THE EFFECT OF EXPECTATION AND INTENTION ON THE

APPRECATION OF ABSURD HUMOUR

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Abstract

Violations to our sense of meaning have traditionally been thought of as a source of anxiety and

threat. However, meaning violations can also be a source of humour, as is evidenced by their

abundant use within comedy in the form of absurd humour. The present study investigated this

apparent paradox by examining the effects of expecting absurdity and perceiving an intention to

be funny on humour ratings of absurd jokes. The roles of various individual differences were

also investigated. Results indicated that expecting absurdity increased funniness of the first

absurd joke encountered. Perceived intention to be funny did not affect funniness ratings. When

controlling for individual differences, there was also a significant interaction between

Expectation and Intention, although the direction of this effect differed depending on which

individual difference was controlled.

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The Effect of Expectation and Intention on the Appreciation

of Absurd Humour

Humans naturally seek to reduce uncertainty in their environment (Hirsh, Mar, & Peterson, 2012)[1]. One means of doing so is to establish consistent, coherent, and reliable associations, which collectively form "meaning." Identifying meaning in our environment facilitates interactions with our surroundings and makes the world a more predictable place. Because we rely on these associations to reduce uncertainty and inform our behaviour, violations to them represent a distinct problem. Philosophers such as Camus and Kierkegaard thought that meaning violations were reminders that our associations of meaning are actually spurious and that existence is in fact meaningless (Camus, 1942/1955; Kierkegaard, 1843/1945); this is a possibility that most find quite troubling. Recent psychological models, such as the Meaning Maintenance Model (Heine, Proulx, & Vohs, 2006), have also conceived of meaning violations as a source of threat that increases arousal and induces anxiety. In both philosophy and psychology, the focus has been on how meaning violations are perceived as threatening, eliciting a negative or defensive response. However, one response to meaning violations has gone largely unstudied: that of mirth.

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[1] It should be noted that although uncertainty is generally thought of as aversive (Hirsh, Mar, & Peterson, 2012), its effect is not always strictly and uniformly unpleasant. For example, individuals who were uncertain about the prize for a winning raffle ticket that was misplaced were less upset than individuals who knew the prize for the misplaced winning raffle ticket (van Dijk & Zeelenberg, 2006). However, in other cases, uncertainty about negative outcomes is experienced as more unpleasant. For example, individuals with a negative self-perception prefer to have that perception verified, rather than receiving contradictory complimentary information (Swann, Stein-Seroussi, & Giesler, 1992). It is not immediately clear why the effect of uncertainty diverges in this way, but for the purposes of this study it is sufficient to note that uncertainty is typically regarded as aversive, regardless of whether the uncertain outcome is positive or negative.

Meaning Violations and Humour

There are some meaning violations that tend to elicit both feelings of threat and the experience of mirth. In particular, absurd humour tends to elicit this mixed response. Absurdity refers to information that is illogical, irrational, or strange. It acts as a meaning violation by disrupting our expectations of a coherent and consistent world. Although absurdity should elicit a threat response, it is often found to be humorous, as is evidenced by its abundant use within comedy in the form of absurd humour. Absurd humour is even considered its own distinct category, one that employs specific tropes to produce mirth. These tropes include illogical situations, inexplicable events and behaviours, and non-sequiturs. Absurd humor has attained great popularity across a number of different media and throughout history, including novels (e.g., Douglas Adams' *The Hitchhiker's Guide to the Galaxy*), theatre (e.g., Eugène Ionesco's *The Bald Soprano*), and film and television (e.g., Monty Python as well as Tim and Eric). Additionally, certain Internet communities, such as Weird Twitter, have come together based entirely on a shared interest in crafting absurd jokes. Thus, it seems clear that absurdity can be funny under certain circumstances and perhaps for certain types of people, despite the fact that it is a form of meaning violation. Given that much of psychology and philosophy has focused on how meaning violations are threatening, the present study aims to investigate this puzzling and understudied mirth reaction to absurdity in the form of absurd humour.

Humour

The transmission and perception of humour are ubiquitous aspects of human communication (Gervais & Wilson, 2005; Weisfeld, 1993; Wyer & Collins, 1992). Humour can be used to attract mates (Buss & Barnes, 1986; Lippa, 2007), improve our mood (Martin, 2001),

cope with stress (Lefcourt et al., 1997), and increase our workplace efficacy (Mesmer-Magnus,

Glew, & Viswesvaran, 2012). Furthermore, comedy is a highly-popular genre of movies and

television, and so humour is evidently also a highly-prevalent theme in popular media.

Reflecting the fact that humour is such a common and significant aspect of human behaviour, it

is also an important area of psychological research.

Much of the research on the perception of humour has conceived of it as being a two-

stage process (Suls, 1972; 1983). First, an incongruity is encountered in the form of something

surprising or illogical. Next, the incongruity is resolved by reassessing the incongruity using

either new information presented or information from memory. Humour is thought to result from

this resolution of incongruity (Suls, 1972; 1983). For example, consider the following joke:

"Two fish are in a tank. One says to the other, 'Do you know how to drive this thing?'"

Incongruity is introduced right at the end of this joke, when one ponders how one could possibly

drive a fish tank. This incongruity is then resolved when one realises that the word "tank" has

multiple meanings and that, in this case, "tank" refers to a vehicle and not a container for fish.

The perception of humour and its concomitant mirth response results from the resolution of this

incongruity. Humour theories based on this general idea are known as incongruity-resolution

theories. However, not all jokes are as easily explained by incongruity-resolution theories. A

distinct feature of absurd humour is that its incongruities cannot be resolved. Consider the

following joke: "A wise old man told me the things that matter the most are the things that matter

the least. Later we found out he was just a pile of hair." Incongruity is introduced when the

speaker says that what he thought was an old man was actually a pile of hair. This incongruity is

not resolved either by any further information provided by the joke or any additional semantic

information we can draw upon. In this way, this absurd joke appears to follow a different

structure than most typical forms of humour that rely upon incongruity resolution. Rather than resolve an incongruity to introduce humour, incongruity that remains unresolved or unsatisfactorily resolved forms the basis of this kind of humour.

The prevalence of humour that does not rely upon incongruity resolution has been confirmed by a number of large-scale empirical investigations. Ruch (1981, as cited in Ruch, 1992) had participants rate an array of jokes from a variety of sources on funniness. A factor analysis was then conducted on these ratings. He found that three different categories of jokes emerged: jokes based on the resolution of incongruity, jokes whose incongruity cannot be fully resolved, and jokes whose content was sexual. Ruch (1992) has dubbed jokes whose incongruity cannot be fully resolved "nonsense humour." Whether nonsense humour is distinct from our conception of absurd humour, and how the two differ, is not immediately clear. However, both describe a type of humour that, unlike other forms of humour, does not fully resolve the incongruities it presents. Thus, research on nonsense humour should be informative in our investigation of absurd humour. Unfortunately, research on nonsense humour is somewhat limited. Although nonsense humour has been identified as a highly-prevalent category of humour, the majority of humour research has focused on incongruity-resolution humour. Of the research on nonsense humour that has been conducted, most of it has focused on predictors of appreciation.[2] For example, self-reported preference for complex and unconventional forms of humour positively predicted higher funniness ratings of nonsense humour and lower funniness ratings of incongruity-resolution humour (unpublished data cited in Ruch, 1992). Similarly, motivation to seek out and appreciate novel stimuli also positively predicts funniness ratings of nonsense humour (Ruch, 1988). Appreciation for nonsense humour has also been shown to

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[2]However, attempts to predict appreciation of nonsense humour using individual differences have generally been less successful than when predicting appreciation for incongruity-resolution humour (Ruch, 1992).

progressively decrease after the late teenage years (Ruch et al., 1990). Although these findings

on nonsense humour do not directly address the paradox of why something inherently

threatening is perceived as funny, they do help to describe the population that appreciates this

type of humour. By viewing nonsense and absurd humour as highly-related forms of humour, we

used these findings to inform the design of the present study. In addition, a recently developed

theory of humour also provides a useful framework for investigating absurd humour: the Benign

Violation Theory of humour.

Benign Violation Theory of Humour

A possible guide to understanding how meaning violations could elicit mirth is a recent

model of humour that conceives of threat as a crucial element. Known as the Benign Violation

Theory of humour, it predicts that something is funny when (and only when) it is simultaneously

perceived to be both threatening and benign (McGraw & Warren, 2010). If something is

perceived to be genuinely threatening (malign), one does not find it funny. Additionally, this

theory posits that something cannot be funny when no threat is present, when things are purely

benign. Absurd humour would seem to fit this bill perfectly, as it provides a threat in terms of a

meaning violation but presents this threat within the safe confines of a humorous context. This

idea that humour relies on threat is also not completely without precedent. Other theories of

humour, such as incongruity resolution theories, posit the necessity of a meaning violation of

some sort, with the resolution of this violation providing a removal of the threat and thus

producing humour (e.g., Attardo, 1997; Suls, 1972). The Benign Violation Theory modifies these

theories slightly by suggesting that anything that threatens someone's sense of how things "ought

to be" will be seen as funny if it is simultaneously benign. In this way, the theory may offer a

compelling account for why absurd humour can be perceived as funny. Because absurdity acts as

a meaning violation (which is a source of threat), the Benign Violation Theory predicts that this absurdity will only be perceived as funny if it is simultaneously perceived as benign. Following this logic, it seems reasonable to assume that anything that reduces the threat of absurdity should help to increase the likelihood of it being perceived as funny.

The Benign Violation Theory of humour has received some empirical support. McGraw and Warren (2010) have shown that norm violations are perceived as funnier when they are seen as both a violation and benign rather than strictly one or the other. For example, a story in which a man snorted the cremated ashes of his father was rated as funnier when participants reported being able to interpret the story as both "wrong" and "not wrong." Similarly, they found that individuals who were less dedicated to a violated norm or those who felt more psychologically distanced from it rated a vignette based on this norm being violated as funnier (McGraw & Warren, 2010). For example, participants who were not churchgoers were more likely to be amused by a news story about a church raffling off a Hummer SUV than were churchgoers. These studies support the notion that violations can be made funnier by encouraging the perception of them as benign. Furthermore, they show that individual differences can affect the level of threat experienced in response to a violation. More recent studies have attempted to rule out traditional incongruity-resolution as a possible explanation for these effects. For example, in one study participants were shown a video of a man either falling while pole-vaulting or successfully pole-vaulting (Warren & McGraw, 2016). Participants found the failure to be funnier, regardless of whether they were told to expect a successful or botched pole-vault. This suggests that it is the presence of a violation, and not surprise or expectation violation (an incongruous result) that is responsible for the perception of humour. These data therefore lie in contrast to the accounts of incongruity-resolution theories, which typically consider surprise to

be a crucial aspect of humour (Nerhardt, 1976). In another study, a confederate posing as a fellow participant either passed candy or threw candy at participants, explaining the behaviour either beforehand or afterward (Warren & McGraw, 2016). Participants found the experience funnier when candy was thrown at them as opposed to it being passed. They also found it funnier when the behaviour was explained beforehand rather than afterward. These findings also contradict incongruity theories of humour, which typically suggest that surprise is a necessary condition of humour. In contrast, these data suggest that a violation (i.e., a stranger throwing candy at you) can be perceived as funny when it is rendered benign by a preceding explanation. Furthermore, they show that aspects of context, such as expectation, play a role in determining whether something is perceived as benign.

The present study examined the possibility that absurd jokes can be made funnier by reducing the degree of the violation contained within them. Furthermore, context and individual differences were considered as potential ways of reducing the threat of absurd jokes and increasing the likelihood of absurdity being perceived as humorous. In doing so, this investigation hopes to bring about greater understanding of why threatening meaning violations are sometimes seen as humorous. In addition, this study will also test the tenets of the Benign Violation Theory as a valid account of absurd humour.

Individual Differences and Absurdity

There are a number of ways to reduce how much threat is perceived upon encountering absurdity. One factor that should affect the level of perceived threat is individual differences in the tolerance of meaning violations. People vary in the degree to which uncertainty and other indications of meaning violations are found to be troubling, with several well-studied traits

ascribed to these differences. For example, personality traits that describe a tendency to approach

and appreciate both novelty and uncertainty should predict lower levels of perceived threat for

violations of meaning (Ruch, 1988; Ruch & Hehl, 1983). These traits include Openness/Intellect

from the Big Five model of personality (John & Srivastava, 1999) along with Intolerance for

Uncertainty (Freeston, Rhéaume, Letarte, Dugas, & Ladouceur, 1994), Need for Cognition

(Cacioppo & Petty, 1982)[3], and Need for Closure (Webster & Kruglanski, 1994). Similarly, traits

that describe a tendency to react negatively to rule violations, such as the Big Five traits of

Conscientiousness and Neuroticism, should also play a role. McGraw and Warren (2010) showed

that individuals who were less likely to feel that a violation was benign were also less likely to

find that violation funny. In a similar fashion, individuals who react more negatively to rule

violations should be less likely to find these violations benign and thus also less likely to find

them funny. In contrast, those who appreciate novelty and are not inherently bothered by the

breaking of norms or rules should be more likely to find absurdity humorous rather than

threatening. Data collected in our lab have supported the idea that these traits play a role in how

absurdity is perceived (Quinlan et al., in prep.).

Expectation and Absurdity

Aside from individual differences, context is another important factor that may affect

how much threat is perceived in absurdity (Mitchell, Graesser, & Louwerse, 2010). In particular,

expecting something to be absurd should play a significant role in determining our reaction to

absurdity, as the threat experienced in these reactions is likely to be caused, at least partially, by

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[3] Both Openness/Intellect and Need for Cognition are positively related to the Experience Seeking subscale of the Sensation Seeking Scale (Aluja et al., 2003; Sarmány, 1999), which has itself been shown to predict appreciation for nonsense humour (Ruch, 1988). As these two traits describe similar motivations and preferences as Experience Seeking, and as nonsense humour is highly-related to absurd humour, Openness and Need for Cognition should predict appreciation for absurd humour.

violations of expectation (Heine, Proulx, & Vohs, 2006). If absurdity is expected, the shock of

incongruity (and the resultant threat) should be reduced (Warren & McGraw, 2016). Having

accurate expectations should also reduce the sense of unpredictability, which may also be a

source of threat (Hirsh et al., 2012). Importantly, we typically expect absurd humour when we

encounter it, such as when we intentionally watch absurd comedy in the form of a television

show or film. If expectation can reduce threat to the point where this absurdity is perceived as

benign, then absurdity should be more likely to be perceived as funny. Past work has shown that

expectation can reduce the threat response to incongruity. In a study on meaning violations,

Bruner and Postman (1949) presented participants with playing cards that had their colours

reversed (e.g., hearts were black, spades were red, etc.), flashed on-screen for brief durations.

Having been given no explicit expectations, participants relied on their past associations to

inform their perception and interpretation of the stimuli (e.g., expecting hearts to be red). Thus,

when presented with an incongruous card, their expectations and meaningful associations were

violated. The authors reported that this meaning violation led participants to experience

discomfort and confusion. However, the violation and its effects were contingent on the

expectation of standard playing cards. If a participant expected an incongruous card (or once

enough incongruous cards had been shown as to induce new expectations), the authors reported

that these incongruous cards no longer produced discomfort and distress. So, expecting absurdity

should act in a similar fashion, reducing threat and making it benign enough to be perceived as

funny, according to the Benign Violation Theory of humour.

Intention and Absurdity

   Another aspect of context that should affect perceptions of absurdity is knowledge of

intention. Specifically, an intention to be funny may reduce threat and help to produce humour

for a few reasons. First, people who enjoy absurd humour know that it is intended to be funny.

Second, humans generally operate under the assumption that information is intended to be both

informative and sensible (Grice, 2002).Without knowledge of an intention to be funny, attempts

at absurd humour may appear to be nothing but a flagrant violation of these norms, which will be

perceived as threatening. Knowing that humour is intended may allow us to suspend these

norms, reducing the threat experienced and rendering the incongruity sufficiently benign as to be

found funny. There may also be other relevant norms at play when one believes that another

intends to be funny. For example, it is impolite to laugh at someone if that person is not

intending to be funny. Likewise, it is polite to laugh at someone intending to be funny (even if

they might be failing at this). Additionally, because things that are meant to be funny are seen as

inconsequential ("just a joke"), they should be perceived as less threatening, which may aid in

perceiving absurdity as benign and therefore funny. Knowing that something is intended to be

funny may also increase humour ratings by creating the expectation that the joke will be funny.

Expecting a moderate[4] level of humour has been found to increase humour ratings of traditional

jokes compared to when a very high level of humour was expected or there were no expectations

of the level of humour (Wimer & Beins, 2008).

An expectation of humour and knowledge of humorous intentions should both encourage

the perception of absurdity as funny. It is not entirely clear, however, how intention to be funny

affects perceptions of absurdity in the presence or absence of an expectation of absurdity. In

conjunction with an expectation of absurdity, perceived intention should function quite clearly to

reduce threat and increase perceptions of humour. However, when no other expectations are

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[4] Ratings of humour were lower when participants expected very high levels of humour. Although we make no
specific predictions about how these different levels of expectation would operate in the context of absurd humour,
it seems likely that a perceived intention to be funny would induce an expectation of moderate humour (as opposed
to very high or very low).

explicitly provided, it may be that having information regarding an intention to be funny creates an expectation of traditional, non-absurd, humour. Most jokes follow a traditional format, with absurd humour occupying only a small niche of the humour landscape. If intention to be funny without the expectation of absurdity results in the expectation of a traditional joke, the shock of encountering absurdity may increase the threat rather than reduce it, thus rendering it malign and not funny. In this way, intention to be funny may interact with expectations of absurdity, encouraging the perception of absurdity as funny when absurd expectations are present and discouraging that perception when these expectations are absent. Without evidence that perceived intention to be funny induces this expectation of traditional humour though, this prediction of an interaction cannot be made with full confidence. Intention to be funny may unilaterally aid in reducing threat to a benign level, regardless of expectation of absurdity.

Individual Differences, Expectation, and Intention

A final possibility that should be discussed is the moderation of expectation and intention effects by individual differences. It may be that some individuals are high enough in tolerance to the threat of novelty (e.g., possessing high levels of traits like Openness, low levels of intolerance for rule violation like Conscientiousness, etc.) that they find almost all absurdity benign, regardless of context (i.e., intentions, expectations). For these individuals, the reduction of threat by expectations of absurdity may not increase the likelihood of finding absurdity funny. A similar moderation of intention to be funny is possible. First, the reduction in threat provided by knowledge of intention may be redundant for these individuals in a similar fashion to expectation. Second, although many of the humour-encouraging norms discussed above should still be relevant for individuals high in Openness (and related traits), those tolerant of rule violations may not be as motivated by these norms. A tolerance for rule violation likely extends

to a tolerance for norm-violation and so these individuals are more likely to violate norms. Thus, the effect of intention to be funny may be reduced in individuals who are low in Neuroticism and Conscientiousness.

Though there has been little research on how factors like expectation and intention might influence perceptions of absurd humor, one study has indirectly examined this topic within the context of another research goal. Proulx, Heine, and Vohs (2010) presented participants with an absurd and humorous short story, manipulating the participants' expectation of absurdity, in a study on meaning violations. Most surprisingly, no differences in ratings of humour were found based on expectation; those who expected the piece to be absurd found it just as funny as those who did not. There are, however, important aspects of the study that may undermine any possible conclusions about these results. Namely, the stimulus used did not employ absurd humour alone. Participants were presented with a Monty Python parody of a World War I fighter pilot story, which included drug use, homoerotic sexual innuendo, and slapstick, all of which are sources of humour distinct from absurdity. The effect of these humorous elements cannot be disentangled from those tied to the absurd elements in the story. Furthermore, expectation may not affect the perception of these more common forms of humour in the same way as it affects absurdity. As absurd humour has a distinctly-different structure from these other types of humour (Ruch, 1992), expectation may even operate in a different manner entirely when these types of humour are presented together. Another potential concern with this study is the manipulation of expectation. First, expectation was confounded with intention to be funny. Participants in the expected absurdity condition read the following: "This story is an absurd parody of combat adventure stories and is meant to be a joke." This manipulation gives not only an expectation of absurdity—the intended manipulation—but also explicates the intention behind the piece. In

contrast, participants in the control condition were given no explicit expectations or information about intentionality. Second, there are other differences between the two conditions that are not germane to the intended manipulation. For example, participants in the No Expectation condition were given historical information on World War I fighter pilots whereas the other condition did not receive this information. This information was intended to induce normal expectations (i.e., that the story would be a typical piece of historical fiction). However, this manipulation differs greatly from the expected absurdity condition, in which participants were explicitly told what to expect (an absurd parody) and were given no historical information.

Current Study

The goal of this study is to examine how expectation of absurdity, perceived intention to be funny, and individual differences affect the perception of absurd humour. Participants were presented with pure examples of absurd stimuli and both their expectations and their knowledge of intention were individually manipulated. Furthermore, the conditions were closely matched by either including or omitting an explicit expectation induction and information about intentionality, allowing us to test the following hypotheses:

H1: When absurdity is expected, absurd stimuli will be rated as funnier because the expectation will reduce threat, making the violation benign.

H2: When an intention to be funny is perceived, absurd stimuli will be rated as funnier because intention reduces the threat, making the violation benign.

H3: Perceived intention to be funny and expectation of absurdity will interact to affect funniness ratings, indicating that the effect of intention on perception of humour varies according to different levels of expectation. When absurdity is expected, intention to be

funny will lead to an increase in humour ratings (as predicted in H2). When absurdity is

unexpected, perceived intention to be funny will lead to a decrease in humour ratings. This

is due to the violation of an expectation of traditional humour created by knowledge of an

intention to be funny.

As individual differences are also likely to influence whether absurdity is seen as

humorous, this study included a battery of individual difference measures related to appreciating

novelty and tolerating rule violations. These included the Big Five personality traits

(Openness/Intellect, Conscientiousness, and Neuroticism being of particular interest) (John &

Srivastava, 1999), Need for Cognition (Cacioppo & Petty, 1982), Need for Closure (Webster &

Kruglanski, 1994), and Intolerance for Uncertainty (Freeston et al., 1994). This allows us to test

the following hypotheses:

H4: Traits related to an appreciation of novelty will predict higher humour ratings of

absurd stimuli.

H5: Traits related to intolerance for rule violations, uncertainty, and ambiguity will predict

lower humour ratings of absurd stimuli.

H6: The effect of expectation on humour ratings of absurd stimuli will be reduced in

individuals high in traits related to an appreciation of novelty and low in intolerance for

rule violations.

H7: The effect of intention to be funny on humour ratings of absurd stimuli will be reduced

in individuals low in traits related to intolerance for rule violation.

Method

In order to avoid participant fatigue and possible order effects, the study was run in two separate phases completed at different times. Phase 1 consisted of the experimental portion of the study and participants were informed upon completion that they would be contacted within a few days to complete Phase 2, which consisted of the individual difference measures. Not all participants who completed Phase 1 also completed Phase 2, however.

Participants

Because the stimuli employ very nuanced and subtle language, they require a high degree of English fluency. In order to ensure appropriate comprehension, only participants with at least ten years of English fluency were recruited to participate in the study. There were 636 participants recruited for the experimental phase of this study, all of whom were recruited from an undergraduate research pool and who received partial course credit for participation. Of the 636 who were initially recruited, 418 (66%) participants completed both phases of the study.

Data cleaning. All data cleaning was completed prior to the statistical analyses. Of the 636 participants recruited for Phase 1, 5 (1%) did not consent to participate and were removed before analysis. Additional exclusions included 13 (2%) participants who failed our attention check item[5] and 12 (2%) participants who reported that they did not respond honestly to the questionnaire. In order to ensure that only participants who had processed the manipulation were included in the analyses, 151 (24%) participants who were unable to accurately summarise the instructions given to them were also removed. Similarly, 36 (6%) participants were removed for incorrectly recalling the instructions in a multiple choice manipulation check. Finally, an attempt

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[5] "Please select the sum of two plus three for this question." Response was chosen from a drop down list.

was made to clean the data based on missing responses. However, all but 6 participants

responded to every question. The remaining 6 missed only 1 question and so no participants were

removed based on missing responses. The final sample therefore consisted of 432 participants

(306 women, 2 unreported).

Of the 418 participants who initially completed Phase 2, 3 (1%) did not consent to

participate and were excluded. A further 101 (24%) participants were removed for failing one or

more attention check items[6], and 4 participants were removed for providing missing data for

more than 5% of the measures of interest. All exclusions were made prior to any data analysis.

The final sample that completed Phase 2 of the study consisted of 310 participants. After this

data cleaning was completed, 222 participants remained who had successfully completed both

phases of the study.

Stimuli

By way of absurd stimuli, 10 jokes were taken from the Internet community known as

Weird Twitter. These jokes were chosen as targets because they eschew traditional elements of

humour in favour of a uniquely absurd style. Importantly, we have selected stimuli that are

purely absurd—that is, irrational, illogical, or strange—and do not contain other humorous

elements, allowing us to be more confident that any effects observed are attributable to absurdity

per se, rather than some other element of humour. Participants were presented with three

different jokes, presented in an order randomly chosen from ten different orders, allowing us to

monitor and control order effects. Only three targets were presented because we assumed that

new expectations would form after continued exposure to absurd targets. In light of this

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[6] E.g., "Please click on very characteristic of me and proceed to the next question."

possibility, we also analysed only the first presentation of a target in order to examine whether induced expectations were wiped out after first encounter with an absurd text. Using a diverse set of 10 possible targets (with subsets of 3 shown to each participant) shown allows us to be more confident in the generalisability of any effects observed to absurd jokes as a whole. All targets are provided in Appendix A.

Target Ratings

Participants were asked to provide four ratings for each target, with each rating made on a 7-point scale. The first rating served as the main dependent variable: "How funny was the passage you just read?" (1 = "*not at all funny*," 7 = "*very funny*"). Second, participants rated how familiar they found the text to be: "How familiar are you with this passage (or a close variation of it)?" (1 = "*not at all familiar*," 7 = "*very familiar*"). In previous studies conducted in our lab, familiarity has been found to be an important predictor of humour ratings. Third, participants made a rating intended to obscure the true intentions of the study: "How grammatical was the passage you just read?" (1 = "*not at all grammatical*," 7 = "*very grammatical*"). Finally, as a means of measuring appreciation that may not be captured by the funniness rating, participants were asked how likely they would be to share the text with friends: "How likely would you be to share this with your friends?" (1 = "*not at all likely*," 7 = "*very likely*").

Individual Difference Measures

The Big Five. The Big Five personality traits were measured using the Big Five Aspect Scale (BFAS; DeYoung, Quilty, & Peterson, 2007). The BFAS was used because it allows us to

measure both the Big Five personality traits and the two aspects that compose each of the traits.[7]

The BFAS consists of 100 short descriptive phrases, each of which is associated with one of the

ten aspects (e.g., "I get easily agitated" for Volatility; "I laugh a lot" for Enthusiasm).

Participants were asked to rate each phrase on how well it described them on a 5-point Likert

scale from 1 ("*strongly disagree*") to 5 ("*strongly agree*"). The measure has been shown to have

good psychometric properties, with aspect-specific alpha reliability coefficients ranging between

.72 and .89 (DeYoung et al., 2007).

Intolerance of Uncertainty. Intolerance of Uncertainty was measured using the

Intolerance of Uncertainty Scale (IUS; Buhr & Dugas, 2002). The scale consists of 27 phrases

describing feelings towards uncertainty (e.g., "The ambiguities in life stress me"). Participants

were asked to rate each phrase on how characteristic of them it was on a 5-point Likert scale

from 1 ("*not at all characteristic of me*") to 5 ("*entirely characteristic of me*"). The measure has

been shown to have good psychometric properties, with an alpha reliability coefficient of .91

(Buhr & Dugas, 2002) and a test-retest reliability over a five-week period of $r = .78$ (Dugas,

Freeston, & Ladouceur, 1997).

Ambiguity Tolerance. Participants also completed a short measure of Ambiguity

Tolerance. Specifically, they completed the Art Forms subscale of the Measure of Ambiguity

Tolerance (Norton, 1975). This subscale consists of 8 statements that specifically deal with

tolerance for ambiguity within media (e.g., "A poem should never contain contradictions").

Participants were asked to rate their agreement with each item on a 7-point Likert scale from 1

("*strongly disagree*") to 7 ("*strongly agree*"). It's worth noting that although the scale is named

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[7] The two aspects that compose each of the Big Five personality traits are as follows: Openness to Experience and Intellect for Openness/Intellect; Orderliness and Industriousness for Conscientiousness; Enthusiasm and Assertiveness for Extraversion; Politeness and Compassion for Agreeableness; and Withdrawal and Volatility for Neuroticism (DeYoung, Quilty, & Peterson, 2007).

"Ambiguity Tolerance," higher values actually indicate lower tolerance for ambiguity. The full

Ambiguity Tolerance measure has been shown to have good psychometric properties, with an

internal consistency of $r = .88$ and test-retest reliability of $r = .86$ over a 10-to-12 week period

(Norton, 1975).

Need for Closure. Need for Closure was measured using a short-form version of the

original 42 item scale, consisting of 15 items (Roets & Van Hiel, 2011; Webster & Kruglanski,

1994). The scale consists of 15 statements (e.g., "I don't like situations that are uncertain") and

participants are asked to rate how much they agree with each item on a 6-point Likert scale from

1 ("*strongly disagree*") to 6 ("*strongly agree*"). The measure has been shown to have good

psychometric properties, with an alpha reliability coefficient of .87 and a test-retest reliability

over a four-week period of $r = 0.79$ (Roets & Van Hiel, 2011).

Need for Cognition. Need for Cognition was measured using the Need for Cognition

Scale (Cacioppo, Petty, & Kao, 1984), which consists of 18 statements (e.g., "I prefer my life to

be filled with puzzles I must solve"). Participants were asked to indicate to what degree each

statement is characteristic of them on a 5-point Likert scale from 1 ("*extremely uncharacteristic

of me*") to 5 ("*extremely characteristic of me*"). The measure has been shown to have good

psychometric properties, with an alpha reliability coefficient of .90 (Cacioppo, Petty, & Kao,

1984).

Procedure

Data were collected using the online survey client Qualtrics (www.Qualtrics.com) for

both phases of the study. Once recruited, participants were provided with a link to the survey and

were able to complete it at their leisure. At the end of the Phase 1, participants were told that

they would be contacted in a few days to complete a second related study that would also be

worth partial course credit.

The two manipulations used in this study were (1) inducing the expectation of

encountering absurd stimuli, and (2) informing participants that the stimuli were intended to be

funny. In order to control differences between conditions as much as possible, these two

manipulations were executed by either including or omitting the relevant information in the

instructions presented. This resulted in a 2 (Expectation) x 2 (Intention) design.

Due to concerns that our manipulation would not be fully processed by students who are

used to participating in online survey studies and seeing very similar sets of instructions, we took

a number of precautions to encourage participants to pay close attention to the instructions

provided (in which the manipulation was embedded). After consenting to take part in the study,

participants were asked to "Please be sure to read the instructions closely and carefully as this is

not a traditional task." Participants were then randomly assigned to receive one of four sets of

instructions:

(1) "Please read the following passages and respond to the questions that follow."

(*Control*) (*No expectation of absurdity/No knowledge of intention*)

(2) "Please read the following passages and respond to the questions that follow. The

passages you are about to read are absurd (i.e., strange, illogical)." (*Absurd Condition*)

(*Expectation of absurdity/No knowledge of intention*)

(3) "Please read the following passages and respond to the questions that follow. The

passages you are about to read were written to be funny (i.e., humorous, make people

laugh)." (*Funny Condition*) (*No expectation of absurdity/Knowledge of intention to be funny*)

(4) "Please read the following passages and respond to the questions that follow. The passages you are about to read are absurd (i.e., strange, illogical) and were written to be funny (i.e., humorous, make people laugh)." (*Absurd/Funny Condition*) (*Expectation of absurdity/Knowledge of intention to be funny*)

On the same page as the provided instructions, participants were asked to summarise the instructions in their own words. This was intended to encourage participants to fully process the manipulation and served as a basis for removing participants who could not show that they attended to the instructions. The instructions were provided as an image in order to prevent copy and pasting of text. Participants who did not accurately summarise the manipulation present in the instructions (i.e., information about expectations or intentionality) were removed prior to all analyses. Participants were then randomly assigned to one of 10 possible stimulus orders. In order to further encourage participants to attend to the manipulation, the instructions were provided at the top of the page for each stimulus presentation. Each stimulus was presented on its own page along with the four questions detailed in the Ratings section.

After completing presentation of the third stimulus, participants were asked what we had told them about the passages in the instructions, with multiple choice responses. The possible answers were (1) Nothing (*Control*), (2) That the passages would be absurd (*Absurd Condition*), (3) That the passages would be funny (*Funny Condition*), (4) That the passages would be absurd and funny (*Absurd/Funny Condition*), and (5) Don't know/don't remember. This question was intended to serve as a manipulation check, allowing us to remove participants who did not

process the manipulation adequately enough to recognise it from a list some moments later. Participants who did not select the answer corresponding to their condition[8] were removed prior to all analyses. Participants then completed a demographics questionnaire and were debriefed.

Participants who completed Phase 1 were contacted by email between 3 and 7 days later to complete Phase 2. This delay should have removed any possibility for the manipulation in Phase 1 to affect the responses collected in Phase 2. After consenting to participate, participants in Phase 2 completed the 5 individual difference measures in a randomised order. Embedded within the measures were 3 items designed to identify inattentive responders. Participants who responded incorrectly to one or more of these items were removed prior to any analyses. Participants were subsequently debriefed.

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[8] "Don't know/don't remember" was also accepted as a correct response for participants in the Control condition, as this response does not indicate any lack of processing on their part.

Results

Due to concerns that the effect of our manipulations would be reduced by the new expectations formed upon encountering the first stimulus, we planned to conduct all analyses twice: once using the mean of the 3 funniness ratings as a dependent variable and again using just the first funniness rating made. Although we anticipated results to differ between the two sets of analyses, most ended up being quite similar. As a result, notable differences between the two sets of analyses will be noted in the text and less pertinent results will be footnoted.

Descriptive Statistics

The final sample consisted of 132 participants in the Control condition, 108 participants in the Absurd condition, 116 participants in the Funny condition, and 76 participants in the Absurd/Funny condition. That there are the most participants remaining in the Control condition and the fewest remaining in the Absurd/Funny condition is not surprising, as the prior's manipulation check was the easiest to pass and the latter's was the most difficult.[9] Descriptive statistics of the four ratings made by participants are reported across and by condition in Table 1. Descriptive statistics for the individual difference measures are available in Table 2.

The overall mean funniness rating of the Tweets was relatively low, below the mid-point of the 7-point scale ($M_{\text{across conditions}} = 2.57$, $SD_{\text{across conditions}} = 1.24$). Each condition's mean funniness rating was also low, with all means below the scale's mid-point ($M_{\text{Control}} = 2.49$, $SD_{\text{Control}} = 1.25$; $M_{\text{Absurd}} = 2.60$, $SD_{\text{Absurd}} = 1.16$; $M_{\text{Funny}} = 2.46$, $SD_{\text{Funny}} = 1.31$; $M_{\text{Absurd/Funny}} =$

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[9] Both "Nothing" and "Don't know/don't remember" were acceptable answers for the Control condition, so passing the manipulation check required only that you not incorrectly recall instructions (as opposed to correctly recalling specific instructions). Passing the Absurd/Funny manipulation check, on the other hand, required participants to correctly recall two pieces of information from the instructions, making it more difficult than any other manipulation check.

2.83, $SD_{\text{Absurd/Funny}} = 1.19$), indicating that participants generally did not find the stimuli all that

funny, regardless of condition.

Table 1

Descriptive statistics for ratings by condition

Measure	Mean	SD	Min.	Max.
Funniness	(2.57)	(1.24)	(1)	(7)
Control	2.49	1.25	1	6.67
Absurd	2.6	1.16	1	6
Funny	2.46	1.31	1	7
Absurd/Funny	2.83	1.19	1	5.33
Familiar	(1.37)	(0.6)	(1)	(4.33)
Control	1.38	0.58	1	3.67
Absurd	1.28	0.47	1	3.67
Funny	1.43	0.69	1	4.33
Absurd/Funny	1.43	0.68	1	3.67
Grammatical	(4.21)	(1.25)	(1)	(7)
Control	4.2	1.27	1	7
Absurd	4.15	1.21	1.67	7
Funny	4.18	1.29	1	7
Absurd/Funny	4.35	1.22	1.33	6.67
Sharing	(1.93)	(1.13)	(1)	(7)
Control	1.9	1.17	1	6.33
Absurd	1.94	1.02	1	5
Funny	1.84	1.16	1	7
Absurd/Funny	2.11	1.14	1	5.67

Note. Across-condition statistics presented in parentheses. $N = 432$.

Table 2

Descriptive statistics for individual difference measures

Measure	Mean	SD	Min.	Max.	Cronbach's α
Openness/Intellect	3.48	0.45	2.25	4.8	.79
Conscientiousness	3.28	0.47	1.65	4.55	.82
Extraversion	3.38	0.49	1.95	4.6	.85
Agreeableness	3.8	0.4	2.6	4.9	.79
Neuroticism	3.11	0.63	1.55	4.75	.90
Intellect	3.36	0.57	1.6	4.8	.77
Openness to Experience	3.59	0.53	2	5	.71
Orderliness	3.51	0.57	1.3	4.9	.78
Industriousness	3.04	0.58	1.3	4.7	.79
Enthusiasm	3.5	0.56	1.8	5	.79
Assertiveness	3.27	0.59	1.4	4.9	.81
Politeness	3.63	0.49	2.2	4.9	.65
Compassion	3.97	0.49	2.4	5	.81
Withdrawal	3.18	0.64	1.6	5	.81
Volatility	3.04	0.76	1.3	5	.88
Need for Cognition	3.15	0.47	1.5	4.5	.73
Art Forms Subscale (Ambiguity Tolerance)	3.87	0.62	2	5.88	.33
Intolerance of Uncertainty	2.61	0.81	1	4.85	.95
Need for Closure	4.05	0.69	2.13	6	.83

Table 3

Condition differences in mean funniness rating

	Control	Expected	Intended	Expected/Intended
Control	–	-0.11 (-.09)	0.03 (.02)	-0.34 (-.28)
Expected	–	–	0.14 (.11)	-0.23 (-.20)
Intended	–	–	–	-0.37 (-.30)
Expected/Intended	–	–	–	–

Note. Cohen's D presented in parentheses. $N = 432$.

Table 4

Condition differences in mean funniness rating (first rating only)

	Control	Expected	Intended	Expected/Intended
Control	–	-0.18 (-.11)	0.08 (.05)	-0.44 (-.29)
Expected	–	–	0.26 (.16)	-0.26 (-.16)
Intended	–	–	–	-0.52 (-.34)
Expected/Intended	–	–	–	–

Note. Cohen's D presented in parentheses. $N = 432$.

Analysis of Variance

Mean differences were mainly small and are presented in Table 3. Although they are

small, all differences were in the hypothesised directions. Namely, the Funny condition's mean

funniness rating is lowest, as we anticipated. Participants in this condition likely expected a

traditionally-funny stimulus and were instead presented with something bizarre and confusing,

which would have increased the level of threat experienced beyond a benign level. In contrast,

the Absurd/Funny condition had the highest mean funniness ratings, again as we predicted. The

information given in the instructions to these participants regarding expectation and intention is

hypothesized to have helped lower the level of threat experienced to a point where it was benign

and therefore funny. The Absurd condition had the second highest mean funniness rating. We

anticipated this result as expectation of absurdity should have helped to lower threat (compared to the Control condition), but not as effectively as the information regarding expectation and intention in the Absurd/Funny condition.[10]

A 2 (Expectation) x 2 (Intention) Factorial ANOVA was conducted to assess the effects of expectation of absurdity, perceived intention to be funny, and their interaction on mean funniness ratings of the absurd jokes. No significant effects were found. The main effect of Expectation neared the traditional threshold for statistical significance, but the magnitude of the effect was small ($F_{\text{Expectation}}(1, 428) = 3.40$, $p = .066$, $\eta^2 = .008$). Both the main effect of Intention and the interaction term were statistically non-significant and small in magnitude ($F_{\text{Intention}}(1, 428) = 0.439$, $p = .51$, $\eta^2 = .001$; $F_{\text{E*I}}(1, 428) = 1.22$, $p = .27$, $\eta^2 = .003$). Although mean funniness ratings differed between conditions in the predicted ways, these differences did not achieve statistical significance.

An identical 2 (Expectation) x 2 (Intention) Factorial ANOVA was run on the first funniness rating made by participants to examine whether a different pattern of results would be observed when no additional expectation was formed as a result of repeated exposure to the absurd jokes. In this analysis, the main effect of Expectation was statistically significant but small in magnitude ($F_{\text{Expectation}}(1, 428) = 4.45$, $p = .034$, $\eta^2 = .01$). The fact that this effect emerges when examining only the first stimulus presented but not after averaging across the three stimuli suggests that the effect of the Expectation manipulation was reduced in the latter two stimulus presentations, likely due to new expectations forming after presentation of the first joke. It would seem that whether we tell participants that the stimuli are absurd or not, once they

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[10] Mean funniness ratings, both overall and by-condition, were quite similar in the first rating made as in the mean of all 3 ratings. Condition mean differences were also quite similar, both in terms of magnitude and direction. Condition mean differences for the first rating only are presented in Table 4.

see the first absurd stimulus they expect later stimuli to also be absurd. Both the Intention main

effect and the interaction term remained statistically non-significant and small ($F_{\text{Intention}}(1, 428) =$

0.154, $p = .70$, $\eta^2 = .0004$; $F_{\text{E*I}}(1, 428) = 1.19$, $p = .28$, $\eta^2 = .003$). Condition means again

differed in the predicted directions but Expectation was the only effect to achieve statistical

significance.

Regressions

Regression models were used to investigate both the relationship between each individual

difference variable and humour ratings for the absurd jokes, as well as any potential moderation

of the Expectation and Intention effects. Specifically, we were interested in the possible

moderation of Expectation by traits related to an appreciation of novelty (i.e., aspect Openness,

Need for Cognition) and a tolerance for rule violations (i.e., Conscientiousness). We were also

interested in the possible moderation of Intention effects by traits related to intolerance for rule

violations. In addition to these specific models, all other possible moderation effects involving an

individual difference were investigated. Each model regressed ratings of humour[11] on

Expectation and Intention as dummy-coded predictors, with an individual difference measure

and all possible two-way interaction terms included in the model. Because these regressions

required that participants complete both Phase 1 and Phase 2, the total sample size for these

analyses was 222. All results are presented in Tables 5 and 6.

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[11] All regression models were carried out using both the mean funniness rating and the first funniness rating.

Table 5

Regressions showing prediction of mean funniness rating using Expectation, Intention, and individual differences

Measure	Expectation (B)	Intention (B)	ID (B)	E*I (B)	E*ID (B)	I*ID (B)
Openness/Intellect	2.86	-2.29	-0.10	0.79	0.39	0.59
	(-4.46, 2.11)	(-5.46, 1.37)	(-0.89, 0.83)	(0.036, 1.55)*	(-0.60, 1.24)	(-0.43, 1.48)
Conscientiousness	-0.85	-0.60	-0.40	0.68	0.25	0.16
	(-4.89, 2.88)	(-4.10, 2.94)	(-1.54, 0.72)	(-0.11, 1.47)	(-0.86, 1.46)	(-0.88, 1.88)
Extraversion	1.28	0.23	0.52	0.78	-0.38	-0.13
	(-1.94, 4.47)	(-2.78, 3.41)	(-0.20, 1.31)	(-0.086, 1.56)	(-1.29, 0.55)	(-1.01, 0.71)
Agreeableness	2.19	1.07	0.48	0.76	-0.59	-0.33
	(-1.05, 5.88)	(-2.49, 4.78)	(-0.22, 1.28)	(-0.78, 1.54)	(-1.53, 0.25)	(-1.26, 0.57)
Neuroticism	1.50	1.49	0.70	0.69	-0.49	-0.52
	(-1.11, 4.59)	(-3.08, 2.40)	(-0.42, 1.59)	(0.25, 2.17)*	(-1.52, 0.35)	(-0.91, 0.94)
Need for Cognition	-0.73	-1.09	0.14	0.75	0.22	0.29
	(-3.71, 2.22)	(-3.96, 2.02)	(-0.69, 1.03)	(-0.50, 1.58)	(-0.72, 1.16)	(-0.69, 1.19)
Ambiguity Tolerance	1.08	4.40	0.88	0.83	-0.29	-1.19
	(-1.55, 3.62)	(1.83, 7.07)*	(0.19, 1.54)*	(0.04, 1.60)*	(-0.96, 0.41)	(-1.90, -0.51)*
Intolerance of Uncertainty	0.58	0.17	0.53	0.76	-0.26	-0.13
	(-0.23, 2.62)	(-1.06, 2.07)	(-0.047, 1.13)	(.010, 1.59)*	(-0.85, 0.35)	(-0.70, 0.45)
Need for Closure	1.22	1.17	0.57	0.82	-0.33	-0.35
	(-2.33, 3.55)	(-2.13, 4.09)	(-2.25, 3.79)	(-0.26, 1.24)	(-1.04, 0.50)	(-1.01, 0.50)

Note. Values are 95% confidence intervals. * = CIs not including 0. E*I = Expectation-Intention interaction term. ID = Listed

individual difference measure. E*ID = Expectation-individual difference interaction term. I*ID = Intention-individual difference

interaction term. $N = 222$.

Table 6

Regressions showing prediction of first funniness rating using Expectation, Intention, and individual difference

Measure	Expectation (B)	Intention (B)	ID (B)	E*I (B)	E*ID (B)	I*ID (B)
Openness/Intellect	-1.68	-1.52	0.04	1.25	0.46	0.34
	(-5.28, 2.73)	(-5.21, 2.98)	(-0.83, 1.11)	(0.26, 2.17)*	(-0.78, 1.46)	(-0.91, 1.35)
Conscientiousness	-1.74	-4.26	-0.79	1.27	0.52	1.19
	(-7.04, 3.64)	(-9.53, 1.21)	(-2.24, 0.76)	(0.25, 2.28)*	(-1.12, 2.14)	(-0.40, 2.72)
Extraversion	0.35	-2.35	0.06	1.39	-0.12	0.57
	(-4.26, 4.95)	(-6.77, 2.36)	(-0.90, 1.07)	(0.33, 2.14)*	(-1.46, 1.24)	(-0.74, 1.80)
Agreeableness	0.89	2.38	0.58	1.19	-0.24	-0.70
	(-2.82, 5.28)	(-1.69, 7.03)	(-0.16, 1.43)	(0.15, 2.17)*	(-1.36, 0.69)	(-1.87, 0.34)
Neuroticism	1.67	-0.29	0.54	1.16	-0.55	0.01
	(-1.11, 4.59)	(-3.08, 2.40)	(-0.42, 1.59)	(-0.25, 2.17)	(-1.52, 0.35)	(-0.91, 0.94)
Need for Cognition	-0.48	-2.06	-0.06	1.22	0.13	0.55
	(-4.51, 3.33)	(-6.33, 2.38)	(-1.11, 0.95)	(0.20, 2.19)*	(-1.06, 1.40)	(-0.82, 1.87)
Ambiguity Tolerance	0.13	0.81	0.42	1.19	-0.05	-0.29
	(-3.55, 3.55)	(-2.31, 4.13)	(-0.43, 1.21)	(0.020, 2.17)*	(-0.96, 0.92)	(-1.16, 0.53)
Intolerance of Uncertainty	2.16	-0.85	0.90	1.15	-0.88	0.23
	(0.30, 4.26)*	(-2.53, 0.84)	(0.27, 1.67)*	(.20, 2.18)*	(-1.68, -0.20)	(-0.47, 0.92)
Need for Closure	1.84	0.02	0.57	1.31	-0.48	-0.10
	(-2.00, 5.39)	(-4.01, 3.33)	(-0.37, 1.39)	(0.35, 2.34)*	(-1.38, 0.49)	(-0.97, 0.93)

Note. Values are 95% confidence intervals. * = CIs not including 0. E*I = Expectation-Intention interaction term. ID = Listed

individual difference measure. E*ID = Expectation-individual difference interaction term. I*ID = Intention-individual difference

interaction term. $N = 222$.

Each regression was bootstrapped with 1,999 bootstrap resamples and 95% confidence intervals were calculated. There was no evidence for any of the predicted relationships with individual differences, nor any evidence for the predicted moderation effects. One result that did emerge in many models[12] was that the Expectation-Intention interaction term was small and statistically significant after introducing and controlling for the various individual difference measures (e.g., 95% CI of 0.036, 1.55, when trait Openness was included as a predictor). As shown in Figures 1 and 2, perceived intention to be funny led to higher ratings of humour when absurdity was expected but lower ratings of humour when absurdity was not expected, after controlling for one of a variety of individual differences. This suggests that the effect of Intention differs in the presence or absence of Expectation, after controlling for a variety of individual differences. This interaction was explored further by examining the simple effect of Intention at the two levels of Expectation. The sample was split into two based on whether absurdity was expected ($N_{Expected} = 184$, $N_{Unexpected} = 248$). Regressions were then run separately for these two groups. These regressions included as predictors Intention, an individual difference, and the interaction between the two. These simple effects, however, differed considerably based on which individual difference was included in the model. For example, when Openness is included in the model and absurdity is expected, Intention is not a statistically significant predictor of either first funniness ratings or mean funniness ratings. However, when absurdity is not expected, Intention becomes a statistically significant negative predictor of both first funniness ratings ($B = -4.49$, $p = .047$) and mean funniness ratings ($B = -3.47$, $p = .038$), as was predicted. In contrast, when Intolerance for Uncertainty is included in the model, the effect of Intention is not statistically significant when absurdity is expected (First: $B = -.85$, $p = .46$; Mean: $B = -.13$, p

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[12] The Expectation-Intention interaction term was significant in all models based on the first funniness rating. For models regressed on the mean funniness rating, it was significant for the models including trait Openness, Need for Closure, Intolerance for Uncertainty, and the measure of Ambiguity Tolerance (Art Forms).

= .89) but positive and statistically significant when absurdity is not expected (First: $B = 2.10$, p = .04; Mean: $B = 1.84$, $p = .02$). This relationship is in the opposite direction from what was predicted. The same relationship was also found when Need for Closure was included as a predictor and absurdity was not expected (First: $B = 4.61$, $p = .008$; Mean: $B = 3.94$, $p = .002$). In other models, Intention was not a statistically significant predictor of funniness, regardless of whether absurdity was expected. In these cases, the effect of Intention is changing based on level of Expectation, but it is not having a statistically significant effect on rating of funniness in either instance.

Intolerance for Uncertainty was also found to positively predict first funniness ratings (95% CI: 0.010, 1.59), which is unexpected as higher levels of Intolerance for Uncertainty should lead to less positive perceptions of absurd humour. The Intolerance for Uncertainty-Expectation interaction term was also significant when predicting first funniness ratings (95% CI: -1.68, -0.20), indicating that the effect of Expectation is lower at high levels of Intolerance for Uncertainty. This is also unexpected, as Expectation was predicted to be more important in determining levels of threat for people who are less tolerant of uncertainty. Finally, when the Art Form subscale of the Ambiguity Tolerance scale was included in a model predicting mean funniness rating, a number of positive findings emerged. First, the effect of Intention became positive and significant (95% CI: 1.83, 7.07). Second, Ambiguity Tolerance became a small but significant positive predictor (95% CI: 0.19, 1.54). Again, this is surprising as higher values of Ambiguity Tolerance[13] should lead to lower perceived humour for absurd jokes. Finally, the Intention-Ambiguity Tolerance interaction term also emerged as a significant negative predictor

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[13] Ambiguity Tolerance is coded such that higher values indicate higher levels of *in*tolerance for ambiguity.

(95% CIs: -1.90, -0.51), indicating that knowing absurdity is intended to be funny leads to greater perceptions of humour for individuals who are less perturbed by ambiguity.

Correlations

In an exploratory analysis collapsing across conditions, relationships amongst the four ratings made by participants were examined. Due to the non-normal distribution of some of these ratings, Spearman's rho was employed. All correlations are reported in Table 7. One notable result is that ratings of funniness and familiarity were found to be significantly positively related ($\rho = .27$, $p < .01$), which is line with previous findings on the relationship between humour and familiarity. This relationship also suggests that familiarity may play a role in reducing the threat of absurd stimuli, though this would have to be explored experimentally to say for certain. Likelihood of sharing and familiarity also had a significant positive relationship, providing further evidence for the role that familiarity plays in the appreciation of humour ($\rho = .63$, $p < .01$).

Table 7

Spearman's rank correlation coefficients amongst ratings

	Funniness	Familiarity	Grammatical	Sharing
Funniness	–	0.27**	0.084	0.63**
Familiarity	–	–	-.024	0.35**
Grammatical	–	–	–	0.12*
Sharing	–	–	–	–

Note. *$p < .05$, **$p < .01$. $N = 432$.

Exploratory Analyses

Although we had planned analyses and predictions for these data, there were a number of interesting aspects of this study for which we had no strong predictions and which fell outside the primary goals of this study.

Sample Size. An issue that may have affected all of our analyses is sample size. Although our initial sample was large, many participants were removed due to failing the first manipulation check ($n = 151$, 24%). These exclusions reflect the difficulties of having people attend to subtle text-based manipulations. That said, other explanations for this large number of exclusions could exist. After viewing the results, we became concerned that we may have failed to anticipate a possible misinterpretation of our manipulation check that led to people being excluded inappropriately. Our manipulation check required participants to summarise the instructions provided to them, but not all of the information we required to be mentioned were technically part of the instructions. The information regarding the key manipulations (e.g., "The passages you are about to read are absurd [i.e., strange, illogical]") could be considered examples rather than an instruction per se. Participants who interpreted our request this way may have summarised the instructions as something like "read the passages and answer the questions" (which was a very common response). In this case, these participants may have fully processed the manipulation but mistakenly not included it in their response due to misinterpreting the question. However, the same response could also be made by a participant who did not read the instructions but is familiar with typical survey studies. Thus, it's possible that we are unable to separate participants who did not process the manipulation from those who did (but did not show it). This potential error in data cleaning may have led to an unnecessarily large reduction in our final sample size.

Because many of the effects in which we are interested appear to be small in magnitude, we may not have had sufficient power in our final samples to detect them. This would explain why, for example, we see mean differences in the predicted directions between our four conditions but detect few significant differences in the ANOVA. In order to address these concerns about power and our manipulation check, we decided to repeat our main analyses using a sample that included the participants who were originally removed due to the first manipulation check. This sample included 619 participants, 80 of whom were then removed for failing the second portion of the manipulation check: recognising the manipulation we gave them in a multiple choice question. One participant was then removed for having missed more than 1 of the primary ratings, resulting in a final sample of 559. After repeating our analyses with this larger sample, and increased statistical power, our results generally did not change. Neither Expectation, nor Intention, or their interaction was statistically significant in the ANOVA, based on either mean funniness ratings (ps = .14, .94, .23, respectively) or first funniness ratings (ps = .22, .80, .29, respectively). One change we did observe is that the effect of Expectation on first funniness ratings, which was statistically significant in the original ANOVA on first funniness ratings, became statistically non-significant. When taking into account the individual differences data, we found that the total number of these 559 participants who completed both phases was 287, so including these participants does not increase power substantially from the results reported above. That said, when repeating these analyses we observed generally the same results, with no new relationships between individual differences and funniness ratings of absurd jokes.

Although including these participants did increase statistical power, the difficulties with our manipulation check remain: we cannot know for certain whether participants removed for incorrectly responding to our manipulation check did not read the instructions or genuinely

misinterpreted our request. Properly addressing both the issue of power and ambiguity in our manipulation check would require that the study be replicated with a greater sample size and a more discernibly-attentive sample. To achieve this, a better means of checking the success rate of our subtle manipulations is necessary. Alternatively, the impact of the manipulations could be increased.

Culture. How one's culture relates to the perception of absurdity is a question that we have regularly been asked since beginning this line of research. Appreciation for a type of humour related to absurd humour, nonsense humour, has been shown to differ between cultures (Ruch & Forabosco, 1996). Culture is likely an important determinant of one's perception of absurdity for a number of reasons. First, the prevalence of absurdity in humour likely differs between cultures. Japanese humour, for example, uses absurdity very commonly, even in the mainstream, whereas absurd humour is at least somewhat more niche in North America. Second, the contradictions and logical gaps that are so common in absurd humour are likely also to be perceived differently between cultures, due to differences in cognitive processing. East Asians, for example, tend to be more dialectical in their thinking: they are able to assimilate multiple perspectives, tolerating some contradictions, in order to find a "middle way" (Peng & Nisbett, 1999; Nisbett et al., 2001). Westerners, in contrast, are more rigid in their thinking, preferring to adhere more strictly to categories, rules, and formal logic (Nisbett et al., 2001). Because absurd humour regularly violates logic, Westerners should find it more violating than do East Asians. Thus, Westerners should require a greater reduction in threat in order to find absurd humour funny, whereas East Asians should be more predisposed to appreciating it.

We asked participants to report the culture with which they most identify. Our final sample consisted of 117 North Americans, 117 South Asians, 32 Middle Eastern individuals, 30

Southeast Asians, 26 East Asians, and a small number in several other categories. The full

breakdown is provided in Table 8. Because we did not have enough East Asians to directly

compare to Westerners, we instead opted to form two cultural groups: one consisting of North

Americans and Western Europeans and another consisting of everyone else. This is, admittedly,

a very crude comparison. But by comparing these two groups, we can determine if Westerners

perceive the absurd jokes differently from non-Westerners in general. The Western group

consisted of 122 participants and their mean first funniness rating was 2.84, whereas the other

group consisted of 302 participants and their mean first funniness rating was 2.36. A 2

(Expectation) x 2 (Intention) x 2 (Cultural group) ANOVA was run to determine the relative

effect of culture on funniness ratings of absurd jokes. When first funniness rating was used as the

dependent variable, the main effect of Expectation was small but significant ($F_{Expectation} = 5.11$, p

$= .02$, $\eta^2 = .0083$), as was the main effect of Culture ($F_{Culture} = 6.81$, $p = .009$, $\eta^2 = .015$). No

other main effects or interaction terms were statistically significant (all ps $> .08$). Surprisingly,

after controlling for Expectation and Intention, Westerners rated the first absurd target as slightly

funnier than did the non-Westerners. This is counter to our expectations, although the non-

Westerner group is composed of many different cultures, not all of which are necessarily more

tolerant of absurdity than Westerners. It may therefore be that this observed difference is the

product of broader cultural differences in humour. Although these jokes are absurd, they were

written by Westerners for a Western audience; non-Westerners may generally find them less

appealing than do Westerners.[14] These results also show that Expectation still has a significant

effect on perceived humour, even after controlling for cultural status. Furthermore, as the Culture

interaction terms were non-significant, there is no indication that Expectation and Intention

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[14]The interpretation of these mean differences is further complicated by the difference in response biases between
cultures. For example, responses from East Asians tend to be more moderate and ambivalent than those Westerners
due to dialectical thinking (Hamamura, Heine, & Paulhus, 2008).

operate differently in these two groups. Again, this is somewhat surprising, as we would expect

Expectation to be more influential for a group that is less predisposed towards absurdity,

although this may again be difficult to interpret given the heterogeneous composition of our non-

Westerner group. Finally, the same 2 x 2 x 2 ANOVA using mean funniness rating for all three

jokes as the dependent variable found only one significant main effect: that of Expectation

($F_{Expectation}$ = 4.09, p = .044, η^2 = .0083). No interaction terms were significant. This suggests that

the cultural difference in funniness ratings is mainly present in the perception of the first target;

cultural differences may wash away once the initial meaning violation has taken place.

Table 8

Culture	Frequency
African	13
Caribbean	23
Don't Know	1
East Asian	26
Eastern European	13
Mediterranean	26
Middle Eastern	32
North American	117
None	5
Other	8
South American	11
South Asian	117

Southeast Asian	30
Western European	5

Note. Five participants declined to answer.

A 2 (Expectation) x 2 (Intention) ANOVA was then run for both groups separately and somewhat different results from those above were found. Namely, the effect of Expectation on mean funniness rating was significant for Westerners ($F_{Expectation} = 4.43$, $p = .037$, $\eta^2 = .0036$) but not for non-Westerners ($F_{Expectation} = 0.86$, $p = .36$, $\eta^2 = .0026$).[15] As the mean of the two conditions that expected absurdity was higher than that of the two conditions that did not,[16] this suggests that the effect of Expectation is stronger for Westerners than for non-Westerners, though this cultural difference was not statistically significant, as indicated by the previous analysis. This might be because Westerners find the logical violations more inherently threatening due to their more rigid cognitive style.

It is not clear from these results exactly how culture affects perception of absurdity, but we do have some preliminary results to suggest that cultural differences may exist: Westerners were found to rate absurd jokes as slightly funnier than non-Westerners. Additionally, the effect of expecting absurdity was found to be statistically significant for Westerners, but not for non-Westerners. In order to properly investigate the role of culture, a future study should sample groups of North Americans and East Asians. Ratings of absurd jokes could then be compared, as can the two groups' relationships with various individual differences and contextual effects (i.e., Expectation and Intention).

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[15] Expectation was not a significant main effect for either group when first funniness rating was included as the dependent variable.

[16] $M_{Expected} = 2.89$, $M_{Unexpected} = 2.44$.

Intention to share. Participants were asked to report how likely they would be to share with friends each of the absurd jokes they saw. We conceived of this item as being similar to ratings of funniness, as both should be an indication of the level of appreciation for the joke. As shown in Table 7, intention to share and funniness do have a strong, positive correlation ($\rho = .63$, $p < .01$). Funniness, however, may be a concept closely related to traditional forms of humour and the explicit action of laughter. The absurd jokes presented in this study are very different from traditional humour and, in the context of completing an online study, participants may have been unlikely to generate much laughter. Therefore, intention to share may serve as an indicator of appreciation or entertainment separate from standard notions of humour. Furthermore, it is an indication of a real-world social behaviour, one that becomes more relevant as content-sharing becomes an integral part of popular social media platforms (Lee, Park, & Han, 2014). Intention to share is also a particularly-relevant metric of appreciation for these items, as Twitter allows users to "retweet" Tweets, sharing that Tweet with one's followers and displaying it on one's page. Given that intention to share and ratings of funniness likely reflect similar sorts of appreciation, we would make the same predictions about the effects of expectation of absurdity and perceived intention to be funny on intention to share as we have on that of funniness ratings. That is, intention to share will be higher when absurdity is expected and when an intention to be funny is perceived. Furthermore, the effect of intention to be funny on intention to share will be lower when absurdity is not expected.

Descriptive statistics for ratings of intention to share are provided in Table 1. As with ratings of funniness, conditions differ in the predicted directions: intention to share is lowest when an intention to be funny is perceived and highest when an intention to be funny is perceived and absurdity is expected. However, these mean differences are very small and are not

necessarily indicative of stable effects. A 2 (Expectation) x 2 (Intention) ANOVA was run with ratings of intention to share as the dependent variable. There were no significant main effects ($F_{Expectation}(1, 423) = 1.44$, $p = .23$, $\eta^2 = .004$; $F_{Intention}(1, 423) = 0.087$, $p = .77$, $\eta^2 = .0002$). The interaction term was also not significant ($F_{E*I}(1, 428) = 1.17$, $p = .28$, $\eta^2 = .003$). There is no evidence for an effect of expectation of absurdity or perceived intention to be funny on intention to share absurd jokes. These findings are in line with the results of our ANOVA when using mean funniness ratings as our dependent variable.

Discussion

This study investigated the effects of expecting absurdity and perceived intention to be funny on the perception of humour in absurd jokes. Participants were either told that they would encounter absurd stimuli or were given no information about expectation. Similarly, participants were either told that the stimuli were intended to be funny or were given no information about intentionality. Each participant then rated how humorous they found three absurd jokes. The effect of expectation, intention, and individual difference variables was examined, along with their interactions.

Expectation

We hypothesised that expecting absurdity would reduce the amount of threat experienced upon encountering it, allowing one to process it as a benign threat and perceive it as funnier. This was only partially supported by our data. Mean differences in funniness ratings indicated that expecting absurdity did increase perceptions of humour. [17] This was also confirmed by the ANOVA carried out on the first humour rating participants made, although the effect of Expectation was small. However, the effect of Expectation did not reach threshold for statistical significance when the mean funniness rating for all 3 jokes was examined. Thus, our concern that new expectations would form after encountering the first target and that these expectations would override the manipulation appear valid, as the effect of Expectation was stronger when only the first stimulus was analysed.

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[17] This was found to be true both of the first funniness rating and the mean funniness rating. Mean funniness rating: $M_{\text{Expected}} = 2.70$, $M_{\text{NoExpectation}} = 2.47$. First funniness rating: $M_{\text{Expected}} = 2.69$, $M_{\text{NoExpectation}} = 2.36$.

Although the effect was small, the finding that absurd jokes are rated as funnier when they are expected to be absurd is in line with findings in past work (i.e., Warren & McGraw, 2016) and the predictions of the Benign Violation Theory. These results also contradict the common notion that surprise is a crucial element of humour (Nerhardt, 1976), as mitigating the surprise of encountering something absurd increased perceptions of humour. Thus, in the case of absurd humour, surprise may contribute to perceived threat, thereby reducing perception of humour. Notably, these findings differ from those of Proulx and colleagues (2010), who found no differences in humour ratings based on whether absurdity was expected. However, their null finding may have been due to the stimulus they used, which made use of a variety of types of humour besides absurd. Expecting absurdity may have a different impact on the perception of these other types of humour, potentially reducing the apparent effect of Expectation.

However, even considering only this first rating, the effect is still much weaker than we anticipated. This may be due to a number of reasons. First, it is possible that our manipulations of expectation and intention were not strong enough. A high number of participants were removed prior to analysis for being unable to either accurately describe the manipulation in their own words or recognise the manipulation in a multiple choice question. Those who remained were successful in both manipulation checks, which indicates that some participants did correctly process the manipulation (as best we can discern). Still, the fact that such a large number of participants did not pass the manipulation checks suggests that our manipulation was not very successful and as a result this manipulation also seems unlikely to have been impactful. Furthermore, it is possible that even those who were able to correctly parrot the instructions and then recognise them later may not have processed the instructions deeply and meaningfully. This is likely because students are so used to taking survey-format studies and are seldom forced to

pay much attention to the instructions. Even when encouraged to attend to them, subtle text-based instructions may not be sufficiently impactful for this manipulation. A stronger induction of expectation may be necessary in order to elicit stronger effects. For example, the manipulation could instead provide an example of absurdity as the first target with the assumption that an expectation of absurdity would then be induced for the second target.

Another possibility is that our stimuli were too threatening to be perceived as funny for many participants, even when the absurdity was expected. These stimuli are highly popular Tweets from a relatively large community on Twitter[18]. That said, this type of humour is still rather niche and it may be that the meaning violation present is still perceived as malign by many, even when it is expected. This possibility is at least partially-supported by the data: the overall mean funniness rating was 2.57, which is below the scale's midpoint at 4 (labeled "Moderately Funny"). Mean funniness ratings were also somewhat negatively skewed, with 61 participants (14%) rating the funniness of all three targets as a 1. In order to address this concern, we could re-run the study using stimuli that have less severe meaning violations and thus induce a lower level of threat. Expecting absurdity might then lower threat sufficiently to allow more participants to perceive the jokes as funny.

Future studies should also focus on identifying the mechanism for the relationship between expectation of absurdity and the mirth response to absurd jokes. As per the Benign Violation Theory of humour, we have conceived of this relationship as mediated by the experienced level of threat; absurdity that is expected is less jarring, induces less uncertainty, and is thus less threatening. However, this possible mechanism has not been directly examined in this

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[18] For example, Twitter user "@dril," who wrote one of our stimuli, has approximately 345,000 followers.

study. In order to address this, threat would have to be measured and analysed as a possible

mediator.

Intention to Be Funny

We predicted that a perceived intention to be funny would increase humour ratings of

absurd jokes. Understanding a meaning violation as something trivial—"just a joke"—should

help to reduce its threat to a level where it is benign and thus potentially funny. We also

predicted that perceived intention to be funny would operate differently depending on whether

absurdity was expected. Because a perceived intention to be funny may create the expectation of

traditional humour, it may make encountering an absurd joke even more jarring, thus increasing

perceived threat and lowering the likelihood of perceiving it as funny. In contrast, when

absurdity is expected, perceiving it as intending to be funny helps to reduce the threat of the

meaning violation and encourages the perception of humour. These predictions were only

partially supported by the data. Condition differences in funniness ratings support both these

predictions. First, the mean funniness rating for the two conditions where an intention to be

funny was not perceived (Control and Absurd) was lower than the mean of the two conditions

where it was (Funny and Absurd/Funny).[19] Second, ratings of funniness were lowest when an

intention to be funny was perceived but absurdity was not expected. They were also highest

when both an intention to be funny was perceived and absurdity was expected.[20] However, these

differences were very small and neither the main effect of Intention, nor the interaction between

Expectation and Intention were statistically significant in the ANOVA. One possible explanation

is that the stimuli used may be too threatening for intention to be funny to render it benign. Even

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[19] Mean funniness rating: $M_{\text{Intended}} = 2.61$, $M_{\text{NoIntentions}} = 2.54$. First funniness rating: $M_{\text{Intended}} = 2.53$, $M_{\text{NoIntentions}} = 2.48$.

[20] Both findings held for both the first funniness rating and the mean funniness rating.

if threat has been reduced, the meaning violation may still be too severe to be perceived as funny for many participants. Alternatively, it may be that knowing something is intended to be funny does not lower the perceived threat of absurdity. Although we had conceived of it as encouraging participants to view the target as trivial, it may only draw a contrast between what is commonly viewed as funny and the unpleasantness of experiencing a meaning violation. In this way, it might uniformly invite an unfavourable comparison with traditional humour, regardless of whether absurdity is expected. It may also be that intention is not an important determinant in the perception of absurdity. This would seem to be consistent with the results of Proulx and colleagues (2010), who found no influence of expectation and intention (combined).

Understanding the influence of expectation and intention is complicated somewhat by the results of the regressions. These models included as predictors our Expectation manipulation, Intention, a single individual difference measure, and all possible 2-way interaction terms. The majority of these found the interaction between Expectation and Intention to be a small but statistically significant positive effect.[21] Thus, when certain individual differences are controlled, the effect of Intention increases when absurdity is expected, as predicted. Notably, this interaction provides another possible explanation for why the main effect of Intention was not significant in our ANOVA. These two opposite effects effectively cancel one another out, rendering the main effect of Intention null. Interpretation of this effect is further complicated by the contradictory nature of the simple effects of Intention. We predicted that perceived intention to be funny would decrease ratings of humour when absurdity is not expected because that perception would create an expectation of traditional humour, making absurd humour even more jarring. This pattern is only present in some of the models in which the Expectation-Intention

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[21] All models using the first funniness rating as the DV found the E-I interaction significant, while only some models using the mean funniness rating did. Refer to Results section for detailed list.

interaction was significant. Although the observed change in the effect of Intention based on

level of Expectation is in line with our prediction in some models (e.g., when Openness is

included in the model), a change in the opposite direction from what was predicted was observed

in other models (e.g., when Intolerance for Uncertainty was included in the model). These

conflicting results are not a strong source of evidence for our account of how the effect of

Intention should change based on expectations, although there is evidence that the effect does

change.

It should be noted that this interaction effect is smaller than anticipated and conditional

on controlling for individual differences. It is unclear, however, why this interaction only

emerges when these individual differences are controlled for. It is possible that the change in the

effect of Intention based on level of Expectation is partially-predicated on these individual

differences. Although we did not include the three-way interaction term in our models, this might

account for the masking of the interaction effect when individual differences were not included

in the model. As for theoretical reasons that the interaction between Expectation and Intention

would be masked by such a variety of individual differences, it is difficult to speculate. Although

some of these measures were similar, many of them differed considerably from one another and

very few of them are significant predictors of ratings of funniness, so there is no clear reason

why they should all act in the same way to mask the Expectation-Intention interaction.

It is difficult to form strong conclusions about the relationship between perceived

intention to be funny and the perception of absurd humour from these conflicting results.

Evidently, the interaction effect we predicted has some role in the perception of humour in

absurdity. However, it is difficult to confidently identify that role given such varied results, and

additional studies are required to produce more definitive answers. Future studies should use

absurd jokes with less severe meaning violations in order to increase the likelihood that manipulations of intention and expectation can render them benign. If the Expectation-Intention interaction is indeed authentic, the specific mechanism should be investigated. Although we posited that it could be expectation of traditional humour created by a perceived intention to be funny that leads to lower ratings of humour when absurdity is not expected, this has not been explicitly shown in the current study and would have to be confirmed by examining if intentions to be funny spontaneously elicit expectations of traditional humour.

Individual Differences

A number of predictions were made about the role of individual differences in the perception of absurd jokes, both as predictors and as moderators of other effects. Namely, we hypothesised that traits related to an appreciation for novelty (e.g., Openness, Need for Cognition) would predict higher humour ratings and traits related to intolerance for rule violation (e.g., Conscientiousness) would predict lower humour ratings. We also predicted that the effect of Expectation would be lower in individuals either high in appreciation for novelty or low in intolerance for rule violation. Finally, we predicted that the effect of Intention would also be reduced in individuals low in traits related to intolerance for rule violation. Generally, these predictions were unsupported by the data. It is not immediately clear why the individual differences measured did not successfully predict perception of humour in absurd jokes, as many of these measures seem closely related to aspects of absurd humour. For example: absurd jokes deal heavily in ambiguity and uncertainty. Traits that describe a dislike for these aspects of absurd humour should negatively predict perception of humour but no such relationship is supported in the data. One potential explanation that has already been raised is that these stimuli were too threatening to be rendered benign for most participants. It may be that only those

individuals extremely tolerant of ambiguity and uncertainty can appreciate these stimuli and we were unable to capture this demographic adequately enough to illustrate this relationship. Less severe meaning violations may be necessary in order to properly explore the relationship between perception of absurd humour and individual differences. What these results mean for individual differences that are more distally-related to absurd humour is also unclear. Openness, for example, describes an appreciation for novelty and creativity. Although absurd humour tends to be replete with both, it may be that other aspects of absurd humour supplant the appeal that these jokes would have for individuals high in Openness. Namely, the threat inherent in absurd humour and one's perception of that threat may render Openness irrelevant. In other words, how you feel about the creativity and novelty in absurd humour could be secondary to how threatening you perceive the meaning violations therein to be.

It should be noted, however, that these results are at odds with previous findings in our lab. In an unpublished study, we had participants rate the funniness of variety of absurd targets, including Twitter jokes, aphorisms, jokes written by children, aberrant proverbs, and computer-generated nonsense. Funniness ratings were found to be moderately negatively correlated with Conscientiousness ($r = -.22$, $p = .002$, $N = 189$; Quinlan & Mar, unpublished data). It is possible that the relationship between Conscientiousness and funniness ratings exists for some of these target categories but not absurd Twitter jokes. Although the correlation does still hold in these data when only participants who saw absurd Twitter jokes are included, the sample size is too small to be confident in the results ($r = -.39$, $p = .017$, $N = 36$; Quinlan & Mar, unpublished data). The contradictory nature of these findings makes it difficult to make any firm conclusions about the role of individual differences in the perception of absurd humour. Although we have

evidence that it does play some role, future studies and more concrete results are necessary to be confident in any conclusion.

Conclusion

Although the results of this study were largely inconclusive, there were some notable findings. First, expecting absurdity does indeed increase funniness ratings of an absurd joke. We believe that expecting absurdity reduces the threat of the absurd joke and, as per the Benign Violation Theory of humour (McGraw & Warren, 2010), this reduction of threat allows participants to view the target as funnier. This effect was small, however, and it may have been that targets were too threatening for Expectation to have a stronger impact on how they were perceived. We anticipated that knowing that the texts were intended to be funny would increase humour when absurdity was also expected, but decrease humour when absurdity was not expected. This pattern was visible in the condition differences of funniness ratings, but these differences were only statistically significant when certain individual differences were controlled for, and the effect remained small. This suggests that perceived intention to be funny does increase the threat of an absurd target when absurdity is not expected, possibly because it creates the expectation of traditional humour which makes the absurd joke more jarring. None of the predicted relationships between funniness ratings and individual differencs were found. Preliminary exploratory results suggest that Westerners and non-Westerners may perceive absurd jokes differently, although this requires further exploration in a dedicated study. Future studies should also address a number of the design issues discussed herein: namely, the potentially low impact of our manipulations and the difficulties with identifying participants who properly processed the manipulation.

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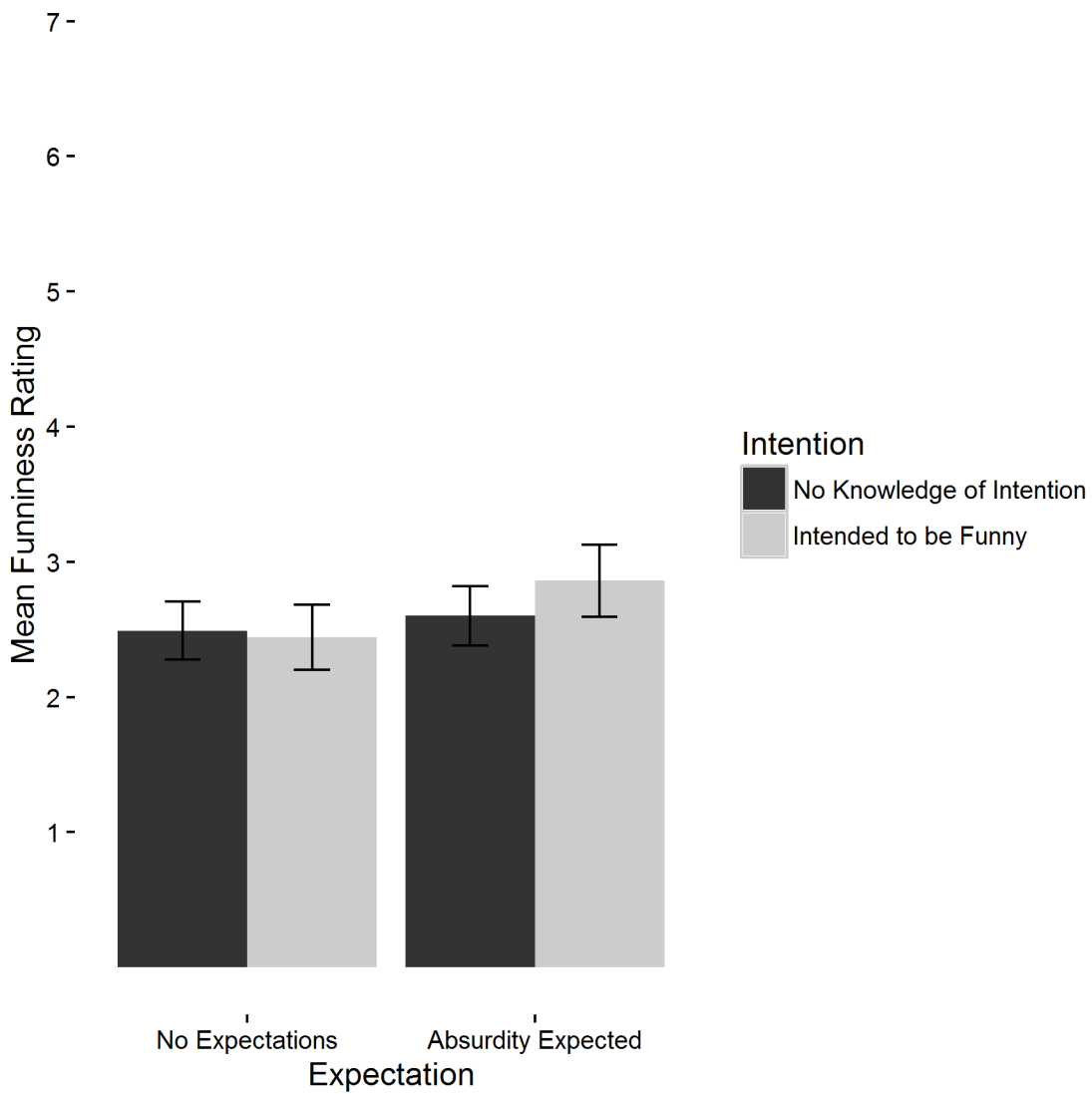663-688. doi:http://dx.doi.org/10.1037/0033-295X.99.4.663

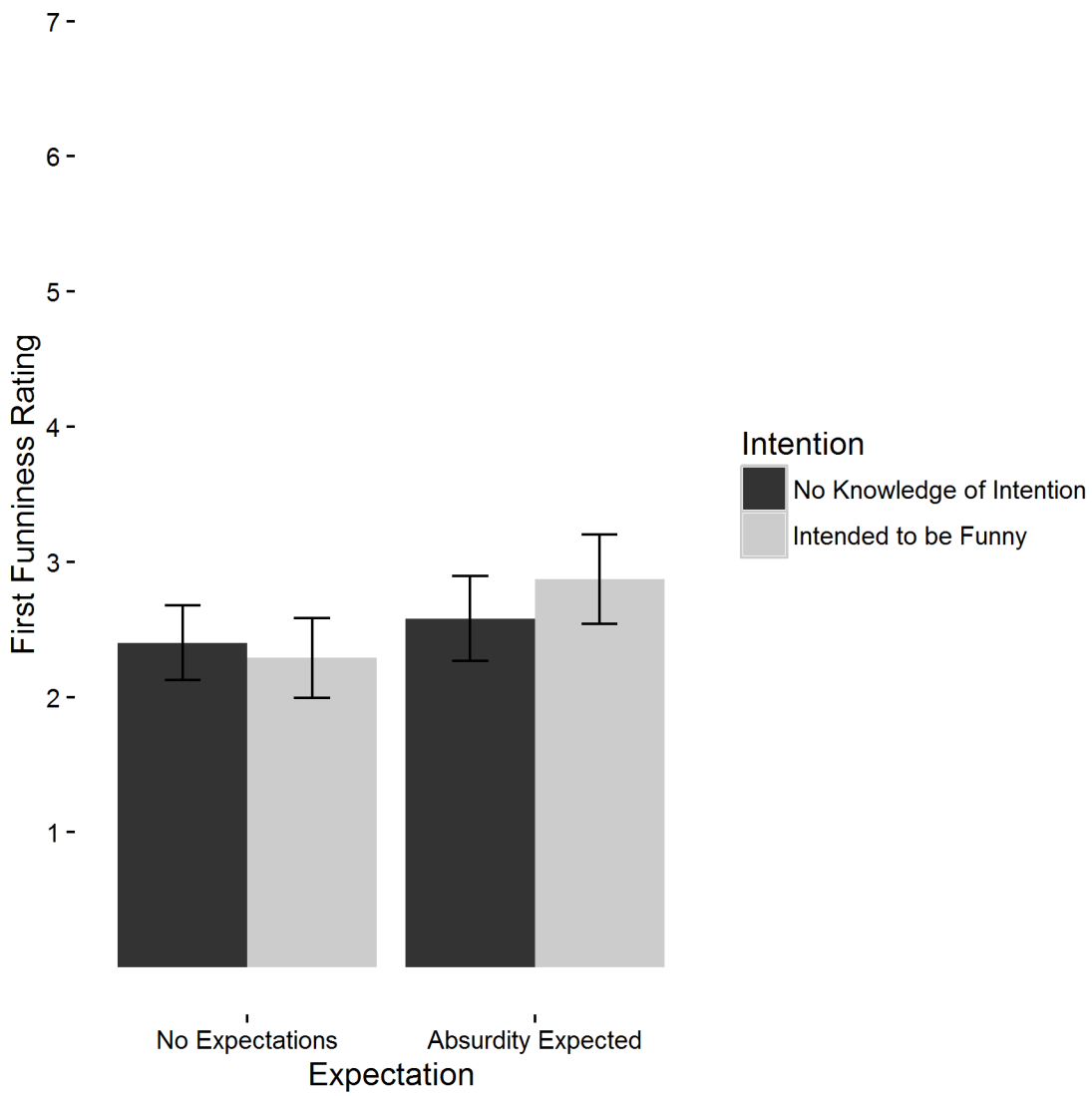*Figure 1.* Mean ratings of funniness by condition. Error bars represent 95% confidence intervals.

Figure 2. First funniness ratings by condition. Error bars represent 95% confidence intervals.

Appendix A

Absurd jokes taken from Weird Twitter.

- For sale: car. Does not stop. You will have to jump in as I jump out. I have been driving this car for three years. Please help me.
- Putting cool gothic steeples everywhere was my trademark as an architect and I'll be damned if I change that now that I'm a plastic surgeon.
- The chief put my gun and badge in the paper shredder but it just broke the paper shredder.
- Forgot my iPod so I'm just beatboxing on the bus. Driver is breakdancing in the aisle. Bus is going crazy right now. We haven't moved in 2 hours.
- If your grave doesn't say "rest in peace" on it you are automatically drafted into the skeleton war.
- Hour 7 of refusing to say "when" as Mom spoons more and more mashed potatoes onto my plate. Grandma crying, uncles yelling, I will not yield.
- 100 percent of survey respondents said: help us get out of this tall tree. We didn't know this survey involved being stuck in a tree.
- I'd be extra scared if a break-in occurred while I was in the shower and the burglar saw me in there, fully clothed and eating my soup.
- It's reductive to describe my new website, hoogle, as "just google for horses."
- A wise old man told me the things that matter the most are the things that matter the least, later we found out he was just a pile of hair.