation of humor appreciation focuses on the role of communication. Along this line, Young and Bippus (2001) reported that hurtful messages which featured a humorous element were more appreciated by recipients than hurtful messages that were not humorously phrased. It was in a similar investigation that Cann, Zapata, and Davis (2009) suggested that “in small doses, any use of humor may be appreciated as a social lubricant, but a constant barrage of negative humor may, over time, become highly unappealing” (p. 465). Dewitte and Verguts (2001) found evidence that good jokers were able to determine if others would appreciate their communicative humor via accurately interpreting the social feedback of message recipients. Organizational communication scholarship by Romero, Alsua, Hinrichs, and Pearson (2007) concluded that cultural and regional differences affected humor appreciation. Since the aforementioned literature suggests the appreciation of communicated humor can vary because of the message recipient, it seems that additional research could yield further understanding on the relationship between communication and humor appreciation.

The Current Research

The present study analyzed the appreciation of humor and personality information within an interpersonal framework because it nicely corresponded with the thesis, rationale, variables, and methods of the current research. The central thesis of this interdisciplinary experiment was that flattering personality information would result in an increase in ratings of humor appreciation while unflattering personality information would result in a decrease in ratings of

humor appreciation. The rationale for evaluating face-to-face social interaction is that said environment is resourceful, ecologically valid, effective for observing the dialogue of strangers, and an efficient means for dissecting communication in interpersonal relationships. The main variables for this investigation were the pre-test administration, post-test administration, humor appreciation, and communication. Lastly, it should be noted here that the general structure for the present research involved a pre-test measure, distraction task, and then a post-test measure.

Previous literature devoted to humor appreciation has maintained a narrow research focus. That is, extant scholarship dedicated to the appreciation of humor has mainly centered on correlation analyses and whether humor appreciation shared a relationship with various other social constructs. While we know that many variables share a positive relationship with humor appreciation, we know very little about what variables share an inverse relationship with humor appreciation. Indeed, prior scholarship has nicely documented the concept of humor appreciation. However, no scholarship has investigated whether trait attributes alter ratings of humor appreciation over time. Thus, the following hypotheses are being proposed:

H1: Flattering personality information will lead participants to increase their ratings of the humor appreciation of another individual.

H2: Unflattering personality information will lead participants to decrease their ratings of the humor appreciation of another individual.

Extant research devoted to communication and humor appreciation has highlighted the roles and responsibilities of both the message sender and the message receiver. The vast majority of previous communication literature has examined the humor orientation of the message sender and specifically focused on whether a communicator is skilled at delivering humorous messages (Booth-Butterfield & Booth-Butterfield, 1991). While receiver-based communication literature by Merolla (2006) found “further evidence of the potential link between decoding ability and humor” (p. 184), communication scholarship devoted to humor appreciation as a receiver-

based listening skill has been relatively undeveloped. As such, the following research question was offered:

RQ1: What effect will a single interpersonal communication event have on evaluations of humor appreciation?

Method:

Participants

A total of one hundred and eight ($N = 108$) undergraduate students at a large southeastern university in the United States participated in this study. The age for participants varied from 18 years of age through 37 years of age. Sixty one ($N = 61$) of these participants were involved in the communication present conditions while 47 ($N = 47$) of the participants were involved in the communication not present conditions. The sample was comprised of participants who were enrolled in an introductory level communication course. Participants were rewarded extra credit in their introductory level communication course in exchange for their participation in this study.

Instruments

A modified version of a humor appreciation sub scale (Thorson, Powell, Sarmany-Schuller, & Hampes, 1997) was utilized in this study. The sub scale for this study included items such as: "The person in the photograph can make other people laugh; the person in the photograph can make up jokes or funny stories; people tell the person in the photograph that she/he says funny things" and the like. The sub scale featured a 7-point Likert range (1 = strongly disagree, 7 = strongly agree).

Procedures

A series of five different activities constituted the procedural element of this investigation. First and foremost, four separate conditions were created for this study. The first condition involved

1) flattering personality information with communication present, the second condition involved 2) unflattering personality information with communication present, while the third condition involved 3) flattering personality information with no communication present, and the fourth condition involved 4) unflattering personality information with no communication present. The flattering personality information or unflattering personality information was self reported data that participants supplied about either herself or himself. Specifically, participants were instructed to supply three separate flattering snippets of her or his individual personality as well as supply three separate unflattering snippets of her or his personality. Each individual snippet of information was to be comprised of 50-100 words of personal narrative. In total, participants were asked to provide 150-300 words of flattering personality information about oneself and to provide 150-300 words of unflattering personality information about oneself.

The second procedural element of this study was the pre-test administration. A headshot photograph of another person was placed at the table in front of each study participant. Participants were then instructed to indicate their evaluations of the humor appreciation of the person in the photograph with a modified version of the humor appreciation sub scale of Thorson, Powell, Sarmany-Schuller, and Hampes (1997). Participants were instructed to analyze and then re-analyze the photograph after they completed each individual item on the pre-test portion of their humor appreciation sub scale.

The third procedural element for this study was a distraction task. It was in the communication present conditions that study participants were brought into a separate room to engage in seven minutes of face-to-face interpersonal communication with the person who was pictured in their pre-test administration. That is, participants in the two conditions in which communication was present engaged in social interaction with the pictured individual that she or he anonymously evaluated during the pre-test measure. Participants in the communication present conditions were then given a precise scenario to distract their minds from their pre-test evaluations. Specifically, the participants in the communication present conditions were informed that they were about to meet a new person for the first time in the eating area of the

student union and that they were desirous of engaging in a playful conversation in which their main objective was to produce humor. It was after these instructions were provided that seven minutes of face-to-face social interaction subsequently occurred between participants. The principal investigator engaged in unobtrusive observation while participants engaged in face-to-face social interaction. On the other hand, it was in the communication not present conditions that study participants completed a language distraction task to avert their minds from their pre-test evaluations. The task required participants to list words that started with various three-letter word stems. For example, participants in the communication not present conditions were instructed to write as many words as they could think of that started with the letters 'con' or 'pre' and the like on a sheet of notebook paper. It is important to note here that the amount of time provided to either engage in social interaction or complete the language task was equal. Put differently, the amount of time between the pre-test administration and the post-test administration was the same for all of the study conditions.

The fourth procedural element for this investigation was the post-test administration. The exact same headshot photograph of another person was placed at the table in front of each study participant. Participants were once again instructed to indicate their evaluations of the humor appreciation of the person in the photograph with a modified version of the humor appreciation sub scale of Thorson, Powell, Sarmany-Schuller, and Hampes (1997). Participants were given the same instructions and told to analyze and then re-analyze the photograph after she or he completed each individual item on the post-test portion of their humor appreciation sub scale. It was after each participant completed the post-test measure that she or he was debriefed about the investigation and then dismissed from the study.

The fifth procedural element of this study that should be noted was a manipulation check. It was immediately after the post-test administration was completed that study participants were asked to rate the flattering and unflattering information that was provided to them about another individual. The manipulation measure featured a 7-point Likert scale with responses that ranged from strongly agree to strongly disagree (1 = strongly disagree; 7 = strongly agree).

The mean for the flattering information was 4.96 ($sd = 1.64$) while the mean for the unflattering information was 2.83 ($sd = 1.67$). The results of a paired-samples t test produced evidence of a statistically significant difference between the two conditions ($t(107) = 7.028, p < .001$). The findings from the validation check suggested the manipulation was successful.

Data Analysis

The proposed hypotheses and research question for this study were tested with the statistical program for the social sciences (SPSS). A repeated measures ANOVA was used to test the study hypotheses. The research question for this investigation was answered via a $2 \times 2 \times 2$ mixed factorial ANOVA in which condition (flattering or unflattering) and communication (present or not present) were the between subjects factors while administration (pre-test or post-test) served as the within subjects factor. Supplemental analyses including paired-samples t tests were also completed when necessary.

Results

Hypothesis one proposed that flattering personality information would lead participants to increase their ratings of the humor appreciation of another individual. The results of a repeated measures ANOVA uncovered support for this hypothesis ($F(1, 59) = 45.430, p < .001$, Partial Eta Squared = .435). The perceived humor appreciation of another person before flattering information was provided was 4.96 ($sd = 0.84$) on a 7-point response continuum while the perceived humor appreciation of another person after flattering information was provided was 5.76 ($sd = 0.89$) on a 7-point response continuum. Therefore, it can be argued that flattering information about the personality of another person can actually make that person be seen as more appreciative of humor.

Hypothesis two proposed that unflattering personality information would lead participants to decrease their ratings of the humor appreciation of another individual. Empirical support was found for this hypothesis after the completion of a repeated measures ANOVA ($F(1, 49) = 13.039, p = .001$, Partial Eta Squared = .204). Initial ratings of the humor appreciation of another

individual were 5.10 ($sd = 0.74$) on a 7-point response continuum before unflattering information was provided whereas post-test ratings of the humor appreciation of another individual were 4.36 ($sd = 1.41$) on a 7-point response continuum after unflattering information was provided. Indeed, displaying an unflattering persona communicates that a person is not open to appreciating the humor of another individual.

The research question of interest for this study was: What effect will a single interpersonal communication event have on evaluations of humor appreciation? The following results emerged from the $2 \times 2 \times 2$ mixed factorial ANOVA that was calculated on the dependent variable of humor appreciation. The between subjects main effect for communication (present or not present) was not statistically significant ($F(1, 107) = .037, p = .84, \text{Partial Eta Squared} = .000$) while the between subjects main effect for condition (flattering or unflattering) was statistically significant ($F(1, 107) = 17.591, p < .001, \text{Partial Eta Squared} = .140$). A within subjects main effect for administration (pre-test or post-test) was not uncovered ($F(1, 107) = .165, p = .68, \text{Partial Eta Squared} = .002$). A two-way interaction between condition (flattering or unflattering) and communication (present or not present) was not observed ($F(1, 107) = .011, p = .918, \text{Partial Eta Squared} = .000$). It should also be noted that a two-way interaction between administration (pre-test or post-test) and communication (present or not present) was also not discovered ($F(1, 107) = .153, p = .69, \text{Partial Eta Squared} = .001$). However, a two-way interaction between administration (pre-test or post-test) and condition (flattering or unflattering) was uncovered in the present investigation ($F(1, 107) = 48.483, p < .001, \text{Partial Eta Squared} = .310$). In addition, this two-way interaction was qualified by a statistically significant three-way interaction (See Table 1; See Figures 1A and 1B) between communication (present or not present), condition (flattering or unflattering), and administration (pre-test or post-test) on the dependent variable of humor appreciation ($F(1, 107) = 6.324, p = .013, \text{Partial Eta Squared} =$

Table 1.

Means for Interaction between Communication Condition, Personality Information, and Pre-Test/Post-Test Administration on Humor Appreciation

Communication Condition	Personality Information	Administration (Pre-Test/Post-Test)	Mean	Std. Error
Communication Present	Flattering	Pre-Test	5.049	.135
		Post-Test	5.649	.197
	Non - Flattering	Pre-Test	4.934	.156
		Post-Test	4.516	.229
No Communication Present	Flattering	Pre-Test	4.851	.159
		Post-Test	5.937	.234
	Non - Flattering	Pre-Test	5.280	.156
		Post-Test	4.198	.229

Estimated Marginal Means of Humor Appreciation in the Flattering Condition

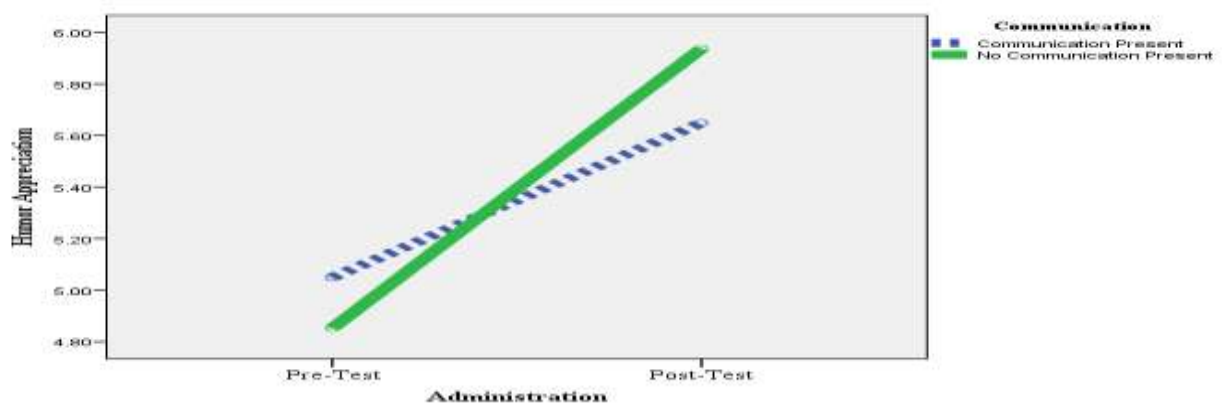


Figure 1A. Three-Way Interaction Plot between Communication, Flattering Information, and Administration on Humor Appreciation

Estimated Marginal Means of Humor Appreciation in the Unflattering Condition

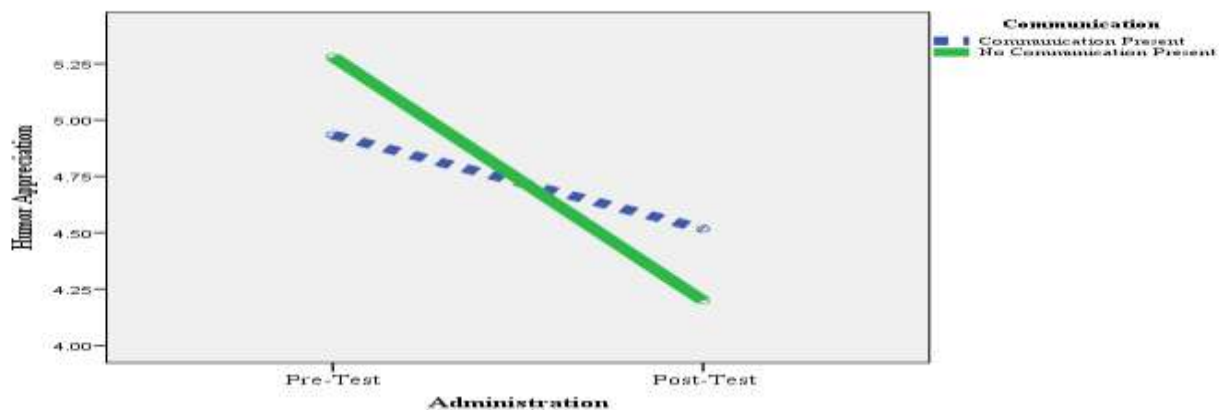


Figure 1B. Three-Way Interaction Plot between Communication, Unflattering Information, and Administration on Humor Appreciation

.055). In short, one of the main findings from the aforementioned research question was that: the effects of flattering or unflattering personality information are diminished by the presence of communication in a humor relevant context.

Supplemental Analyses

There are a couple of additional results that were noted by the principal investigator who observed the face-to-face social interactions of the participants in the communication present conditions. First, participants appreciated humor that referenced earlier discussion points in the current conversation. For example, mirth was produced in one conversation when a male participant revisited a discussion point on a popular musician towards the end of their seven minute conversation. This callback to a previous conversation thread was appreciated as humorous and evident in other conversations as well. A second supplemental analysis that emerged in this study was that male participants exerted great effort in order to make female

participants appreciate their attempts at humor. For instance, one participant resorted to juggling as a means to produce laughter in his interpersonal dyad. It should also be noted that using puns and pre-rehearsed stories were also a prevalent means of trying to make others appreciate humor.

Discussion

The goal of this social experiment was to determine if personality information could influence ratings of humor appreciation when communication was present and when communication was not present. Findings produced evidence of an interaction whereby flattering information resulted in evaluations of humor appreciation increasing from pre-test to post-test while unflattering information resulted in evaluations of humor appreciation decreasing from pre-test to post-test. Taken together, several interesting points of discussion emerged from the present research.

One interesting point of discussion is that ratings of humor appreciation increased after flattering information was provided about another individual. This finding suggests that non-physical features play a prominent role in the context of humor appreciation regardless of interpersonal communication. It seems that conveying a flattering persona demonstrates that one is receptive to receiving humorous messages. Individuals who are desirous of making others laugh in various contexts should thereby always consider the temperament of the message recipient before sharing humorous messages. While those involved in stand-up comedy frequently use quick one liner jokes at the start of a set to determine what genre of humor is most appropriate for the audience, those not involved in stand-up comedy can apply this study finding by electing to share humorous anecdotes and stories only when the mood of the message recipient is encouraging. The aforementioned result highlights the research of Merolla (2006) who illustrated that decoding ability was an integral component of the humor process. Indeed, the sender of humorous messages should thus place the psychological demeanor of the message recipient at a premium if she or he desires to attain the highest level of humor appreciation.

Another intriguing point of discussion that should be noted is the finding from the second study hypothesis that ratings of humor appreciation decreased after unflattering personality information was supplied about another individual. One possible reason why this result emerged is because individuals actively employ stereotyping as method for sense making in the arena of humor appreciation. Unflattering personality information may trigger individuals to make an immediate negative connotation about the role humor plays in the life of another individual. The evidence that emerged in this study suggests that individuals see a link between the constructs of unflattering personality information and low levels of humor appreciation. The observed decrease in humor appreciation ratings from pre-test to post-test could also be interpreted as a means for study participants to achieve passive retaliation against a person who was initially perceived to be on the up and up. While Zillman and Bryant (1974) reported that retaliation was a conducive condition for mirth in a humor appreciation context, this study yielded support that unflattering personality information about another person may evoke a retaliatory response of unfavorably evaluations of another person in a humor appreciation context. Regardless of whether stereotyping or retaliation was the chief motive for the decrease in humor appreciation ratings of another individual, the support that emerged from the second study hypothesis did indicate that telegraphing an unflattering persona illustrates that a person is not receptive to appreciating humor.

The research question for this study asked: What effect will a single interpersonal communication event have on evaluations of humor appreciation? The central finding for the research question was that interpersonal communication resulted in a less pronounced increase in humor appreciation ratings of another individual relative to the conditions in which interpersonal communication was not present. One reason why this result surfaced is because interpersonal communication mediates the effects of flattering personality information in the arena of humor appreciation. That is, individuals place greater value on their personal observations during interpersonal communication than on stated psychological attributes with regards to the appreciation of humor. Perhaps the data that emerged from this particular finding is best noted in an educational context. Specifically, it could be argued that humor appreciation is inherently a communication construct. Indeed, message processing is part of the

humor appreciation process. At the same time, the most salient variable at play in this study of humor appreciation was listening, which has traditionally found a home in the communication discipline. Hearing or listening to the communicated message whether humorous or not must occur before a decision on appreciation is made. Study findings from this investigation insinuate that more communication scholars should analyze humor appreciation via utilizing a communicative lens in order to gain additional insight on the topic of humor appreciation.

A final point of discussion that should be noted involves the observations that were completed by the principal investigator in the communication present conditions. Perhaps the most notable observation was that participants struggled at making a stranger appreciate their humor within the aforementioned seven-minute window period of time. It seems that humor appreciation is a phenomenon that is developed over time within an interpersonal dynamic. Put differently, it takes time to “get” the humor of another person. Indeed, there are some individuals who just naturally excel at humor. However, for most individuals multiple rounds of social interaction are required in order to truly appreciate the humor of a fellow interlocutor. One possible reason why this is perhaps the case is because sharing humorous messages is not at the fore of the individual thought process when strangers communicate for the first time. It is also conceivable that making a concerted effort to deliver humorous messages or trying to be a funny bunny is potentially a negative expectancy violation when strangers engage in their first interpersonal interaction. All joking aside, the results from this study suggest that it takes time to deeply appreciate the humor of another individual.

Limitations and Future Research

There are a couple of limitations and areas of future research that should be discussed. One limitation of this study was that the sample was restricted to undergraduate students at a United States university. Thus, it is possible that the observed effects and interactions may not be representative of a more diverse community. A second limitation of this study was that some of the participants in the communication present condition might have been cognizant of the fact that they were being observed for research purposes. As such, it is conceivable that

observer effects could have altered the behavior of some of the more observant study participants in the communication present conditions. Finally, future research should investigate whether other variables could potentially alter ratings of humor appreciation. That is, it would be interesting to note in the future if various other negative personality attributes can adversely influence how funny we deem a message sender to be.

References

- Andrews, T. G. (1943). A factorial analysis of responses to the comic as a study in personality. *The Journal of General Psychology, 28*, 209-224.
- Antonini, R. (2005). The perception of subtitled humor in Italy. *Humor: International Journal of Humor Research, 18*, 209-225. doi: 10.1515/humr.2005.18.2.209
- Booth-Butterfield, S. & Booth-Butterfield, M. (1991). The communication of humor in everyday life: Individual differences in the use of humorous messages. *Southern Communication Journal, 56*, 205-218.
- Burns, W.J., & Tyler, J.D. (1976). Appreciation of risqué cartoon humor in male and female repressors and sensitizers. *Journal of Clinical Psychology, 32*, 315-321.
- Cann, A., Zapata, C.L., & Davis, H.B. (2009). Positive and negative styles of humor in communication: Evidence for the importance of considering both styles. *Communication Quarterly, 57*, 452-468. doi: 10.1080/01463370903313398
- Degabriele, J., & Walsh, I. P. (2010). Humour appreciation and comprehension in children with intellectual disability. *Journal of Intellectual Disability Research, 54*, 525-537.
- Dewitte, S., & Verguts, T. (2001). Being funny: A selectionist account of humor production. *Humor: International Journal of Humor Research, 14*, 37-53. doi: 10.1515/humr.14.1.37

Galloway, G., & Chirico, D. (2008). Personality and humor appreciation: Evidence of an association between trait neuroticism and preferences for structural features of humor. *Humor: International Journal of Humor Research*, *21*, 129-142. doi: 10.1515/HUMOR.2008.006

Kelly, L.E., Knox, V.J., Gekoski, W.L., & Evans, K.M. (1987). Age-related humor as an indicator of attitudes and perceptions. *Journal of Social Psychology*, *127*, 245-250. doi: 10.1080/00224545.1987.9713690

McGhee, P.E. (1971). Cognitive development and children's comprehension of humor. *Child Development*, *42*, 123-138.

Merolla, A. J. (2006). Decoding ability and humor production. *Communication Quarterly*, *54*, 175-189. doi: 10.1080/01463370600650886

Romero, E.J., Alsua, C.J. Hinrichs, K.T., & Pearson, T.R. (2007). Regional humor differences in the United States: Implications for management. *Humor: International Journal of Humor Research*, *20*, 189-201. doi: 10.1515/HUMOR.2007.009

Samson, A.C., & Hempelmann, C.F. (2011). Humor with background incongruity: Does more required suspension of disbelief affect humor perception. *Humor: International Journal of Humor Research*, *24*, 167-185. doi: 10.1515/HUMR.2011.011

Samson, A.C., Lackner, H.K., Weiss, E.M., & Papousek, I. (2012). Perception of other people's mental states affects humor in social anxiety. *Journal of Behavior Therapy & Experimental Psychiatry*, *43*, 625-631. doi: 10.1016/j.jbtep.2011.08.007

Sar-El, D., Mikulincer, M., & Doron, G. (2013). Attachment orientations and individual differences in humor. *Journal of Social & Clinical Psychology*, *32*, 34-53. doi: 10.1521/jscp.2013.32.1.34

Singer, D.L., Gollob, H.F. & Levine, J. (1967). Mobilization of inhibitions and the enjoyment of aggressive humor. *Journal of Personality*, 35, 562-569.

Suits, K., Tulviste, T., Ong, R., Tulviste, J., & Kolk, A. (2012). Differences between humor comprehension and appreciation in healthy children and children with epilepsy. *Journal of Child Neurology*, 27, 310-318.

Thaler, A., Posen, J., Giladi, N., Manor, Y., Mayanz, C., Mirelman, A., Gurevich, T. (2012). Appreciation of humor is decreased among patients with Parkinson's disease. *Parkinsonism & Related Disorders*, 18, 144-148.

Thorson, J.A., Powell, F.C., Sarmany-Schuller, I., & Hampes, W.P. (1997). Psychological Health and sense of humor. *Journal of Clinical Psychology*, 53, 605-619.

Young, S.L., & Bippus, A.M. (2001). Does it make a difference if they hurt you in a funny way? Humorously and non-humorously phrased hurtful messages in personal relationships. *Communication Quarterly*, 49, 35-52. doi:10.1080/01463370109385613

Yue, X.D. (2011). The Chinese ambivalence to humor: Views from undergraduates in Hong Kong and China. *Humor: International Journal of Humor Research*, 24, 463-480.

Weinstein, N., Hodgins, H.S., & Ostvik-White, E. (2011). Humor as Aggression: Effects of motivation on hostility expresses in humor appreciation. *Journal of Personality and Social Psychology*, 100, 1043-1055. doi: 10.1037/a0022495

Zillmann, D., & Bryant, J. (1974). Retaliatory equity as a factor in humor appreciation. *Journal of Experimental Social Psychology*, 10, 480-488. doi: 10.1016/0022-1031(74)90016-X

Zigler, E., Levine, J., & Gould, L. (1966). Cognitive processes in the development of children's appreciation of humor. *Child Development*, 37, 507-518.