

Don't Worry, It's Not Real: How Humor and Violation Severity Varies with Hypothetical
Psychological Distance

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Abstract

We seek to examine how the level of “hypotheticality” (how real or abstract something seems) affects humor in this study. Under the Benign Violation Theory of humor (McGraw & Warren, 2010), or BVT, humor is a result of a benign violation.

Psychological distance can enhance or limit humor based on the ability to reduce a sense of threat. Previous research has been limited to extreme violations either mild or severe.

The purpose of our study is to give depth to intermediary violation severity and how they interact with humor and distance. We hypothesize the moderately hypothetical condition is the funniest as a close stimulus will be too close and uncomfortable to be humorous, and a distant one will be irrelevant. Two studies were conducted using first 76 university students and secondly 388 MTurk workers. The results did not reveal any significant differences in humor level between hypotheticality and severity.

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Imagine a familiar story. It's a Saturday morning and a couple of kids are gathered around the television in the family room with their choco-choco crazy crunchy cereal. Appearing on the screen is a jubilant talking sponge that the mom can approve of, knowing they're learning a little about life's lessons. Meanwhile the kiddos get a good kick out of watching him wrap his bottom lip right over the top of his head or have his eyes jump out of his skull.

Sponges get ripped in half, coyotes have all their bones pulverized, and unlucky cats have their knee caps busted in by their prey. Turn these characters into human actors and suddenly the kids are watching *Saw 7*. Why exactly can a friendly yellow sponge be run over or lit on fire and the audience is not alarmed, even amused, from his misfortune?

Although there are many theories that seek to grasp what causes humans to laugh, they often are unable to fully address such a phenomena. Benign Violation Theory (BVT) incorporates methods necessary and sufficient to predict humor but also can explain how and why psychological distance is able to sway what is considered funny (McGraw & Warren, 2010). The real world is devoid of talking sponges. Characters like SpongeBob are unrealistic. He is very hypothetical. On the other hand, the *Saw* series is dreadfully real, although some of the horrific material is not incredibly different from happenings on children's cartoons. BVT deepens our understanding of why the degree to which something is hypothetical or not interacts with humor.

Ancient philosophers, anthropologists, market researchers, and comedians are some of the many who have sought to learn more about humor and its various effects. Although there is a weighty amount of scientific inquiry on humor, many theories predict humor when it does not happen or don't accurately predict how certain conditions change the perception of humor such as psychological distance.

Significance of Humor

Humor is not limited to human life. Other primates make a noise that is thought to be analogous to human laughter during tickling, supporting that humor may have evolved out of a need to indicate non-aggressive behavior (Vettin & Todt, 2005; Ross, Owren, & Zimmermann, 2009; Darwin, 1872; Yerkes & Learned, 1925; Lockard et al. 1977; Goodall, 1968). Many specialists also argue tickling and laughter probably play a significant role in the survival and success of the human race (Provine, 2004; Porteous, 1988; Gervais & Wilson, 2005; Weisfeld, 1993; Li et al., 2009).

Supporting the evolutionary value of humor, humor is intermingled with attraction. ^{some} Some research found a positive association between humor and marital satisfaction (Weisfeld et al., 2011), happiness in romantic relationships (Butzer & Kuiper, 2008), and mate preference (Didonato, Bedminster, & Machel, 2012). There are many gender linked differences apparent between humor and attraction. Previous studies found a preference for males who produce humor during courtship, and females who are receptive to others' jokes and musings (Bressler & Balshine, 2006). Curiously, the type of humor can either help or hurt attraction based on characteristics of the individual (Lundy, Tan, & Cunningham, 1998). Singles may want to reconsider whoopee cushions as a must have on the next date.

Humor and social appeal are intertwined outside of courtship as well. Higher levels of humor increase general social attractiveness and popularity (Wanzer, Booth-Butterfield, & Booth-Butterfield, 1996; Mesibov & Stephens, 1990; Hampes, 1992) and decreases social distance (Graham, 1995; Sherman, 1985; Sherman, 1988). And in therapeutic settings, humor facilitates bonding (Yoels & Clair, 1995; Dziegielewski, Jacinto, Laudadio, & Legg-Rodriguez, 2003; Berger, Coulehan, & Belling, 2004).

Those with a better sense of humor have reported feeling less stress (Abel, 2002; Labott & Martin, 1987; Martin & Dobbin, 1988; Martin & Lefcourt, 1983), lower levels of depression, loneliness, and higher self-esteem (Overholser, 1992). Humor can lower blood pressure during stressful tasks ([Lefcourt, Davidson, Prkachin, & Milis, 1997](#)). A study done on trainees in the Israeli military uncovered that when others perceive an individual to be funny that individual is more likely to perform better under stress (Bizi, Keinan, & Beit-Hallahmi, 1988).

Regarding business, leaders who use humor are often perceived to perform their management duties better (Priest & Swain, 2006); although there are usually distinctions to the types of humor (Decker & Rotondo, 2001; Smith & Powell, 2009) and types of leaders (Avolio, Howell, & Sosik, 1999). A meta-analysis on the topic established that an employee's use of humor has a positive association with worker productivity, cohesion among group members, and even health. Supervisors who use positive humor styles benefit from a better performance from subordinates and the supervisor themselves, satisfaction from subordinates, and a lower chance of work withdrawal (Mesmer-Magnus & Glew, 2012). Humorous stimuli are often more convincing than non-humorous ones (Lammers, Leibowitz, Seymour, & Hennessey, 1983) as well as more memorable (Takahashi & Inoue, 2009). Furthermore, humor enhances attention and

increases product liking (Weinberger & Gulas, 1992). But similar to bonding and attraction, the interaction is dodgy and can sometimes enhance a positive product or brand evaluation or strengthen disapproval (Chattopadhyay & Basu, 1990).

Psychological Distance

Psychological distance is characterized by a deviation from the present self “in the here and now” (Lieberman & Trope, 2010). Removal from this point happens in many ways: spatial, temporal, social, and hypothetical. Changes in perspective significantly impact how events or objects are thought of. Construal level theory suggests that increasing the abstraction of an event or object removes the relevance of minute details, leaving only general overarching meanings. Psychological distance can also decrease perceived threat (Mobbs et al., 2007; Chandran & Menon, 2004; Balci et al., 2013). An example of such threat reduction is that higher psychological distance lowers distress from a terminal illness (Butler, 2003). Children exposed to a distant trauma were less distressed than those who were close to one (Pine, Costello, & Masten, 2005). Additionally, people recounting a negative past memory reported feeling more distance from that past self than those asked about a positive memory (Ross & Wilson, 2002). Psychological distance or proximity mediates feelings of threat and changes the attributes of one’s thoughts and memories.

Theories of Humor

The question of what humor actually is lingers in the palette of humor research. Some of the great figures in history, such as Aristotle and Freud, pondered the question (Berger, 1987). Although there are many theories, three are prominent.

Superiority Theory

Superiority Theory describes feelings of mirth or laughter as a result from a playful triumph (Gruner, 1997) or laughing at the ignorant actions of others (Meyer, 2000). The theory has close connections to Freudian theory due to a shared essence of aggression (Martin, 2007). Research has indeed found a positive relationship between humor and aggression (McCauley, Woods, Coolidge, & Kulick, 1983; Epstein & Smith, 1956; Singer, Gollob, & Levine, 1967; Prerost, 1987).

Consider a bit from Louis CK when he calls attention to 20 years old and why they deserve unfulfilling minimum wage jobs. As he put it, “For two decades you’ve just been taking and sucking up education, and love, and food, and iPods.” According to the theory, the audience laughs because they feel playfully aggressive towards inexperienced young people.

However, the relationship between humor and aggression is not precisely how superiority theory predicts. Zillman, Bryant, and Cantory (1974) used 1972 presidential candidates to unveil a negative relationship between the rejected candidate and level of aggression; more aggression leads to less humor. Extreme aggression towards the preferred candidate was funnier. According to superiority theory, subjects would have enjoyed higher levels of victimization towards the candidate they disliked allowing for more aggression. Other comparable studies have supported a non-linear relationship between humor and aggression and claim that people prefer moderate levels of hostility (Zillmann & Bryant, 1974; Bryant, 1977; Deckers & Carr, 1986; Barrick, Hutchinson, & Deckers, 1990).

The examples incorporate a condition that influences the perception of humor that superiority theory misses. It was more alright to laugh at a presidential candidate that is favored than one who is disliked. Much as it is acceptable for a person to make fun of someone they know well rather than someone they just met, which is generally rude or unpleasant. The example demonstrates that changing social distance can transform something into being funny or make it uncomfortable. Humor cannot be solely linked to aggression as the increase of aggression does not always result in an increased amusement. Gruner (1997) does point out that the triumph must indeed remain playful to be humorous. However, this theory does not address why some funny events become less funny as distance passes.

Relief Theory

Relief Theory of humor proposes that humor is elicited when psychological tension is experienced and then released (Meyer, 2000) or when nervous energy is shed (Morreall, 1982). Freud (1905) was one of the theory's pioneers. Supporting these notions, Shurcliff (1968) created an experiment that found a positive interaction between humor, surprise, and anxiety. Humor's ability to release tension and regulate stress provides support for relief theory.

The following joke exemplifies the release of tension the theory describes. A woman overhears a man speaking on the phone in a coffee shop. The man is saying, "For 200 dollars an hour, she better be good! Do you think she can get me off?" The woman is horrified and asks the man if he's really talking about such an offensive thing in public. Perplexed, he replies, "What's your problem? I'm talking about my lawyer." Replacing the tension from hearing a man talk

about his excitement for time with a prostitute with the less uncomfortable situation of paying for a lawyer's legal services would be why the joke is humorous according to relief theory.

Looking at the research between humor and release of nervous energy, predictions fail to hold. Consider the various ways to create humor; several of them are in fact associated with higher levels of anxiety and depression (Kuiper, Grimshaw, Leite, & Kirsh, 1988). One study serves as a powerful counter argument against the viability of relief theory. Hom (1966) discovered higher pre-existing and induced levels of anxiety before exposure to a humorous stimulus resulted in lower amusement. According to relief theory, a greater release of tension should result in a greater level of amusement.

Consider McGraw, Warren, Williams, & Leonard's (2012) study, where increasing psychological distance increased the humorousness of severe violations. For example, increasing the amount of time after a tragedy results in increasing humor. To explain their results, relief theory suggests there would be a greater release of psychological tension soon after a tragedy rather than later. This finding does not present itself. But relief theory does touch on a key point. For the experience of amusement, the stimulus must be in some way alright or relieving. The concept standing alone is not adequate, however.

Incongruity Theory

Berger (1987) advocates the pivotal aspect of incongruity theory is an inconsistency between what a person expects and what is experienced. Freud himself speculated on the merit of jokes and "the contrast between the sense and the nonsense" (1905). Many researchers have been able to provide evidence to support incongruity theory. Wicker, Thorelli, Barron, & Ponder

(1981) revealed a relationship between surprise, resolution and humorousness along with many others finding similar results (Deckers & Devine, 1981; Shultz, 1972; Nerhardt, 2008).

Additionally, brain imaging techniques also provided some validation for this theory (Chan et al., 2012; Samson, Hempelmann, Huber, & Zysset, 2009; Moran, Wig, Adams, Janata, & Kelley, 2004).

The “Surprised Kitty” video that went viral on YouTube.com is an example of a humorous instance reminiscent of incongruity theory. The 17-second long video got 66 million views by featuring a kitten being tickled and acting like a human baby. The shock caused viewers to snicker around the globe for a total of about 1 billion seconds. According to incongruity theory I, the video is humorous because of the difference between expected and actual actions.

Some patterns of changing nature based on social context appear in much of the humor literature that incongruity theory does not predict. Research supports that people described as conservative find particular types of jokes to be more amusing (Murray, 1934; Wilson & Patterson, 1969; Hehl & Ruch, 1990), predominantly appreciating sex jokes and incongruity resolution jokes (Ruch & Hehl, 1986). People’s views on social roles (more liberal or more stringent) co-vary with humor preference (Moore, Griffiths, & Payne, 1987; Hodson, MacInnis, & Rush, 2010). Others have discovered a negative relationship between sexist jokes and humor in women and a positive correlation in men (Love & Deckers, 1989; Terry & Ertel, 1974). Men tend to find hostile humor towards other men less enjoyable than hostile humor directed towards women (Mundorf, Bhatia, Zillmann, Lester, & Robertson, 1988). Incongruity theory, along with

others before it, struggle to explain why changes between groups affect what's funny and what's not.

Why is it men found humor that featured hostility toward men less appealing than toward women or liberals and conservatives consider different types of humor appropriate? Neither of the three theories before, except for superiority theory, touch on why such a case occurs. The difference between the groups in the experiment is the level of psychological distance. A victim less similar to the listener of a joke can tolerate more brutality. The joke is threatening and no longer amusing. Jokes that hit too close to home often result in disapproval or discomfort rather than laughter.

Superiority theory touches the necessity of a violation, relief theory describes that the situation must be okay or non-harmful, and incongruity suggests conflicting interpretations must be necessary. Each raises a relatively valid argument. BVT is advantageous in that it ties the ideas from the other theories before it and incorporates them to be able to answer the observations made about the effects of humor.

The Benign Violation Theory

Stemming from a similar theory proposed by Veatch (1998), BVT suggests that laughter and amusement result from three important events: a violation occurs, the violation is benign, and these two previously mentioned evaluations must happen simultaneously (McGraw & Warren, 2010). A violation is a situation that is wrong or threatening; a threat to how the world "ought to be." According to Veatch (1998) and McGraw and Warren (2010) violations have a

wide range of forms such as physical threats or a variety of norms such as linguistic norms, social norms, and moral norms.

The detection of a violation alone does not embody humor. The violation must also be benign or harmless and these two feelings happen at the same time. BVT describes laughter and amusement as what happens when something is both okay and not “okay”. McGraw and Warren suggest that there are several ways for a violation to be benign with results supporting their claims.

First, if more than one norm applies and one is threatening while another is not. Consider the following example. Picture a woman being flashed at the park. Instead of being shocked, she is happy and exclaims that she was hoping to one day she’d be flashed. Flashing is usually unacceptable, but the woman was glad to be flashed, thus making the violation seem both okay and not okay. If the woman had been horrified, there was no alternative norm and the situation was only a violation. The availability of a less disturbing competing norm (she was glad, so no one was ultimately harmed) reduced the threat of the violated one (public exposure).

A second way for a benign perception is if the listener is weakly committed to the violation. A feminist would be more insulted by a sexist joke just as a Mormon would be more offended by Mormon jokes. Higher commitment to beliefs results in more threat from violating them, thus making the joke not benign.⁵ skjkk

And lastly, psychological distance can cause a violation to be benign. Janet Jackson may never one day laugh about her wardrobe disaster, but those who don’t know her probably found it funny quite soon after. The image of SpongeBob exploding is funnier than if a real human had.

Because psychological distance reduces threat, it should also be able to transform unpleasant and unfunny violations into benign and funny violations.

Other theories have touched on the capabilities for violations to grow funnier as distance increases such as superiority theory. BVT predicts that severe violations will become less threatening (and funnier) with greater psychological distance like superiority theory does. Unlike theories before it though, BVT also predicts that very mild violations will grow to be less funny with greater distance. The violation in a mishap is already very minimal. Increasing the distance of the mishap eradicates all threat and is no longer a violation. It becomes just benign.

Before the research on BVT, the literature has not examined the specifics of the interaction between humor and psychological distance. McGraw, Warren, Williams, & Leonard (2012) confirmed a positive relationship between humor and psychological distance for severe violations, and a negative one for mild mishaps. The previous efforts to support BVT focus on severe and mild examples. Our inquiry serves to expand the knowledge of moderately severe violations, BVT, and the relationship between psychological distance and humor.

Although there are many forms of psychological distance, our efforts focus on “hypotheticality” or the degree a stimulus is seen as hypothetical. That is, if hypotheticality is increased, the situation will seem less realistic (Liberman & Trope, 2010). Thus far, just one study done by McGraw, Warren, Williams, and Leonard (2012) specifically assesses the relationship hypotheticality has on humor. Hypotheticality is an ideal candidate to investigate how moderate violations interact with humor for several reasons. First, manipulation of hypotheticality is less transparent than other forms of distance. Second, the level of hypotheticality is less limiting than other forms that have more limiting variations such as social

distance. Lastly, the interaction between hypotheticality, violation severity, and humor is relevant to practical applications such as cartoons, video games, television shows, and other artistic endeavors. Messages brought forth by producers of media such as these are drastically altered in part by hypotheticality. The specificity and endpoints of such a continuum of psychological distance are limited only by human imagination.

We have conducted two studies that build off of each other in order to assess the relationship between humor and hypotheticality. First, we isolated the moderate norm violation. Next, we reformatted the second study to adjust for any unforeseen mechanical flaws or differences in predicted and actual perception of threat. Then we repeated the experiment with three levels of severity of the violated norm in addition to the three levels of hypotheticality in order to comprehensively measure the effects of distance and humor.

Our hypothesis states that for the moderately severe violation should reveal a curvilinear relationship between humor and psychological distance: the realistic manipulation will be too threatening be considered benign (just a violation), the very abstract manipulation will be just benign (no violation), and finally, the moderately distant violation will be the funniest (see figure 1). The moderate violation will be the condition that is both a violation and benign. The reasoning was because psychological distance has the ability to reduce threat. Looking at the moderately severe violation should seem like a combination of previous studies looking at tragedies with a positive relationship to psychological distance and humor and mishaps with a negative one. We also aim to confirm the positive relationship between severe tragedies and hypothetical distance and the negative relationship between mild mishaps and humor that other studies have unveiled.

Study 1: Moderately Severe violation and Hypotheticality**Research Design**

We used a between-subjects randomized experimental design. The independent variable was the level of hypotheticality, or how realistic the picture looked, and the dependent variable was humor score. Three levels of hypotheticality varied on the representation of the victim (a cat) in the joke. The least hypothetical level was a picture of a real cat referred to as “real picture” (see figure 2). The next level was a cartoon cat with realistic features which is referred to as “realistic cartoon” (see figure 3). Finally, the most hypothetical picture was of a cat that appears fairly blob-like referred to as “abstract cartoon” (see figure 4). Participants saw one of the three pictures with the following joke below it:

My cat had a problem with his leg, and it needed to be removed. I couldn't bear to do it myself, so I asked a friend to take him to the veterinarian. I was not home when my friend came to pick him up. I have two cats. He took the wrong one.

We chose to wrongly amputate the victim to exemplify a moderately severe violation.

Ultimately, the victim is okay and will continue onward mostly unharmed but at the same time has experienced something relatively unfortunate.

The survey included 13 questions asked about the scenario. Participants answered four questions assessing the perception of humor: do you think this scenario is humorous, is funny, made you laugh, and is entertaining? Cronbach's alpha from the humor questions was .93. The questions were asked on a 6-point scale ranging from *no* to *very*. We combined the scores from each of these questions to measure humorousness of each condition.

Three questions were asked to determine whether or not the manipulation of the independent variable worked. These were as follows: did the picture seem real, made up, and hypothetical (Cronbach's $\alpha > .70$)? The questions were asked on the same 6-point scale that the humor questions were. We intended to see if changing the pictures of the cats altered the perception of hypotheticality between levels of the independent variable.

The survey also assessed severity of the violation: do you think this scenario is disturbing, disgusting, strange, and upsetting? In the same format as the other questions, we asked these to determine if changing the level of psychological distance did reduce negative emotions. Lastly, we asked participants if they understood the scenario and if they had heard it before to assess if comprehension or familiarity affected the results.

Procedure

Participants were approached in the entrance of a university building and asked to take a survey in exchange for a candy bar ($N = 76$; 67.1% males, 32.9% females; mean age = 22.5). A table was set up in the entrance of a campus building. The survey software randomly generated each condition when the participants began the survey.

Results

We analyzed the perceived humor as it varied between the three levels of hypotheticality using a between-subjects one-way analysis of variance. This indicated an overall significant difference in humor scores, $F(2,73) = 3.59, p = .033$ (table 1). A post hoc comparison was conducted using the Tukey HSD test. This revealed significance between the real condition ($M = 2.52, SD=1.57$) and

the real cartoon condition ($M = 1.41$, $SD = 1.35$) with $p = .025$ (table 2). The abstract cartoon was not significantly different from either of the other conditions ($M = 1.95$, $SD = 1.60$).

Another one-way ANOVA was conducted to determine whether each condition varied on its level of hypotheticality, and the result was significant, $F(2,73) = 7.70$, $p = .001$. The hypotheticality rating of the real picture ($M = 2.22$) was significantly different than the real cartoon ($M = 3.26$) with $p = .012$ and from the abstract cartoon ($M = 3.54$) $p = .001$. However, the difference between the two cartoons was not significant, $p = .738$ (table 1).

Discussion of Study 1:

Based on the lack of significantly different hypotheticality rating between the real cartoon picture and the abstract picture, these two conditions were considered the same. Given that, the relationship our data describe mimics the relationship previous studies found for a mild mishap. Increasing distance from the real picture to the cartoons resulted in lowered humor scores. Because of this negative relationship, we assumed that the moderate violation was mild and that a severe violation would produce a curvilinear effect. The two cartoon conditions needed to be altered in hopes that they would be perceived as different levels of hypotheticality. The results from the negative emotions mirrored the results from the hypotheticality scores.

Study 2: Multiple Severity Levels and Hypotheticality

Research Design

We used a 3 (hypotheticality: real, real cartoon, abstract cartoon) x 3 (violation severity: mild, moderate, severe) between subjects design for the second study. The survey from the first study

remained intact with the addition to several questions. Participants were asked two more questions asking about negative emotions: do you think the scenario is upsetting, and do you think the scenario is sad? The new survey contained another added question to assess emotional closeness to the violated norm. To obtain the information, we asked the participants if they were more of a cat person or a dog person with five options: much more a cat person, more a cat person about equal, more a dog person, and much more a dog person.

Procedure

Amazon's MTurk website hosted the survey (55.4% male, 44.6% female; mean age = 32.4). Participants (N= 388) completed the survey in exchange for \$.30. They were exposed to one of 9 possible versions of the scenario randomly (one level of hypotheticality combined with one level of severity) and explained that they would be asked their opinions about a peculiar scenario. Of the three pictures, the real picture and the real cartoon were unchanged from the first study. Because the hypotheticality scores from the two cartoons did not significantly vary, the survey in the second study contained an abstract cartoon looking less realistic than the one in the first survey (see figure 5).

There were three levels of severity. The most severe violation involved the wrong cat being accidentally killed by the vet. In the moderate violation, the cat is mistakenly amputated; the same condition from the first study. And the mild violation depicted the wrong cat simply getting a shot. Because the violation used in the first study mirrored the results of a mild violation (a negative relationship between hypotheticality and humor), we predicted the severe violation would actually be considered moderate and reveal a curvilinear relationship between humor and hypotheticality.

Results

Humor scores were compared using a 3 x 3 between subject analysis of variance. There was no main effect of picture, $F(2,385) = .013, p = .98$. Subjects exposed to the real picture ($M = 2.03$, $SD = 1.35$) did not report higher humor scores than those exposed to the realistic cartoon ($M = 2.01$, $SD = 1.46$) or the abstract cartoon ($M = 1.99$, $SD = 1.25$). There also was not a main effect of violation severity, $F(2,385) = 2.10, p = .12$. Those exposed to the severe violation ($M = 1.82$, $SD = 1.28$) did not report a higher humor score than those exposed to the moderate ($M = 2.07$, $SD = 1.43$) or the mild ($M = 2.15$, $SD = 1.32$) violations. There was also not a significant picture x violation interaction, $F(4,385) = .38, p = .83$ (see Table 2).

Hypotheticality scores were perceived to be different between pictures, $F(2,385) = 39.61, p = .000$. The significant differences are only between the real picture ($M = 2.86$) and the real cartoon ($M = 3.90$), $p < .001$. Similarly, significant differences were revealed from the real picture and the abstract cartoon ($M = 4.10$), $p < .001$. The two cartoons were once again considered equally hypothetical, $p = .36$ (see table 3).

Discussion of Study 2:

The results from the second study indicated no differences in humor scores between any of the nine possible conditions. The change in violation and the change in pictures also provided non-significant effects separately. Once again, hypotheticality scores between the two cartoons were not significantly different from one another.

General Discussion

Although results from the first study appeared to partially support the hypothesis, the results did indicate there was a curvilinear effect for a moderately severe violation. Because other studies have successfully supported hypotheses very similar to ours, the non-significant results could be due to design flaw. BVT has many supporting studies that have successfully tested the effects psychological distance has on different severities of violations and humor. Our study gives direction for future studies like it.

Limitations

The results highlight two important problems in the study. The violation was not properly featured in the pictures, and the pictures also did not represent a gradient of hypotheticality.

In the picture used, the violation itself was not visually represented. The manipulation of hypotheticality in connection to the violation was not adequately conveyed. The participant mentally construed the death or injury rather than be delivered it. In the previous study involving hypotheticality and humor (McGraw, Warren, Williams, & Leonard, 2012), the consequence of the violation was present in the picture shown. Abstract looking cartoons such as Wiley E. Coyote and Kenny from *South Park* are shown experiencing their trauma. In our study, the participants were shown a picture of the victim unharmed and then told a story about it, leaving a disconnection between the violation and the psychological distance. Changing the pictures to include the violation could have greatly improved the study. The gap between the distance and violation likely can explain why the negative emotions had little relation to the manipulation of hypotheticality.

The non-significant hypotheticality levels between the two cartoons still remained a problem in the second study. There are probably two possibilities as to why they were still as hypothetical as each other: either the cartoons were yet again not physically different enough or the visual representation alone of hypotheticality is perceived categorically (real or not). It is possible that varying the image by the shape of the figure may have given the two cartoon pictures enough distance. In practice, images and characters vary by behavior, posture, coloring, voice, and other such dimensions to further themselves from reality. To limit extraneous differences between each hypotheticality condition, the pictures only differed visually.

A different method to change hypotheticality could be more successful in producing a gradient. Two suggestions for future experiments are to either vary the physical shape even more for the abstract cartoon and perhaps use more detailed graphic design for the real cartoon or stray from a physical representation of hypotheticality.

Because the violation and the manipulations need to be directly linked and the visual gradient of hypothetical distance was unattainable, future endeavors could explore representing hypotheticality using a non-visual method.

If the scenario featured a cat behaving in a way a cat could not possibly behave, it may have better produced a gradient while at the same time keeping the hypotheticality and violation linked. The character could do something impossible or improbable included in the violation. For example, “My cat has an addiction problem. The damned thing barks and barks at me until I give him his nicotine and he finally shuts up.” The cat could either: a) meow as a realistic manipulation; b) bark as a moderately hypothetical manipulation;; c) complain in English as the most abstract version. For the violation, he could crave: a) sugar; b) nicotine; or c) heroine.

Hypotheticality is linked with the violation and saves the need for 9 different pictures of the cat with the physical consequence of the violation included.

Future Directions

A curvilinear relationship between a moderate norm violation and humor could likely be discovered upon further research. The foundations for the hypothesis was grounded in a theory that has other support from previous research and there were several key methodological changes that a future experiment could incorporate. According to BVT, the moderate violation should be threatening when it is too realistic and becomes irrelevant once it is very abstract or psychologically distant. Your bad haircut is devastating, a friend's is funny, and a stranger's is irrelevant.

Humor, from the viewpoint of benign violation theory, also allows a line to be drawn between what's included in group values and what is not. Finding something funny suggests that it is the meeting of the appropriate and the inappropriate. Laughter from a benign norm violation is an excellent barometer of what people believe is acceptable, true, or irrelevant. We can gain insight into changes in beliefs through humor.

Without proper examination of these phenomenon, people seeking to profit from the use of humor, in areas like advertising or leadership roles, may unknowingly squander the great potential of it. Knowing the effects is only a portion of understanding how people can use humor as a powerful tool. We must also have a firm understanding of the secretive and incredibly complex underlying mechanics of what makes humor. Our efforts have been to further the domain seeking to explain why humor occurs.

A quotation from Sigmund Freud in his book *Jokes and Their Relation to the Unconscious* (1905) exemplifies the challenges in defining humor and whether not it is worth defining. Freud also goes on to write, “I can appeal to the fact that there is an intimate connection between all mental happenings – a fact which guarantees that a psychological discovery even in a remote field will be of an unpredictable value in other fields.” Humor is often understood as not much more than an instantaneous response in day-to-day interactions, receiving little speculation by most. The efforts here, and with other studies, call upon greater reflection and a deeper understanding of what it is that actually makes us laugh.

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Table 1

Humor and Hypotheticality Scores for Study 1

Moderate			
Mean Humor and Standard Deviation		Hypotheticality and Standrad Deviation	
<hr/>			
Condition			
Real	2.52 (1.57)		2.22 (1.28)
Real Cartoon	1.41 (1.35)		3.26 (1.16)
Abstract Cartoon	1.95 (1.60)		3.53 (1.16)
<hr/>			
<i>p</i> = .03			
<hr/>			

Humor Score Means and Stand Deviations by Picture and Violation Severity in Study 2

		Violation Severity					
Pictures		Mild		Moderate		Severe	
Conditions	M	SD	M	SD	M	SD	
Real Picture	2.32	1.4	2.01	1.30	1.76	1.28	
Real Cartoon	2.11	1.45	2.10	1.56	1.82	1.33	
Abstract Cartoon	2.01	1.06	2.12	1.44	1.86	1.25	
F(2,#)							

Hypotheticality Score Means and Stand Deviations by Picture and Violation Severity in Study 2

		Violation Severity					
Pictures		Mild		Moderate		Severe	
Conditions	M	SD	M	SD	M	SD	
Real Picture	3.38	.69	3.24	1.04	3.04	.84	
Real Cartoon	3.35	.79	3.16	.86	2.86	.80	
Abstract Cartoon	3.36	.67	3.23	.75	3.29	.82	
F(2,#)							

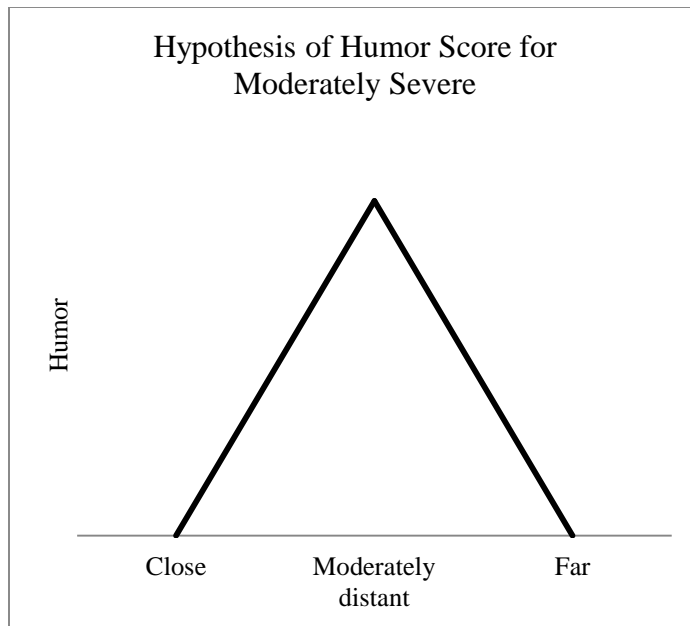


Figure 1. Hypothesis of moderately severe violation. The figure illustrates what was predicted of humor scores for a moderately severe violation.



Figure 2. Real hypotheticality condition. This figure was used as the real condition to elicit the least amount of hypotheticality



Figure 3. Real-cartoon hypotheticality condition. This figure was used as the real-cartoon condition to elicit a moderate amount of hypotheticality

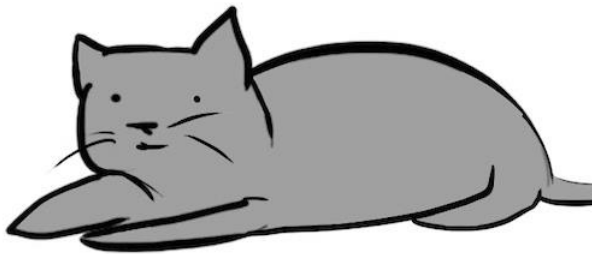


Figure 4. Abstract-cartoon hypotheticality condition. This figure was used as the most hypothetical condition.

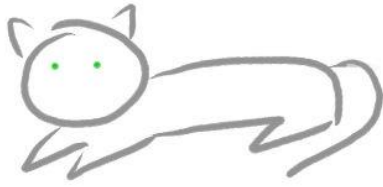


Figure 5. Abstract-cartoon hypotheticality condition for the second study. This figure was used as the most hypothetical condition.