# Questions for a Theory of Humor

Lauren Olin\*
University of Missouri – St. Louis

# **Abstract**

Finding things funny is a pervasive aspect of human mental and social life, but humor has been neglected in the philosophy of mind and cognitive science. Recently, however, there has been a swell of interest in the topic. This essay critically introduces and evaluates contemporary developments in the field, and generates an associated list of questions that a successful theory of humor should be able to answer.

# 1. Introduction: What is Humor?

The topic of humor has been long neglected by academicians, of both philosophical and scientific persuasions. While the reasons behind the recent swell of interest in humor remain mysterious, it is nonetheless both welcome and warranted. As the moniker *Homo ridens* (Koestler 1964) implies, experiences of humor pervade human mental and social life. Like language and morality, humor is a species universal with evolutionary origins and displays systematic cultural variation (Darwin 1872; Gervais and Wilson 2005). Moreover, mounting evidence suggests that experiences of humor have far-ranging implications for both mental (Galloway and Cropley 1999; Lefcourt 2001) and physical health (Martin 2001).

So what is humor? Hard to say, not least because the term is promiscuous: 'humor' is used to refer to an enormous range of things that are perceived as funny, and which prompt feelings of mirth, smiling, or laughter. But despite the heterogeneity of humorous phenomena, philosophers and cognitive scientists have, by and large, assumed that the folksy category of humor picks out a natural psychological kind, and that conceptual and scientific advances will help to explain it in a way that is grand and unified.

Three classical theories of humor dominate philosophical and psychological discussions: the Superiority Theory, the Relief Theory, and the Incongruity Theory. While each view has strengths, and while each has proven influential in contemporary theorizing about humor, each seems unable to explain some paradigmatic instances of the funny. Updates and revisions have made some progress towards resolving well-known difficulties, but the diversity of theories, one fears, remains paltry by comparison to the diversity of the subject matter.

This essay will not exhaustively canvas philosophical and scientific research on humor. More modestly, it presents the three major approaches to studying it, critically introduces and evaluates contemporary developments, and generates an associated list of questions that a successful theory of humor should be able to answer.

# 2. The Superiority Theory: Hostility, Prejudice, & Shame

According to the superiority theory, the humor that we find in comedy and life is based in ridicule: comic amusement is brought on by feelings of power over others or by awareness of another's misfortune (cf. Morreall 1983: 4–5). The superiority view is typically attributed to Plato, based on his discussion of malicious comedy in the *Philebus* (48a–50c). Contemporary

renderings, however, owe most to Hobbes, who explicitly characterized laughter as a kind of joy associated with feelings of achievement (1650: *Human Nature* sec. IX).<sup>2</sup>

The superiority theory seems to honor a number of seeming truisms about humor. The miser, drunkard, and clown are stock figures in comedy, both cross-culturally and historically. There is often something comical about watching a person make dumb mistakes, and jokes do often have targets. However, the theory also encounters problems, many of which came to light following Hutcheson's (1725: 28) critique of Hobbes' view. There are sometimes situations that make one's superior status obvious but evoke feelings of pity rather than mirth. And it's difficult to see how feelings of superiority are involved in the enjoyment of simple puns or logical jokes (cf. Paulos 2008).

## 2.1. HOSTILITY

Even if the superiority theory fails as a general theory of humor, however, lots of humor implicates hostile feelings. The most detailed contemporary elaboration of the superiority view is due to Charles Gruner, who argued that laughter originated in the vocalizations typical of our male ancestors following victory in aggressive conflicts (Gruner 1978: 43; cf. Eibl-Eibesfeldt 1973). According to Gruner, the evolution of language made it possible to 'defeat' others in conversation, and humor now persists as a kind of 'playful aggression.'

The perceived funniness of jokes is correlated with perceived aggressiveness, across age groups and by individuals of varied cultural and socioeconomic backgrounds (McCauley et al. 1983; Epstein and Smith 1956). However, it also appears that aggressiveness can be overdone in ways that undermine perceived funniness (Zillmann and Bryant 1974; Bryant 1977), and there are ways of using aggressive forms of humor in order to express affection. Overtly hostile joking practices are common ways of fostering intimacy in traditional societies (Freedman 1977), and teasing remains a common way of cultivating closeness (Keltner et al. 1998, 2001; Oring 1994). Unsurprising, then, that Gruner was wrong about the nature of the relationship between laughter and aggression. In non-human primates, silent bared teeth displays and relaxed open mouth displays are considered homologues to human smiling and laughter – respectively – but ethnographic studies have shown that both facial displays occur only in playful contexts (van Hooff 1972).

So there is lots of hostility in humor, but it doesn't appear that humor is essentially hostile, and sometimes even hostile humor facilitates social cohesion. A theory of humor should therefore speak to the question: How and why does humor function so paradoxically, incorporating both hostile and pro-social elements?

## 2.2. PREJUDICE

Many jokes implicate negative stereotypes about women, marginalized ethnic and racial groups, and LGBT individuals, and the superiority theory seems to provide a natural explanation of what can seem morally unsettling about them (Anderson 2015). But disparaging humorous forms also often leave open the question of whether a joke-teller really means to endorse the morally bad attitudes exploited by a joke, so it's not always clear that being amused by disparaging humor is morally suspect (Martin 2007). Some scholars argue that people only need to be *aware* of negative stereotypes in order to appreciate disparaging humor, (Attardo & Raskin 1991), while others insist that being aware of negative stereotypes isn't enough: one must also *endorse* them in order to find disparaging humor funny (Bergmann 1986).

The most empirically plausible views lie somewhere between these two extremes. People are more likely to enjoy disparaging humor when they already have some dislike or contempt for

the group being targeted (La Fave et al. 1976; Wicker et al. 1980), and the people who most enjoy humor that turns on negative stereotypes typically already embrace those stereotypes (Zillman and Cantor 1976, Cantor 1976, Bill and Naus 1992). For example, multiple studies have shown that people who display a relative preference for jokes targeting women are also more likely to identify the jokes as sexist and to endorse sexist attitudes (Henkin and Fish 1986; Greenwood and Isbell 2002).

To be sure, sexists can and do appreciate sexist humor, and we are all familiar with cases in which racially charged humor becomes unmistakably racist.<sup>3</sup> But there also seem to be cases in which humor functions to subvert prejudicial attitudes: think of successful feminist comedians like Margaret Cho, Sarah Silverman, and Amy Schumer, or comics like Martin Lawrence, Dave Chappelle, and Russell Peters who use their humor to tackle complex social problems related to race. Alas, the many subtleties of stand-up comedy, and of comic characters more generally, make these forms of humor difficult to tackle in the lab (Lewis 1997).

So while superiority theorists have long claimed an advantage in being able to give an account of how humor functions to perpetuate discrimination, the record suggests that the relationship between disparaging humor and prejudice is more nuanced than commonly supposed. In addition to the classical emphasis on whether and how funniness relates to the immoral content of jokes, humor theorists should ask: Under what conditions, and in what ways, is humor that implicates negative stereotypes harmful? How do preferences for disparaging humorous forms relate to the beliefs and attitudes of joke-tellers and joke-listeners?

#### 2.3. SHAME

While questions about the nature of the relationship between humor and hostility are controversial, it's not controversial that being laughed at sometimes feels bad. The practice of ridiculing out-group members through laughter is cross-culturally ubiquitous (Davies 1990). In both psychological and statistical senses, it is 'normal' to dislike being laughed at, though there are cultural differences in the severity of this particular aversion: the Thai, for instance, are far more suspicious when others laugh in their presence than are the Finns (Ruch and Proyer 2008).

Bergson (1914) anticipates the complexity of the relationship between laughter and shame. According to his Mechanical theory, which incorporates elements of the superiority view, comic characters are typically *unable* to adapt to the complex demands of social reality. Laughter, Bergson thinks, functions to ostracize individuals who are not responsive to complex social requirements. This idea comports well with evidence that it's not the presence of hostility per se that drives ratings of funniness, but rather the perceived suffering of targets – and then only if they don't suffer 'too much' (Deckers and Carr 1986; Wicker et al. 1981). Welcome news, in a way: the feelings of distress associated with being laughed at implicate many of the same neurocognitive systems as do feelings of physical distress (Eisenberger and Lieberman, 2004; MacDonald and Leary, 2005).

Less welcome news concerns pathological cases in which intense suffering appears unavoidable. Gelatophobia, the pathological fear of being laughed at (Ruch and Proyer 2008; cf. Bergson 1914) is thought to result from traumatic experiences of being put-down during childhood and adolescence, and from specific patterns of early parent-child interactions (Schneier et al. 2004; Sellschopp-Rüppell and von Rad 1977; Titze 2009). Gelatophobes react to the expressions of laughter and smiling typically associated with experiences of humor in an aversive way, apparently unable to distinguish between playful teasing and malicious ridicule (Platt 2008).

Interestingly, many of the same social conditions that predispose to the development of gelatophobia - in particular low levels of maternal intimacy and passive fathering - obtain in the lives of professional humorists (Fisher and Fisher 1981). Following Ruch & Proyer

(2009), we might call these individuals *gelatophilic*. The possibility of gelatophilia suggests that the sense of humor may be developed to cope with difficult social conditions in early life.

In addition to giving an intuitively plausible story about why it feels bad to be the butt of a joke, a successful theory of humor should also ask: What are the connections between the psychology of humor and laughter and the moral psychology of shame?

# 3. The Relief Theory: Sex, Death, & Relationships

A second set of classical approaches to humor are called Relief theories; they're based on a suggestion primarily associated with Spencer (1860) and Freud (1905). Humorous amusement, on these views, involves the release of nervous excitement or emotional tension. According to Freud, inhibiting urges requires energy stores, so when faced with the possibility that one's urges may need inhibiting, people store energy. Later, when the tendentious subject matter is revealed as part of a joke, listeners become free to release the energy saved for the repression of baser impulses and laugh 'with the quota of psychic energy which has become free through the lifting of the inhibitory cathexis; we might say that [they laugh] this quota off' (1905: 182). This aspect of Freud's view has been at least partly confirmed: mirth is always associated with patterns of increased arousal (Hubert et al. 1993).

There are also, however, problems with the theory. One is that the tension-release model can't account for spontaneous jokes and witticisms that don't allow time for the buildup of energy stores. Another is that it predicts the most inhibited, repressed people take the most pleasure in joking around, but experience and evidence tell against this: the expression rather than the inhibition of sexual and hostile impulses is associated with the enjoyment of sexual and hostile humor (Ruch and Hehl 1988; Eysneck 1972).

#### 3.1. SEX

Still, the relief theory seems to give a natural explanation of why sexual and hostile themes are so dominant in humor, now, historically, and cross-culturally. According to Freud, sex and violence are the two main sources of repression, since most societies have rules prohibiting the expression of sexual and violent impulses. But the appreciation of hostile and sexual humor is apparently associated with the expression rather than the inhibition of impulses, so what gives?

The relationship between levels of arousal and perceived funniness is linearly positive (McGhee 1983; cf. Berlyne 1972): humorous materials with arousing themes are typically rated as funnier than non-arousing forms – even when those themes are associated with negative emotions like fear, anxiety, and anger (Cantor, Bryant & Zillman 1974). Berlyne (1960) martialed an impressive amount of evidence suggesting that humorous stimuli are rich in collative variables – things like incongruity, surprise, ambiguity – which draw people's attention and are associated with increased arousal in the brain and autonomic nervous system. So perhaps it's not that talk of sex *per se* is funny, but just that talk of sex is arousing, and people are more likely to find things funny when aroused.

Regardless, reflection on dominant humorous themes suggests that a theory of humor should be able to explain: Why are sexual and otherwise arousing themes so dominant in humor?

#### 3.2. DEATH

Mainstream comedy in the US has long been dominated by Jewish comedians – *Time* reported in 1979 that while Jews made up 3% of the population, well over 80% of professional comedians were Jewish! At the time, it's been argued, American culture was looking for a way to deal with

emerging anxieties of the modern era and so turned for relief to 'the Jews, the masters of handling history's troubles' (Epstein 2001: xii).

Historians of humor agree that what people now call Jewish Humor in the US is in fact imported from humorous traditions borne out of strife in middle Europe. In Vonnegut's summation, it comes

from the peasants' revolt, the thirty years' war, and from the Napoleonic wars. It's small people being pushed this way and that way, enormous armies and plagues and so forth, and still hanging on in the face of hopelessness. Jewish jokes are middle European jokes. And the black humourists are gallows humourists, as they try to be funny in the face of situations which they see as just horrible (Clancy 1999: 56).

The existence of such comic traditions testifies to the importance of humor as a tool to cope. There are plenty of rich anecdotes suggesting that people use humor in order to deal with stressful life events and some empirical evidence. Humor has been used as a coping strategy by prisoners of war and residents of concentration camps (Ford and Spaulding 1973; Henman 2008). And – more mythically – when the HMS Sheffield was sunk in the Falklands war of 1982, her crew reportedly sung Monty Python's 'Always Look on the Bright Side of Life' while waiting to be rescued.

While these examples are oddly uplifting, evidence concerning the psychological and cultural benefits of using humor as a means to cope is mixed. In a study of healthcare workers dealing with AIDS and cancer patients, Dorz and colleagues (2003) found that increased use of humor was associated with increased levels of emotional exhaustion and heightened feelings of depersonalization. Still further cases are oddly unsettling. Lefcourt (2001), for instance, reports that members of the Gestapo were regularly observed to laugh in response to the 'frazzled' behavior of Jews attempting to run from them. And there are multiple ethnographic reports of people who live in socioeconomically impoverished cultures making light of crushing realities that aren't easily regarded as appropriate subjects for joking. In the shantytowns of Rio de Janiero, for instance, everyday humor reportedly involves making fun 'of dead, sexualized and grotesque bodies and...the death of poor bodies' (Goldstein 2003: 44).

Using humor as a tool to cope appears to be adaptive in some circumstances, but may also contribute to negative social and psychological outcomes. In light of these considerations, it seems appropriate to ask: How does humor function as a coping mechanism? In what circumstances is the use of humor a good strategy for coping?

# 3.3. RELATIONSHIPS

People use humor to cope with death, but also with social life. Both men and women cite the sense of humor as an important characteristic in prospective mates (Daniel et al. 1985), and people who perceive their partners as having a good sense of humor also tend to be more satisfied in their relationships (Ziv & Gadish 1989). The relief theory claims to provide a natural diagnosis of these findings: humor can be used to ease tension, and intimate relationships are sometimes, well, tense.

Recent work, however, casts doubt on the notion that humor in the context of intimate relationships is always associated with happiness and successful outcomes. Gottman and his colleagues (1998) found that when married couples were discussing problems in their relationships, the use of non-sarcastic humor by wives predicted relationship stability over five years, but only when the humor led to a reduction in their partner's heart rate. In order to account for such a mixed bag of evidence, Rod Martin (2007) has suggested that there may be different 'humor styles': on his view, using humor to foster intimacy, or in order to cope with adversity, is adaptive, while using humor aggressively to ridicule others, or in order to disparage oneself, is maladaptive. Preliminary empirical investigations suggest that Martin is onto something: the use of affiliative humor is associated with positive relationship outcomes, while the use of aggressive and sarcastic forms of humor can diminish relationship satisfaction (Martin, Campbell & Ward 2008).

In summary, then, research suggests that relief theorists are right to think that humor can function as a coping strategy in the context of close relationships but fail to adequately address the ways it can function to their detriment. A theory of humor ought to address these issues and speak to questions such as: How does humor function to promote intimacy and relationship satisfaction? And how does it function to the detriment of close relationships?

# 4. The Incongruity Theory: Breadth, Nonsense, & Development

Concerns about superiority theories initially motivated the development of the incongruity theory of humor. The funny, on this view, is found in the incongruous: we laugh at things that are unexpected or unusual because they surprise us, or seem somehow out of place. The experience of being amused can be described in terms of the recognition of the fact that you were thinking about something in a different way, or from a different perspective, than that called for by the overall context. This is perhaps most evident in the case of irony – 'a state of affairs that is the reverse of what was to be expected; a result opposite to and in mockery of the appropriate result' (Carlin 1997: 116). The theory finds some support in remarks from Aristotle (1984), was first developed by Hutcheson in response to Hobbes (1725), and is usually credited to Kant (1790).

To the extent that one among the classical theories dominates in psychology, it is the incongruity theory (Clark 1970; Morreall 1987). And there is a sense in which that's unsurprising: taxonomies of humor typically present the superiority and relief theories as competitors to the incongruity theory, but they can be well-ordered and understood as particular versions of it; "incongruity-based" issues...can be traced back to the earliest theories' (Attardo 1994: 48). For example, in the *Poetics* Aristotle characterizes puns in terms of incongruous elements, and Plato appeals to the notion of 'mixed' emotions in his characterization of the laughable (*Philebus* 48a–50c). Hobbes appeals to a notion of incongruity related to questions of social status or superiority (Hobbes 1650, 1651), and Spencer explicitly uses the term incongruity in explicating his version of the relief view (Spencer 1860: 109; cf. Freud 1905, 1928). It may just be that superiority theories and relief theories deal admirably with humor that involves aggressive, derisive, or sexual content because incongruities concerning social status and social expectations feature prominently in their respective accounts.

The fact that the incongruity theory inherits the explanatory power of other theories is in some sense a virtue (Berger 1997: 208), but this broad applicability also underscores its central weakness: the bare notion of incongruity is simply too broad to be meaningful. Bain (1859: 257) provides a list of incongruous things that are not, intuitively, objects of amusement, and the list is long, from 'a decrepit man under a heavy burden' to 'a corpse at a feast, parental cruelty, filial ingratitude, and whatever is unnatural.' Most theorists agree that examples like Bain's show that incongruity fails as a sufficient condition on humor but continue to insist that it's necessary (Morreall 1987; Martin 2007).

#### 4.1. BREADTH

Early attempts to make sense of what's right about appeals to incongruity involved imposing conditions on the ways in which incongruities must be apprehended in order to qualify as funny. Suls (1972, 1983), for instance, suggested that incongruities must not only be present

in experiences of amusement but also be apprehended very suddenly. This constraint on the notion of incongruity is intuitively plausible, since timing is so important for telling jokes, but experiences of being startled involve incongruities that arise suddenly and fail to be amusing.<sup>5</sup> Inadvertently but quickly killing a loved one would be suddenly incongruous, but tragic rather than funny. And there are many ways of being positively surprised that can't be identified with being amused.

Still other authors have suggested that the class of humorous incongruities can be constrained by reference to features of the contexts in which they are encountered. For example, Rothbart (1976) suggested that incongruities count as humorous so long as the context in which they are encountered is playful and non-threatening, and Morreall (2011) has argued that laughter itself functions to signal that a context is playful rather than threatening. Of course context is relevant to experiences of humor; however, it's not likely that appealing to contextual features will serve to distinguish humorous from non-humorous forms of incongruity across the board. Even in playful joking contexts attempts at humor can fail when 'a line is crossed' unintentionally, and the function of humor as a coping strategy provides implicit support for the view that humor manifests even in serious circumstances.

Building on Veatch's (2009) conception of 'affective absurdity', McGraw and Warren (2010) argue that a humorous event occurs when and only when there is a norm violation, the violation is benign, and someone simultaneously appraises the event as both involving a norm violation and as benign. However, as is well known, even jokes that turn on norm violations we don't regard as benign can sometimes be funny. The literature on immoralism in the ethics of humor – the position which claims that the immoral content of jokes contributes to their funniness – is rife with examples of jokes in which the violation of robustly moral norms seemingly contributes to their humor (Smuts 2010). With this in mind, Cohen (1999: 83) provides the following advice to readers disturbed by a clever but morally unsettling racist joke:

I wish you good luck in thus maintaining your feeling of disgust – moral disgust, if that's how it feels to you – at the joke, but I insist that you not let your conviction that a joke is in bad taste, or downright immoral, blind you to whether you find it funny.

Coming from the other direction, many benign norm violations fail to amuse. Most everyone has witnessed loved ones telling white lies – construed as epistemic, pragmatic, or even moral violations – but they aren't typically amusing. Fashion blunders violate aesthetic norms, and are generally thought unimportant, but the poorly dressed aren't uniformly hilarious.

Each of these developments of the incongruity theory seem to latch onto something significant about some forms of humor, and the conditions they impose on incongruities in order to qualify as funny go some distance towards accounting for humorous phenomena in general. However, they all traffic in different notions of incongruity, and they all fail to answer, in a compelling way, one question that should be central to a successful theory of humor: How should the notion of incongruity relevant to humor be operationalized?

## 4.2. NONSENSE

Following Shultz (1972; Suls 1972, 1983), some incongruity theorists postulate an additional 'resolution' condition that humorous incongruities must satisfy. On these views, the notion of incongruity is typically cashed out in terms of cognitive scripts, schemas, or mental representations: the punch-line of a joke creates an incongruity by introducing information that is incompatible with the listener's mental representation of the set-up. That information must then be re-interpreted somehow to resolve the incongruity and 'get the joke.' For example, in elaborating his linguistically based version of the incongruity theory, Raskin (1985) gives the following example:

'Is the doctor home?' the patient asked in his bronchial whisper.

On Raskin's view, the semantic script activated by the set-up of this joke concerns typical interactions between doctors and patients: sick people visit doctors and receive care. 'Getting' this joke requires activating an alternative script concerning typical interactions between lovers. Hurley, Dennett and Adams (2011) defend a more general version of the incongruity theory according to which mirth is the reward associated with identifying the failures characteristic of a class of mental models: humorous stimuli first prompt the construction of a mental space, then require the conscious realization that the mental space contains an 'overcommitted belief' that needs to be rejected. On their view, and in keeping with the example just outlined, anyone amused by this joke has too much credence in the idea that the bronchial whisperer is seeking medical care. The experience of mirth comes about when a listener realizes their mistake and updates their mental space accordingly, thereby resolving the incongruity.

Problems with this proposed condition on humorous incongruity are more complex than the problems afflicting temporal, contextual and value-related conditions. First, Nerhardt (1976) and Deckers (1993) have shown that people will laugh in response to incongruity without resolution. Nonsensical incongruities, as well as incongruities that can be resolved, are both well-represented in collections of popular humorous material (Martin 2007). There is also evidence that different types of people have different preferences for these different kinds of humor: for instance, conservatives find jokes in which incongruities are resolved less aversive than liberals do, while liberals find nonsense humor less aversive than do conservatives (Ruch and Hehl 1986a, 1986b). Preferences for these different forms of humorous incongruity also vary over the course of development and as a function of age (Ruch et al. 1990).

While there may be little doubt that jokes sometimes involve incongruities that are resolved, incongruity-resolution views that claim to provide necessary and sufficient conditions for humor cannot account for nonsense humor. Given these considerations, it seems appropriate to ask: What is the relationship between forms of humor that involve incongruity and its resolution, and other nonsensical forms? And how do preferences for these different humorous forms relate to individual differences in other domains?

#### 4.3. DEVELOPMENT

When incongruity theories were introduced to psychological circles in the 1960s and 1970s, they succeeded in drawing attention to the 'cognitive' aspects of humor, which had been neglected previously. Since then, the tides have turned: cognitive psychological theories of humor now dominate, and the psychobiological and developmental aspects of humor and laughter have been neglected. In fact, there still isn't much research on humor in the context of early development, since the cognitive skills required for the resolution of complex incongruities are not supposed to manifest until approximately 18 months of age (McGhee 1971). It's unfortunate for incongruity theorists, then, that findings from the last 40 or so years overwhelmingly support the view that the development of humor is tied to the very early development of specific interpersonal skills, both competitive and pro-social (Panksepp 1998).

<sup>&#</sup>x27;No', the doctor's young pretty wife whispered in reply. 'Come right in.'

Laughter as an expression of mirth emerges at about four months of age, and the mechanisms required for laughter are present at birth (Sher and Brown 1976). Moreover, there is evidence that humorous exchanges become central to interactions with infants before laughter emerges, at as early as 3 months of age (Darwin 1872; Ambrose 1963). The majority of infant laughter appears to be directed at the violation of social expectations, particularly concerning the use of objects (Sroufe and Wunsch, 1972), but infants also appreciate watching others tease and joke around, suggesting that they understand the difference between playful and serious intentions (Nakano and Kanaya 1993; Trevarthen and Hubley 1978). After the middle of the first year, and especially by month 11 or 12, infants begin laughing at things like funny faces, unexpected sounds, and socially inappropriate actions (Sroufe and Wunsch 1972). Over the course of development, infants display systematic preferences for humor that involves patterns and norms they have only recently mastered, rather than humor that involves what's already familiar (McGhee 1971, 1979). As early as 10 months of age, infants start picking up on the amusement of others, and teasing and clowning around themselves (Reddy 1991).

So in sum, well before children have the cognitive materials thought required for the resolution of conceptual incongruities they appreciate humor that involves understanding the social intentions and emotional dispositions of others (Dunn 1988; Leekham 1991; Nakano and Kanaya 1993; Reddy 1991). Attention to psychobiological and developmental work on humor therefore seems likely to provide incongruity theorists with resources for operationalizing the notion of incongruity relevant to humor. And since the development of the sense of humor parallels overall cognitive development (McGhee 1979), it may also illuminate the relationship between humor and the acquisition of social, linguistic, and cultural norms. So then: How does the capacity for humor develop? And how does it relate to the development of social and linguistic capacities more generally?

## 5. Conclusion

While some of the foregoing questions for a theory of humor have been asked before, many fall at the intersection of disparate sub-fields, where it seems likely that insights from one research program might be called on to inform efforts in another. It was noted at the outset that humor studies are united by the question of what humor essentially is, but humor theorists might be wise to concede that that question is overly ambitious, and ask instead: Why does humor occupy such a central role in mental life and social discourse? And given that role, why has the topic been so neglected?

# Acknowledgments

Many thanks to John Doris, Ron Mallon, Eric Brown, Mike Dacey, Dylan Murray, and one anonymous reviewer for helpful comments on earlier drafts of this essay.

# Short Biography

Lauren Olin is an Assistant Professor of Philosophy at the University of Missouri — St. Louis. Her work is located broadly in the philosophy of cognitive science, with special emphasis on questions about the psychology of humor, knowledge, and morality. She also has interests in the philosophy of perception, and the philosophy of psychiatry.

# Notes

<sup>\*</sup> Correspondence: Department of Philosophy, University of Missouri – St. Louis, 1 University Blvd. 599 Lucas Hall, St. Louis, MO 63121-4400, USA. Email: olinl@umsl.edu

- <sup>1</sup> More exhaustive surveys of the classical literature can be found in Piddington (1933: 152–221) Attardo (1994: 14–59), Keith-Spiegel (1972), and Morreall (1987).
- <sup>2</sup> Hobbes also allows that we can laugh at our own past mistakes, provided that we first become conscious of having overcome them (1651: book 1 chapter 6).
- <sup>3</sup> Michael Richards' Laugh Factory rant of 2006 is probably the most well-known example of this kind, though there are many others.
- <sup>4</sup> Funniness ratings also increase after epinephrine injections (Schachter and Wheeler 1962), and even low arousal emotions like disgust contribute to amusement. Scatological and otherwise disgusting things often elicit laughter, and when people are primed to be disgusted, they'll then find humorous stimuli funnier (Strohminger 2014).
- <sup>5</sup> See Carroll (1999).
- <sup>6</sup> A class of theories related to incongruity theories so called 'play' theories of humor, take these and related observations very seriously. The idea of humor as an essentially playful activity was first endorsed by Eastman (1936) and has been elaborated in various forms (Berlyne 1969; Fry 1963; Apter 1982, 1991, 2001; Barnett 1990, 1991; Bergen 1998, 2002, 2003; McGhee 1979).

# Works Cited

Ambrose, Anthony. 'The age of Onset of Ambivalence in Early Infancy: Indications from the Study of Laughing.' *Journal of Child Psychology and Psychiatry* 4.3–4 (1963): 167–181.

Anderson, Luvell. 'Racist Humor.' Philosophy Compass online 24 JUL (2015). DOI:10.1111/phc3.12240.

Apter, M. J. The experience of motivation. The Theory of Psychological Reversals 1982.

Apter, M. J. A structural phenomenology of play. Adult play (1991): 113-30.

Apter, M. J. Motivational styles in everyday life: A guide to reversal theory. American Psychological Association, 2001.

Aristotle. The Complete Works of Aristotle Volumes I and II. Ed. & Trans. J. Barnes. Princeton: Princeton University Press, 1984.

——. Linguistic Theories of Humor, Vol. 1. New York, NY: Walter de Gruyter, 1994.

Attardo, Salvatore and Victor Raskin. 'Script Theory Revis(it) ed: Joke similarity and joke representation model.' *Humor: International Journal for Humor Research* 4.3–4 (1991): 293–347.

Bain, Alexander. The Emotions and the Will. London: J.W. Parker, 1859.

Barnett, L.A. The playful child: Measurement of a disposition to play. Play & Culture 4.6 (1991): 51-74.

Barnett, P. Definition, design, and measurement. Play and Culture 3, 1990: 319-336.

Bergen, D. Development of the sense of humor. The sense of humor: Explorations of a personality characteristic (1998): 329–358.

—. The role of pretend play in children's cognitive development. Early Childhood Research & Practice 4.1 (2002): n1.

——. Play as a context for humor development. *Play from birth to twelve: Contexts, perspectives, and meanings* (2006): 141–156. Berger, Arthur Asa. *An Anatomy of Humor.* New Brunswick, NJ: Transaction Publishers, 1997.

Bergmann, Merrie. 'How Many Feminists Does it Take to Make a Joke? Sexist Humor and what's Wrong With it.' *Hypatia* 1.1 (1986): 63–82.

Bergson, Henri. Laughter: An Essay on the Meaning of the Comic. New York, NY: Macmillan, 1914.

Berlyne, Daniel E. 'Humor and its Kin.' The Psychology of Humor: Theoretical Perspectives and Empirical Issues (1972): 43-60.

—. 'Laughter, humor, and play.' The handbook of social psychology 3 (1969): 795–852.

----. Conflict, Arousal, and Curiosity. New York, NY: McGraw-Hill Book Company, 1960.

Bill, Brigitte and Peter Naus. 'The Role of Humor in the Interpretation of Sexist Incidents.' Sex Roles 27.11–12 (1992): 645–664.

Bryant, Jennings. 'Degree of Hostility in Squelches as a Factor in Humour Appreciation.' It's a funny thing, humour (1977): 321–327.

Campbell, Lorne, Rod A. Martin, and Jennie R. Ward. 'An Observational Study of Humor use While Resolving Conflict in Dating Couples.' *Personal Relationships* 15.1 (2008): 41–55.

Cantor, Joanne R. 'What is Funny to Whom?' Journal of Communication 26.3 (1976): 164-172.

Cantor, Joanne R., Jennings Bryant, and Dolf Zillmann. 'Enhancement of Humor Appreciation by Transferred Excitation.' Journal of Personality and Social Psychology 30.6 (1974): 812.

Carlin, George. Brain Droppings. New York, NY: Hyperion, 1997.

Carroll, Noël. 'Horror and Humor.' Journal of Aesthetics and Art Criticism (1999): 145-160.

Clancy, Laurie. 'Running Experiments Off: An Interview.' Conversations with Kurt Vonnegut. Ed. Rodney Allen William, 1999. 46–56.

Clark, Michael. 'Humour and Incongruity.' Philosophy 45.171 (1970): 20-32.

Cohen, Ted. Jokes: Philosophical Thoughts on Joking Matters. Chicago, IL: University of Chicago Press, 1999.

Daniel, Hal J. et al. 'Values in Mate Selection: A 1984 Campus Survey.' College Student Journal 19.1 (1985): 44–50.

Darwin, Charles. The Expression of Emotion in Man and Animals. London: John Murray, 1872.

Davies, Christie. Ethnic Humor Around the World: A Comparative Analysis. Indianapolis, IN: Indiana University Press, 1990.

Deckers, Lambert. 'On the Validity of a Weight-judging Paradigm for the Study of Humor.' Humor - International Journal of Humor Research 6.1 (1993): 43-56.

Deckers, Lambert and Diane E. Carr. 'Cartoons Varying in Low-level Pain Ratings, Not Aggression Ratings, Correlate Positively With Funniness Ratings.' Motivation and Emotion 10.3 (1986): 207-216.

Dorz, Stella et al. 'Predicting Burnout Among HIV/AIDS and Oncology Health Care Workers.' Psychology and Health 18.5 (2003): 677-684.

Dunn, Judy. The Beginnings of Social Understanding. Cambridge, MA: Harvard University Press, 1988.

Eastman, M. Enjoyment of Laughter. New York: Simon & Schuster, 1936.

Eibl-Eibesfeldt, Irenäus. 'The Expressive Behavior of the Deaf-and-blind Born.' Social Communication and Movement (1973): 163-194.

Eisenberger, Naomi I. and Matthew D. Lieberman. 'Why Rejection Hurts: A Common Neural Alarm System for Physical and Social Pain.' Trends in Cognitive Sciences 8.7 (2004): 294-300.

Epstein, Lawrence J. The Haunted Smile: The Story of Jewish Comedians in America. New York, NY: Public Affairs, 2001.

Epstein, Seymour and Richard Smith. 'Repression and Insight as Related to Reaction to Cartoons.' Journal of Consulting Psychology 20.5 (1956): 391.

Eysneck, Hans Jürgen. 'Forword.' The Psychology of Humor: Theoretical Perspectives and Empirical Issues. Eds. J. H. Goldstien and P. E. McGhee. New York, NY: Academic Press, 1972. xii-xvii.

Fisher, Seymour and Rhoda Fisher. Pretend the World is Funny and Forever. Hillsdale, NJ: Erlbaum Associates, 1981.

Ford, Charles V. and Raymond C. Spaulding. 'The Pueblo Incident: A Comparison of Factors Related to Coping With Extreme Stress.' Archives of General Psychiatry 29.3 (1973): 340-343.

Freedman, Jim. 'Joking, Affinity and the Exchange of Ritual Services Among the Kiga of Northern Rwanda: An Essay on Joking Relationship Theory.' Man (1977): 154–165.

Freud, Sigmund. Jokes and Their Relation to the Unconscious. New York, NY: W.W. Norton & Co, 1905/1989.

Fry, William F Jr. 'Sweet Madness: A study of humor.' Palo Alto (1963).

Galloway, Graeme and Arthur Cropley. 'Benefits of Humor for Mental Health: Empirical Findings and Directions for Further Research.' Humor – International Journal of Humor Research 12.3 (1999): 301–314.

Gervais, Matthew and David S. Wilson. 'The Evolution and Functions of Laughter and Humor: A Synthetic Approach.' The Quarterly Review of Biology 80.4 (2005): 395–430.

Goldstein, Donna. Laughter Out of Place: Race, Class, Violence, and Sexuality in a Rio Shantytown. Berkeley, CA: University of California Press, 2013.

Gottman, John M. et al. 'Predicting Marital Happiness and Stability from Newlywed Interactions.' Journal of Marriage and the Family (1998): 5-22.

Greenwood, Dara and Linda M. Isbell. 'Ambivalent Sexism and the Dumb Blonde: Men's and Women's Reactions to Sexist Jokes.' Psychology of Women Quarterly 26.4 (2002): 341–350.

Gruner, Charles R. Understanding Laughter: The Workings of Wit & Humor. Chicago, IL: Nelson Hall, 1978.

Henkin, Barbara and Jefferson M. Fish. 'Gender and Personality Differences in the Appreciation of Cartoon Humor.' The Journal of Psychology 120.2 (1986): 157–175.

Henman, Linda D. 'Humor as a Coping Mechanism: Lessons from POWs.' Humor – International Journal of Humor Research 14.1 (2008): 83-94.

Hobbes, Thomas. The Treatise on Human Nature and That on Liberty and Necessity. London: J. Johnson & Co, 1650/1812. -. Leviathan. Indianapolis, IN: Hackett, 1651/1812.

van Hooff, Jaram A. 'A Comparative Approach to the Phylogeny of Laughter and Smiling.' Non-verbal Communication. Ed. R. A. Hinde. Cambridge: Cambridge University Press, 1972.

Hubert, Walter, Mathilde Möller, and Renate de Jong-Meyer. 'Film-induced Amusement Changes in Saliva Cortisol Levels.' Psychoneuroendocrinology 18.4 (1993): 265–272.

Hurley, Matthew M., Daniel C. Dennett, and Reginald B. Adams. Inside Jokes: Using Humor to Reverse-engineer the Mind. Cambridge, MA: MIT Press, 2011.

Hutcheson, Frances. 'Reflections Upon Laughter.' Dublin Journal, No. 10-12 (1725): 38-8.

Kant, I. Critique of the Power of Judgment. New York: Cambridge University Press, (1790) 2000.

Keith-Spiegel, Patricia. 'Early Conceptions of Humor: Varieties and Issues.' The Psychology of Humor: Theoretical Perspectives and Empirical Issues. Eds. J. H. Goldstein and P. E. McGhee. New York, NY: Academic Press, 1972. 4-39.

Keltner, Dacher et al. 'Teasing in Hierarchical and Intimate Relations.' Journal of Personality and Social Psychology 75.5 (1998): 1231.

-. 'Just Teasing: A Conceptual Analysis and Empirical Review.' Psychological Bulletin 127.2 (2001): 229.

- Koestler, Arthur. The Act of Creation. London: Hutchinson, 1964.
- La Fave, Lawrence et al. 'Superiority, Enhanced Self-esteem, and Perceived Incongruity Humour Theory.' Humor and Laughter: Theory, Research, and Applications. Eds. Antony J. Chapman and Hugh C. Foot. Piscataway, NJ: Transaction Publishers, 1976. 63–91.
- Leekham, Susan R. 'Jokes and Lies: Children's Understanding of Intentional Falsehood.' Natural Theories Of Mind: Evolution, Development, and Simulation of Everyday Mindreading. Ed. A. Whiten. Oxford: Blackwell, 1991. 159–174.
- Lefcourt, Herbert M. Humor: The Psychology of Living Buoyantly. New York: Kluwer Academic, 2001.
- Lewis, Paul. 'Debate: Humor and Political Correctness.' Humor: International Journal of Humor Research 10.4 (1997): 453–513.
- MacDonald, Geoff and Mark R. Leary. 'Why Does Social Exclusion Hurt? The Relationship Between Social and Physical Pain.' *Psychological Bulletin* 131.2 (2005): 202.
- Martin, Rod A. 'Humor, Laughter, and Physical Health: Methodological Issues and Research Findings.' *Psychological Bulletin* 127.4 (2001): 504–519.
- -----. The Psychology of Humor: An Integrative Approach. San Diego, CA: Elsevier Academic Press, 2007.
- McGraw, A. Peter and Caleb Warren. 'Benign Violations Making Immoral Behavior Funny.' *Psychological Science* 21.8 (2010): 1141–1149.
- McCauley, Clark et al. 'More Aggressive Cartoons are Funnier.' Journal of Personality and Social Psychology 44.4 (1983): 817. McGhee, Paul E. 'Cognitive Development and Children's Comprehension of Humor.' Child Development (1971): 123–138.
- McGhee, Paul E. 'The Role of Arousal and Hemispheric Lateralization in Humor.' *Handbook of Humor Research*. New York, NY: Springer, 1983. 13–37.
- -----. Humor: Its Origin & Development. San Francisco, CA: Freeman, 1979.
- Morreall, John. Taking Laughter Seriously. Albany: SUNY Press, 1983.
- ----. The Philosophy of Laughter and Humor. Albany, NY: SUNY Press, 1987.
- ----. Comic Relief: A Comprehensive Philosophy of Humor. Oxford: John Wiley & Sons, 2011.
- Nakano, Shigeru and Yuko Kanaya. 'The Effects of Mothers' Teasing: Do Japanese Infants Read Their mothers' Play Intention in Teasing?' Early Development and Parenting 2.1 (1993): 7–17.
- Nerhardt, Göran. 'Incongruity and Funniness: Towards a New Descriptive Model.' *Humor and Laughter: Theory, Research, and Applications*. Eds. Anthony J. Chapman and Hugh C. Foot. Piscataway, NJ: Transaction Publishers, 1976. 55–62.
- and Applications. Eds. Anthony J. Chapman and Hugh C. Foot. Piscataway, NJ: Transaction Publishers, 1976. 55–62. Oring, Elliott. 'Humor and the Suppression of Sentiment.' Humor: International Journal of Humor Research 7.1 (1994): 7–26.
- Panksepp, Jaak. Affective Neuroscience: The Foundations of Human and Animal Emotions. Oxford: Oxford University Press, 1998.
- Paulos, John Allen. Mathematics and Humor: A Study of the Logic of Humor. Chicago, IL: University of Chicago Press, 2008. Piddington, Ralph. The Psychology of Laughter. London: Figurehead, 1933.
- Plato. Plato: Complete Works. Ed. J. M. Cooper. Indianapolis, IN: Hackett, 1997.
- ——. 'Emotional Responses to Ridicule and Teasing: Should Gelotophobes React Differently?' Humor-International Journal of Humor Research 21.2 (2008): 105–128.
- Raskin, Victor. Semantic Mechanisms of Humor. Dordrecht: Reidel, 1985.
- Reddy, Vasudevi. 'Playing With Others' Expectations: Teasing and Mucking About in the First Year.' Natural Theories Of Mind. Ed. A. Whiten. Oxford: Blackwell, 1991. 143–158.
- Rothbart, Mary K. 'Incongruity, Problem-solving and Laughter.' Humour and Laughter: Theory, Research and Applications, 1976. 37–54.
- Ruch, Willibald and Franz-Josef Hehl. 'Conservatism as a Predictor of Responses to Humor–I. A Comparison of Four Scales.' Personality and Individual Differences 7.1 (1986a): 1–14.
- —... 'Conservatism as a Predictor of Responses to Humor–II. The Location of Sense of Humor in a Comprehensive Attitude Space.' *Personality and Individual Differences* 7.6 (1986b): 861–874.
- —... 'Attitudes to Sex, Sexual Behaviour and Enjoyment of Humour.' Personality and Individual Differences 9.6 (1988): 983–994.
- Ruch, Willibald et al. 'Age Differences in the Enjoyment of Incongruity-resolution and Nonsense Humor During Adulthood.' Psychology and Aging 5 (1990): 348–355.
- Ruch, Willibald and Rene T. Proyer. 'The Fear of Being Laughed at: Individual and Group Differences in Gelotophobia.' Humor: International Journal of Humor Research 21.1 (2008): 47–67.
- ——. 'Extending the study of gelotophobia: On gelotophiles and katagelasticists.' *Humor-International Journal of Humor Research* 22.1–2 (2009): 183–212.
- Sher, Phyllis K. and Stuart B. Brown. 'Gelastic Epilepsy: Onset in Neonatal Period.' American Journal of Diseases of Children 130.10 (1976): 1126–1131.
- Shultz, Thomas R. 'The Role of Incongruity and Resolution in Children's Appreciation of Cartoon Humor.' Journal of Experimental Child Psychology 13.3 (1972): 456–477.

- Sellschopp-Rüppell, Almuth and Michael von Rad. 'Pinocchio A Psychosomatic Syndrome.' Psychotherapy and Psychosomatics 28 (1977): 357-360.
- Schachter, Stanley and Ladd Wheeler. 'Epinephrine, Chlorpromazine, and Amusement.' Journal of Abnormal and Social Psychology 65.2 (1962): 121-128.
- Schneier, Franklin R. et al. 'Social Phobia.' Clinical Manual of Anxiety Disorders. Ed. Dan J. Stein. Arlington, VA: American Psychiatric Publishing, 2004. 63-86.
- Smuts, Aaron. 'The Ethics of Humor: Can Your Sense of Humor be Wrong?' Ethical Theory and Moral Practice 13.3 (2010): 333-347.
- Strohminger, Nina. 'Disgust Talked About.' Philosophy Compass 9.7 (2014): 478–493.
- Sroufe, L. Alan and Jane Piccard Wunsch. 'The Development of Laughter in the First Year of Life.' Child Development (1972): 1326-1344.
- Spencer, Herbert. 'The Physiology of Laughter.' Essays on Education and Kindred Subjects. London: Dent, 1860/1911.
- Suls, Jerry M. 'A Two-stage Model for the Appreciation of Jokes and Cartoons: An Information-processing Analysis.' The Psychology of Humor: Theoretical Perspectives and Empirical Issues 1 (1972): 81–100.
- 'Cognitive Processes in Humor Appreciation.' Handbook of Humor Research. New York: Springer, 1983. 39–57.
- Titze, Michael. 'Gelotophobia: The Fear of Being Laughed at.' Humor International Journal of Humor Research 22.1–2 (2009): 27 - 48.
- Trevarthen, Colwyn, & Penelope Hubley. 'Secondary Intersubjectivity: Confidence, Confiding and Acts of Meaning in the First Year.' Action, Gesture, and Symbol: The Emergence of Language (1978): 183-229.
- Veatch, Thomas C. 'A Theory of Humor.' Humor International Journal of Humor Research 11.2 (2009): 161-216.
- Wicker, Frank W., William L. Barron, and Amy C. Willis. 'Disparagement Humor: Dispositions and Resolutions.' Journal of Personality and Social Psychology 39.4 (1980): 701.
- Wicker, Frank W. et al. 'Relationships Among Affective and Cognitive Factors in Humor.' Journal of Research in Personality 15.3 (1981): 359-370.
- Zillmann, Dolf and Jennings Bryant. 'Effect of Residual Excitation on the Emotional Response to Provocation and Delayed Aggressive Behavior.' Journal of Personality and Social Psychology 30.6 (1974): 782.
- Zillmann, Dolf and Joanne R. Cantor. 'Effect of Timing of Information About Mitigating Circumstances on Emotional Responses to Provocation and Retaliatory Behavior.' Journal of Experimental Social Psychology 12.1 (1976): 38-55.
- Ziv, Avner and Orit Gadish. 'Humor and Marital Satisfaction.' The Journal of Social Psychology 129.6 (1989): 759-768.