Why did the Anthropologist Cross the Road: On the Anthropology of Humor and Laughter

Christopher Michael Broyles
WHY DID THE ANTHROPOLOGIST CROSS THE ROAD: ON THE ANTHROPOLOGY OF HUMOR AND LAUGHTER

An honors paper submitted to the Department of Sociology and Anthropology of the University of Mary Washington in partial fulfillment of the requirements for Departmental Honors

Christopher Michael Broyles
April 2016

By signing your name below, you affirm that this work is the complete and final version of your paper submitted in partial fulfillment of a degree from the University of Mary Washington. You affirm the University of Mary Washington honor pledge: "I hereby declare upon my word of honor that I have neither given nor received unauthorized help on this work."

C. Michael Broyles

04/27/16
Why did the Anthropologist Cross the Road:

On the Anthropology of Humor and Laughter

Think for a moment, back to one of the last times you laughed—laughed so hard that you cried, so hard that it hurt. It could have been something hilarious, or something small that you got carried away with. But regardless, this moment should be distinct in your memory; it could have changed what may have been a bad day into a better one, and it is possible that you had people giving you dirty looks because you were being so loud. But it is as possible that you had someone laughing just as hard right next to you. After all, we laugh the most when among friends. In any case, this moment should have been distinct enough in your memory that you recalled it the second I asked you to. These moments resonate with us deeply, and for good reason, as laughter is a powerful emotional response that we humans crave from one another.

Now think again, back to a time where you were told, for whatever reason, not to laugh. This is not uncommon in classrooms where unruly children laugh too loudly and too frequently for the teacher’s liking. She tells them to be quiet, or even to shut up. Or a parent or a friend scolded you for laughing at something, saying that “it’s not funny!” You wouldn’t be laughing if it wasn’t, but maybe it was in bad taste at least. You were laughing at something sensitive, or at someone you are expected to respect. Maybe you were laughing at the teacher that told you to shut up in the first place. Either way, these kinds of moments are formative for you as well, in that they have shaped your understanding of the time and place for humor, albeit through mechanisms of shame and humiliation.

But this is the paradox of laughter— that despite how much time and energy we commit to the pursuit of humor and joy that provokes this affective display, we are advised from an early
age that there is a time and a place for this experience. To laugh too much, too loudly, or about
the wrong thing is a kind of moral transgression. This ambivalence, I will argue, characterizes
centuries of public and academic discourse about the role and place of laughter among western
societies; to say that this is an area of contention between humorists and haters of laughter, so-
called misogelasts.

Take for example the old maxim, “laughter is the best medicine.” What does that mean? Well, this opinion, that laughter is not only good, but even healthful, is a long-held conviction
within the western world’s collective imaginary about laughter. However, this is not the full
consensus of social thinkers and critics— many who speak in regard to laughter claim that
laughter can be cruel, excessive, and even dangerous. If you laugh too much, you run the risk of
not taking anything seriously. Further, if you cannot stop laughing, you are displaying symptoms
of a potential psychological disorder. And if enough people can’t stop laughing, you have mass
hysteria, a form of mass psychogenic illness.

These phenomena, among others, have become the focus of contemporary academic
discussion of laughter. Laughter exists in a cross-liminal space in our biosocial imaginary: that
is, as both a behavior and an expression, as good and bad, healthy or unhealthy, a huge amount
of our social lives consists of the activity of laughter, for better or for worse. In this new era of
inquiry on laughter, we have pulled deep from the west’s historical attitudes on laughter, onto
which a scientific canon of laughter has been retrofitted— and in order to produce a pathology of
laughter, we have reached far back into our imaginaries of the problems of taboo and morality
with laughing.

As an extension of these old belief systems, the scientific discourse on laughter is more a
biosocial process than we, or especially the scientists at the forefront of these disciplines, would
like to admit. In this essay, I will review a history of laughter’s canon in the western world, in order to trace the roots of its modern incarnation, and explore how such attitudes have persisted and embodied themselves in the modern, empirical study of laughter. This is an effort toward a more holistic account of how western philosophies of laughter, or gelotologies, imagine and represent the reasons and purposes of laughter; and with anthropological accounts on laughing and humor, I will illustrate the plural ways in which it manifests in human societies. By participating in the discourse that these old gelotologies have produced, this paper offers a study of laughter that seeks to comprehensively answer these questions: what is the role, the real significance, and the cause of human laughter?

To investigate the historical influences of the modern laughter discourse, we must go back as far as we can in early historical examples of gelotology. It is important to note, however, that despite laughter’s ubiquity in our lives, only a handful of important thinkers have written at length about the subject. Plato himself, one of the few and first to have contributed to this conversation, only speaks briefly about the role of comedy and laughter. In The Republic, he warns that “ordinarily when one abandons himself to violent laughter, his condition provokes a violent reaction” (Bloom, 66: 1968), and so the philosopher guardians of his hypothetical utopian state to avoid laughter in practice, as he believed that it leads away from rationality. His student, Aristotle, asserted by contrast that the ensoulment of an infant occurred at the time of its first laugh, at which point the baby may be considered fully human (Bakhtin, 1968; Sanders, 1996). This is one of many convictions about laughter that have persisted as long as our written accounts of it have existed, that such an affective display puts our rationality at risk.

Another equally durable image of laughter paints it in a more favorable light however: in the Old Testament, we are told that “A joyful heart is good medicine, but a broken spirit dries up
the bones” (Psalms, 17:22 NASB). This early connection between healthfulness and laughter is only the first of many throughout the next couple millennia. An old English proverb advises one to “laugh and grow fat,” as merriment was associated with healthful weight gain at the time. Simultaneously, however, the bible denigrates laughter at times, and when God himself laughs, it is often characterized as wrathful or scornful (Psalms 2:2-5).

This duality of laughter continues to be a problem for scholars who dare address the subject for a long time after— and the jury is still out on this case. Next I want to focus on the dark side of laughter for the Euro-American; as Protestant communities continue diffusing into the New World, we see groups like Calvinists decry laughter as a form of sin. Lines from the Bible, such as “and there must be no filthiness and silly talk, or coarse jesting, which are not fitting, but rather giving of thanks,” (Ephesians 5:4) continue to stress this.

Westerners’ ambivalence toward laughter continues to show in the literature of the Enlightenment era, as figures such as Thomas Hobbes produce a derisive characterization of laughter, as so-called schadenfreude that elevates the status of laughter while demoting the target of laughter (Sanders, 1996). From this phenomenon we have derived one of the three main theories of laughter, called the “superiority theory,” the notion that we laugh in part to maintain and improve our status at the cost of others’ own status. Further, Philip Stanhope, the 4th Earl of Chesterfield, warns his son in a letter that “Frequent and loud laughter is the characteristic of folly and ill-manners,” advising his son to maintain a sense of temperance throughout his life (1748).

It is also important to note that, first, Hobbes’s attitudes toward laughter reflect his philosophy of the human condition, that “human behavior is self-interested” (Telfer, 1995: 359). The implication here is that thinkers’ affect toward or against the so-called nature of humanity
has a keen influence on their interpretations of laughter, among other behaviors. Additionally, it is notable that not everyone agreed with Hobbes on this point: Francis Hutcheson wrote his “Reflections Upon Laughter” in 1725 in a direct criticism toward Hobbes’s theory of “sudden glory” (ibid.). In it he remarks upon the absurdity that all human laughter makes a juxtaposition between the status of the laughter and that of his or her target of laughter (1971: 7-8). Rather, Hutcheson posits that “mental” laughter arises out of a “perception of the ludicrous” (Telfer, 1995: 360). This position, while maybe as limiting as Hobbes’s own account, places laughter in the realm of cognition and human understanding, in terms of the origin of humor; this initial explanation will prove extremely useful in constructing an anthropology of laughter later on—but for now let us talk more about Hobbes and other “misogelasts”.

Such negative sentiments toward laughter and humor persist in the 19th century as writers with Victorian sensibilities bemoan laughter as something rash that betrays one’s composure (Passes and Overing, 2000; Vasey, 1875). In this respect, the pejorative meaning of foolishness, with its connection to the fool—that is, the court jester—and laughter, continues to gain symbolic significance. In his Philosophy of Laughter and Smiling, Vasey writes in the mid-nineteenth century on the origin of laughter, claiming that children are encouraged and conditioned to laugh until they “very naturally begin to associate the action of laughter with trashy nonsense and foolish talk” (88: 1875). He takes this further by comparing it to coughing as a physiological response, claiming that both are caused by “influence… of a painful and injurious character” (ibid.: 1875).

So far, the recurring themes in western evaluations of laughter have consisted of morality and health: in order to determine whether or not laughter is good for someone, these thinkers have mused upon whether or not laughter has positive health effects, as well as whether laughter
is a good or bad thing to do, that is, in a moral sense. Enlightenment and Victorian era sentiments of laughter echo convictions of thinkers who range as far back as Plato; the question this raises is how these old ideologies have influenced modern contemplations of the same subject.

Rationality is situated in this discourse as the capacity of human understanding to understand and interpret the world, imagined on the opposite side of a spectrum of the human condition as emotion. In this imagining, *logos* and *pathos* are constructed as opposing forces in western paradigms of humanity, with the former valorized as the pinnacle of humanity because of its role in reasoning. Emotion is juxtaposed within this dichotomy as opposing reason, and so is regarded inversely as irrational. If laughter is then understood as an emotional, affective display, it becomes dangerous, as overriding or destroying the capacity of human understanding.

**Biosocial Models of Laughter**

Following the Enlightenment and beyond the mid-19th century, there is a distinct change in who talks critically about laughter, which leads into the empirical research of laughter as behavior, response, and more. Here I will argue—by looking at the literature of contemporary bioscientists and psychologists—that while the methods and paradigms used to evaluate laughter change drastically in this time period, the results of such research are clear reprises long-standing Euro-American social attitudes. This shift is attributable to the various subscribers of the modern canon of bioscience, but the two figures that have arguably been the most influential in changing the way we talk about laughter today are Sigmund Freud and Charles Darwin.

Freud brought his psychoanalytical theories into the forefront of how we talk about laughter and its relationship with the mind: he believed that laughter and its source, humor, are all embedded within the mind. In his *Jokes and Their Relation to the Human Psyche*, Freud explores how laughter serves to release energy and tension from the psyche, setting a precedent
for future gelotologies by anchoring laughter, in this paradigm, as residing in the individual’s psychological attachments to emotion and society (1905).

Darwin reinforces these associations, but in a different respect, with his research and writings on evolution and adaptation. With regards to animal emotion and expression, Darwin believed that such responses as laughter had their beginnings in our evolutionary history as basic social responses: for other mammals, laughter would have had its uses namely for in-group socialization and play (1875). This interpretation establishes laughter in phylogenetic terms: that is, it suggests that laughter is a bodily function the purpose and source of which resonates from our mammalian ancestors. And so this implication further establishes a canon of how laughter can be understood and imagined via western biosocial frameworks.

These two figures make the transition from the old science of laughter into its contemporary discourse very distinct: rather than discussing laughter in terms of its effects on rationality, or its relation to morality, Freud and Darwin hone in on dilemmas such as the causes of human laughter, as well as explanations of why humans laugh. These distinctions, primarily Darwin’s, hold great importance as a biological account of laughter holds a huge, if not hegemonic, amount of symbolic power. With this in mind, the next step these disciplines—evolutionary biology, psychology, and more—chose to take becomes more surprising.

That is, despite this sudden paradigm shift within the discussion of laughter, the contemporary, so-called science of laughter, to a large degree, still focuses on these historical questions Euro-American societies always had about laughter: is laughter good for you? Is laughter dangerous? And when should I or shouldn’t I laugh? In the next section of this essay I will look at various studies and research projects that the new gelotologists have undergone to
answer these questions, to further illustrate the tenacity of biosocial thinkers to fit laughter within these frameworks.

In order to answer this first question in modernity—“is laughter good for you?”—scientists have had to integrate existing models of laughter into the newly fledged discourse of biomedicine. This process involves a sort of conversion of old maxims into new science: that is, for laughter to be healthy in this modern medical paradigm, such a claim must be made empirically valid. In this conversion, old beliefs are both retrofitted into and reinforced by this new, hegemonic system—by asserting, for example, that laughter resides within primeval evolutionary mechanisms, we maintain the moral economy that historically mediated the use of laughter, by framing it within a new, biosocial regime of truth, a la Foucault (1975).

Throughout the process of this conversion, scientists have gone great lengths to reify these old beliefs: for instance, one study shows that subjects who laugh for extended periods of one hour or so have distinctly higher white blood cell counts than the control group who hasn’t (Lee et al., 2001). Additionally, laughter has, according to research, the benefit of being aerobic exercise (Wilkins, 2009). This has led to a following of people using laughter for exercise, such as Dr. Madan Kataria, known as the Laughter Guru, who uses it in Yoga classes called “laughter yoga” (Kataria, 2015). Such exercises are performed in groups led typically by trained instructors, and sessions can span 35-40 minutes in length; however there are instructions available on how to perform laughter yoga by one’s self as well (ibid.).

Despite all of this, scientific investigation of laughter has not unanimously concluded that laughter is “good for us”—in fact, there is a significant conversation happening in tandem with these others on the adverse effects of laughter, depending on which form it takes. For example, in the realm of psychotherapy, laughter—particularly directed laughter, or “laughing at
someone”—is regarded as dangerous to the mental health of patients (Kubie, 1971). The danger of being laughed at, Kubie argues, makes laughter a risky bet for therapeutic use. Further, cases of mass hysteria diagnosed as a mass psychogenic illness exist, such as the Tanganyikan Laughter Epidemic of 1962, where villagers in colonial Tanzania were found to be laughing and crying uncontrollably for so long that boarding schools where the laughter began were closed for weeks at a time (Provine, 2000). In this case, laughter is regarded as a symptom of psychological distress, and is pathologized when in a form of excess.

At first glance, these different accounts add up to a contradictory and confused narrative of the effects of laughter; how can laughter improve one’s immune system and also be a symptom of hysteria, how can it be dangerous and nurturing? In an even more confounding example, research shows that while laughter may help improve the emotional health of chronic obstructive pulmonary disorder (COPD), sufferers, the physical act of laughter can further damage weak lungs (Emery et al. 2011). In this particular instance, laughter, in a single context, heals and harms simultaneously. While each of these examples are derived from various disciplines, of course, they all are participating in the same practice of empirical science for the purpose of better understanding phenomena of the world. In this case, laughter proves to be difficult to categorize biomedically as either productive or deleterious to one’s health, leading to the conflict in truths. However, this does not prove that the science is unfounded: it only illustrates that Euro-American perceptions of humor within our social history of laughter have made the empirical process behind modern biosocial gelotology all the more more difficult.

Beyond the health effects of laughter, scientists have strived to produce a more coherent etiology of laughter—and in order to understand why we laugh, we must understand first what good it does to laugh in the first place. The purpose of laughter in this discourse will have its
origins in the social behavior of humans, as it follows from their evolutionary past. This train of thought in particular is influenced by Darwin’s work, as it reaffirms the phylogeny of laughter, the continued role of laughing as an adaptive behavior of animals.

First, evolutionary biologists have observed and claimed that most mammals exhibit some form of laughter, typically associated with play (Scott, 2015). The most analogous evolutionary comparison we have to human laughter is that of chimps, primates whose likeness to humans in behavior and physiology allow them to be seen as a consistent reference to our genetic pasts. While they do not laugh in the same manner as us, they inhale in a familiar, rhythmic “ah-ah-ah!” pattern that is often exhibited during social play (Provine, 2000). This behavior of expressive, patterned breathing, Provine suggests, is the precursor to human laughter. The implication of this is that if in fact the laughter of chimps is the behavioral origin of our own sort of laughter, we can investigate the purpose of the chimps’ behavior in order to understand the reasons for our own.

The etiology of chimp laughter then becomes a part of our own—what theories suggest is that chimps emit this laugh-like noise when interacting with other chimps in non-violent situations, as if to communicate that “I’m just playing” (ibid.). The significance of this is that laughter becomes codified as a mechanism of sociality and in-group communication and reinforcement. While human laughter has wildly different causes, biosocial scientists have determined from this research that the roots of its purpose as a social, communicative behavior.

This investigation has not been limited to primates, either. In a study of lab rats, scientists noticed that lab rats emit an excited chatter during play—researchers realized that they could induce the same chatter by “tickling” the rats, which means that these low-frequency noises researchers recorded could be a sort of rat laughter (Panksepp and Burgdoff, 2003). What
Burgdoff and Panksepp’s research here suggests is that the same mechanisms of in-group sociality and play that dictate the adaptive function of human laughter are present as far back our evolutionary history as rats.

Jaak Panksepp goes further to posit that this rat laughter helps illuminate the purpose of laughter with regards to developmental psychology— the origin of humor, he claims, can be pinpointed to the laughter of play, incited by simple social and physical interactions like tickling, which over time become more complex, first as games like Peek-a-Boo, and eventually as jokes encoded in language. Moreover, if “it is a reasonable but not a scientifically established view that the human taste for humor is based, in some fundamental way, on the existence of infantile and childhood joy and laughter,” (ibid. 542) as Panksepp and Burgdoff notes then laughter is in more than one way a far cry to humanity’s evolutionary infancy.

That humor is a learned construction we develop out of early forms of play also echoes Vasey’s claims over a century before that the source of the less-than-savory human laughter is the conditioning of young children who ordinarily would not laugh at all. However, this notion conflicts with others who suggest that laughter comes naturally to infants at roughly the third or fourth month of age (Addyman & Addyman, 2013) and is not always a result of play. For example, infantile laughter is often caused by the sight of the child’s mother or father, as well as other simple social stimuli. The significance of this is that laughter, even in its earliest forms, can signify one of many things, ranging from play to joy to excitement.

But laughter in contemporary social and scientific research extends beyond the crib as well. In a social study of the daily usage of laughter in American society, Provine shows us a plethora of striking results. Two that I consider interesting are that, first, laughter between acquaintances is uncommonly the result of what is perceived as humor, and second, that women
laugh much more frequently than men (2000). This first piece of information reinforces this notion that laughter and humor do not always go hand in hand, and that laughter and sociality are more connected than first thought—overall, humor is the cause of laughter per roughly one in five instances of laughter in Provine’s study.

These results speak to how important laughter has persisted as a form of communication throughout our evolutionary history, Provine suggests; that we are still laughing with people over non-humorous matters leads scientists to believe that the same function of in-group communication that motivates chimps and even rats to laugh also persists in human phylogeny. That second result of Provine’s study, that women laugh more frequently than men, illustrates how in different ways humans can communicate with laughter. This is a part of what the author refers to as the phenomenon called “downward laughter,” the notion that people of lower social stature laugh more frequently than their perceived higher-ups. This is also true within workplaces, regardless of gender: during meetings, bosses tell jokes at a much higher rate than their underlings, who by association laugh more at said jokes.

In this context of gender, downward laughter can be read as a signal of meekness and submission as well. Women in Provine’s studies laughed a distinct amount more than their male counterparts, in a trend comparable to supervisors or managers and their subordinates. In this case, laughter continues to be a mode of unconscious communication, allowing groups to unconsciously assert dominion or inferiority. This language of laughter, while removed from its old evolutionary context, still works to communicate tacit ideas of status, showing what Provine, Panksepp and Burgdoff, and more would argue to be more of the new adaptive purposes of laughter for humankind.
With regards to laughter and gender difference, this particular example offers a glimpse into the incompleteness of this narrative: the difference here is that women laugh a great deal more regardless of whether they are laughing at men or other women; what this alone signifies is that discrepancies in laughter between genders are more complex. Despite this, women’s more frequent laughter compared to men becomes analogous to underlings’ laughter at bosses because of the implicit subjugation in action here. What these researchers have established in their work is a bio-historical canon of laughter that accounts for the meanings and uses of laughter that perhaps had not been previously considered in its Euro-American history—whereas morality and health were key focuses of historical etiologies of laughter, this new discourse illustrates the way this behavior functions in a modern context: born from phylogenetic necessity for our biological ancestors to communicate something to one another, long before we adapted the capacity for language. Laughter is then, within this framing, a primeval language that elevates and complicates humankind’s evolutionary status.

But what then is the implication of laughter being for the monkeys? With this train of thought, we have discussed laughter mainly in terms of being a social mechanism and an adaptive function of relationality—a conversation that appears to set itself apart from older ones about this subject. However, even though Provine et al. seem to be exploring new frontiers in their bioevolutionary research and inquiry, their work continues to speak to these problems of morality and emotion that occupy the dilemma of laughter. That is, by constructing a model for the phylogeny of laughter, from rats to apes to humans, these authors have reified the argument that laughing is a base, emotional response.

In these studies, in slight or serious ways, researchers of all sorts have taken branches of bioscience to not only call back to our enduring beliefs about the etiology of laughter, but they
also strengthen their validity with the hegemonic institution of bioscientific discourse. Through medicine, we confirm that laughter can be of great health benefit: it not only improves immunity to disease, but it also improves mental health and can even burn calories! These descriptions make laughing sound in content like a super drug, and appropriately its side effects make users reassess its usefulness: it can be injurious to the human psyche, and even the body if your lungs are already damaged; further, in excess laughter can signify mental distress or disorientation, like in cases of hysteria.

In producing a bioscience of laughter, researchers have taken the old gelotology governed by morality and health and, in its way, has made a great effort to answer the question, “why do we laugh?” But the canon is incomplete— laughter harms as much as it heals, it is both sinful and divine, malicious and encouraging, as well as submissive and dominating. Despite the great lengths these scientists have gone, the contradictions that had occupied the old Euro-American beliefs on laughing continue in their own science of the subject. This persistence is because the same logic that served to explain the role and place of laughter before is, as these studies indicate, still present today.

That is, the models we have in place to explain laughter’s purpose as well as its effects fall short— and will continue to— because of its lack of plasticity. This model takes for granted that there is one word to express what is, at its essence, a repeated, sometimes loud and rapid exhaling to produce sounds that resemble “haha”s, “heehee”s, et cetera; the word is then expressed as a construction like “behavior” or “bodily function” and becomes steadily less helpful in understanding the real purpose of these actions. The science of laughter strives to reduce this “thing that we do” so that not only further inquiry into the subject may be easier but so we can better understand it, broadly speaking.
And so the failure of this new gelotology, as well as the old ones, is due to the fact that despite this attempt at reduction, laughter has refused to be fully explainable—a product of both the models through which we have tried to understand it as well as the complexity of the thing in the first place. Rather than being a good or bad thing, laughter, in this model, has shown to be both; it occupies a liminal space that offers a plurality of meanings and purposes. When we situate laughter biomedically as something existing somewhere on an axis between healthful and harmful, in a similar manner that Euro-American gelotologies have juxtaposed it within a spectrum between *logos* and *pathos*. Such a model integrates both of these spectra onto a graph of morality between the healthfulness and rationality—or lack thereof—of laughter. However, laughter, when singularly represented on this model, appears in a range of disparate coordinates, in different instances as well as at the same time.

This suggests a flaw in either the models by which we have attempted to evaluate the role and place laughter in and of itself, or a misunderstanding of what we mean by laughter in the first place. That is, can laughter *be* more than one thing? In the next section of this essay, I will look at other anthropological writings on the social meaning, performance, and purpose of laughter as accounted by other societies across the world. In looking at these different logics and perspectives on this subject, we can further understand what gaps persist within our own frameworks on humor and laughter, as well as what alternative models of laughter and humor we can use to further advance this discourse.

As this model of the axes of healthfulness and rationality serve to illustrate modern, biosocial gelotology, it demonstrates that this first dichotomy between rationality and emotion remains a crux of the subject, as it did in historical models of the “goodness” of laughter. Euro-American discourses on laughing and humor will inevitably interact with this matrix at some
point, and so the same is true for anthropology: as this discipline itself has grown out of these older social studies, its evaluation of laughter will also encompass some of the older theories that have been produced by it. In order to understand the current anthropological analysis of laughter, as well as its relation to and disconnection from the self-titled “science of laughter,” it is important to understand the philosophy that serves as foundation for each.

While there are a plethora of different theories regarding laughter, the three that have the strongest influence on these other theories are the theories of relief, incongruity, and superiority. Each of these draws from the thinkers previously discussed, in different ways, and notably are often referred to as theories of humor as well, suggesting that these are archetypes of humor also bears the notion that these three criteria account for what I will refer to as the aesthetics of laughter. For example. the theory of superiority explains that laughter is used to explain the trope of the fool: we laugh at those who are lower than us because they are foolish, they experience misfortune and we recognize their plight as well as our dissociation from their position.

This model speaks to Hobbes’s idea of “sudden glory,” as well as the concept of “schadenfreude,” and is foundational in the moral politics of laughter. Such an association also supports the premise that laughter goes hand in hand with emotions of aggression— and again, this theory is a reflection of Hobbes’s own ideas concerning the human condition. The belief that derisive laughter creates not only an imbalance of power but also the psyche has been a source of ambivalence in this field for centuries. A second front runner of these models is that of relief theory, which suggests that the reason we laugh is to cope and deal with emotional imbalances— nervous laughter, or the sort of laughter one emits while in pain, or under emotional duress, to sublimate different sorts of social miscues and other kinds of suffering. Freud speaks the most explicitly to this theory in his own address of the psyche (1905).
Finally, the incongruity theory of laughter, which is inspired by Francis Hutcheson’s own theories here, offers a more complex approach to the purposes of humorous laughter, in that it assesses the actual mechanics or aesthetics of humor: it posits that laughter is born out of jokes or situations that create what is essentially a dissonance of meaning. That is, when asked, “why the chicken crossed the road?” we are given a premise. The answer, “to get to the other side” creates a mental puzzle for the receiver of the joke. In this timeless example, the solution of the problem is something so simple provokes a sense of confusion, an incongruity between the components of the situation that the listener must resolve. If the recipient of the joke fails to do this, then they “do not get it,” and the joke falls flat.

Humor, in this case, deals with the absurd, the grotesque, and even the sublime— its use is to investigate and reassess the meanings of conventional things that, when rearranged or subverted, stop making sense; they lose meaning, or the meaning changes, within these incongruities. This power of humor, the aesthetic of jokes, which when properly enacted evokes laughter, is the bedrock of the issues that all of these discourses have tried to assess: it makes laughter exciting, provocative, and in many cases, dangerous. Yet this is all contingent with the premise of the incongruity theory, that humor, the production of something funny, is the necessary antecedent of laughter in this case; but more importantly, the processual enactment of humor is embedded in exchanges and subversions of symbolic meaning, in the form of joke-telling.

Again, these are the three most influential theories regarding laughter, listed with a brief social history of their influence on various gelotologies. The extent of their reach in this discourse is apparent in the way they are still applied, both implicitly and explicitly, in contemporary academic research; in some cases, they are even evaluated in plain terms with their
relation to physiological well-being (Wilkins & Eisenbraun, 2009). It is important to note that this list is far from exhaustive, and more theories of laughter have come to be in recent years (Smuts, 2016), but their influence on the discourses of both bioscience and anthropology are much more limited.

Moreover, these theories are not mutually exclusive: they all have their place in explaining the multiple causes and purposes of human laughter. However the incongruity theory proves the most useful with regards to discussing the anthropology of the aesthetics of humor; this is in part due to the plasticity of the theory in how it accounts for the various kinds of laughter this paper assesses, but also to the fact that it lends itself most closely to anthropological models of human cognition and understanding.

This is because the incongruity theory assesses laughter in terms of meaning that is socially delegated between the two parties of the joke teller and her audience. Humor is produced in the subversion of symbols, and so laughter is the acknowledgement of the success of this subversion. This means that through the process of joke-telling, humans are constantly trying to heighten the meaning of certain things—ideals, beliefs, institutions—while devaluing others, or changing them in radically different ways. The process of joke-telling follows a format analogous to Marx’s dialectical materialism, by which he discusses societal change through political paradigm shifts. Here, with the thesis of jokes being the premise, and their punchline being the antithesis, the attainment of new meaning through the resolution of Hutcheson’s “incongruity” is the synthesis of new symbolic imaginings of the things mediated between the joke teller, his audience and the joke’s subject matter.

This process is essentially a humor dialectic by which new meaning is produced in the laughter-making process. To understand better the role and place of laughter, particularly
humorous laughter as Hutcheson’s theory frames it, it is helpful to take a look at how anthropology has framed the ways in which humor is implemented, performed, and mediated in different societies to illustrate the extent to which humor can be powerful. By investigating the many ways societies use humor in social praxis, we learn more about role of humor for natives of an ethnography as well as its role for ourselves. How often do they laugh?; when do they laugh?; and what constitutes humor? We can and have asked these questions, and in doing so have catalogued the local gelotologies of dozens of societies.

But before that— at the beginning of this essay, I asked you to imagine a time where you could not stop laughing, followed by a time where you were forced to stop laughing. I want to reflect further on this latter idea some more, that laughter can be taken from us, and what happens when this occurs. If you cannot recall a time where you have been chastised for laughing, think instead of a time where someone mocked you for your laugh— this scenario resonates with me because despite being a tall, young man with a deep voice, I have a shrill, high-pitched laugh that becomes especially shrill when I think something is really funny. It is obnoxious. But I don’t think about it unless someone makes fun of me for it, either with a strange look or by mimicking me with a scathing cackle of their own.

The reason I bring this up is because if you can relate to this experience, even despite not having as strange a laugh as me, you can probably recall the deep feeling of disempowerment that came with someone making fun of your own laugh. When faced with this, you may feel a sense of embarrassment pour over you (I know I do). Not only do you become the target of derisive laughter in this case, but also you are left without the choice to laugh anymore— lest you face further teasing. In a way this feels disempowering, because you have been discouraged from laughing any more. What can you do instead, at this point?
This is not a trivial predicament to think about when reflecting upon the value of humor and laughing within Euro-American societies, as well as in interpreting the role and place these things occupy within other human societies. Keep these anecdotes in mind as I review the existing anthropological literature that delves, no matter how briefly, into this subject of laughter among indigenous societies of, namely, Melanesian and Amazonian societies. Note how these pluralist philosophies of laughter, as well as the disciplinary frameworks through which we interpret them, differ from the biosocial gelotology that I reviewed in the first part of this essay.

What this ethnographic data—a review of biosocial studies of laughter, in a sort of “anthropology of professionals”—has shown us, is that by and large laughter must be understood in terms of physiology and phylogeny, of bodies and behaviors. Meanwhile, anthropological literature on the same subject posits that, per ethnographic data, most every human society or collective enacts laughter through complex humor dialectics, in diverse and equally ritual or novel social practices. Laughter, anthropology has argued, is an important emotional or affective display that allows humans among a singular or plural people to better integrate with one another socially, improving a sense of solidarity or connectivity among them—this is a part of a set of social processes that anthropologists of emotion have focused on as a component of the production of conviviality.

As well as this, laughter among a wide range of human societies has served a clear and precise political goal: that is, funny laughter, when enacted by a dialectic of humor, allows marginalized groups in these societies to reevaluate the paradigms through which power structures are maintained. Further, the control of laughter within a society or collective tends to reside among those who possess control over other assets of our social lives; the tighter this grip on the production and experience of humor, the more hegemonic the symbolic institutions that
mediate it are in the first place. To illustrate this point, Bakhtin observes that in Renaissance era
Europe, gratuitous laughter was reserved for strictly ritualistic spaces like the carnival; in
limiting the physical and imagined social spaces where laughter can exist, there is a clear relation
between who controls the designation of these spaces and the inferred symbolic power of
laughter (1965:271).

So in anthropology, laughter occupies a specific role and place in humanity’s social
universe: humorous laughter, or laughter produced by something funny, results in a synthesis of
new meaning, and so produces new relations between the self and the other, or between the self
and the imagining of another idea, person, or concept. This is the power of the symbolic
subversion of ideas and social relations that occurs within a humor dialectic. Among these
different outcomes, there are various ethnographies that demonstrate the empowering energy
apparent within these aesthetics of humor; that is, humor in specific contexts provides an
opportunity to reconstruct one’s own milieu, as meaning changes hands in the subversive
practice of humor; the result is a change, of variable significance, in the power dynamics
between producers and targets of laughter. Anke Reichenbach and Fatema Hashem illustrate this
process in their ethnography of Bahraini women who use mimesis and crude humor toward their
husbands in order to improve both their affective and political standing within their gendered
status (2005).

Laughter empowers a collective in manners beyond just this simpler shift in social
standing; in other examples, laughter is a device that weakens the hold powerful beings have
within structures that range from the political to the cosmological. The former of these two is
illustrated in Klumbyté’s ethnography of the 2008 Lithuanian political campaign: in this
campaign, political groups produced a plethora of humorous advertisements that make jokes
about the political process, often at the expense of other candidates (2014). And in a classic example from indigenous Amazonian peoples, the mythic stories of the Chulupi people found in Paraguay are often humorous and risque accounts of revered beings within their cosmology — such as the shaman and the jaguar—that are often portrayed as foolish and perverse (Clastres, 2000).

Such stories of flawed deities and magical beings harken back to canons such as ancient Greek mythology, but are still common today among Amazonian peoples: in Piaroa stories of their creator gods, a brother and a sister, the errant actions of the siblings lead to strife for themselves as well as the production of a dangerous laughing condition called *k’ireau*, or monkey urine madness (Overing, 2000). These stories are integral to understanding the relationship between these given peoples and their myth systems and social structures, and so the aesthetic of humor behind these stories demands close scrutiny in order to make this interpretive process possible.

However, each of these examples yields a different group with a different sociality and approach to humor, as well as a different interpretation from the ethnographers themselves. For Clastres, the humor of the perverted shaman serves to make distinct the role of real shamans, as well as the place of jaguars in Chulupi cosmology. The bawdy stories use Bakhtin’s idea of the grotesque to reinforce their social logic by enacting contrasting and subversive symbols, while also providing relief to the storyteller and audience, ordinarily beside themselves with fear of these mythic figures. Overing, by contrast, focuses upon the act of storytelling itself, and how laughter and other affective displays contribute to the conviviality of the Piaroa. In this interpretation, laughter’s role is to reinforce emotional bonds among kin and affines.
However not all laughter is acceptable among the Piaroa—directed laughter between genders, such as if a group of men laugh at a woman, or vice versa, is considered socially harmful and counterproductive (ibid.). Further, among other Amerindians such as the Guayaki, laughter is a scornful and often very dangerous behavior: like with birth, for instance, participants, including the mother, must remain silent for the duration of the ritual. No sound, and especially no laughter, Clastres stresses, is allowed to be heard the entire time (1998). According to Clastres, the Guayaki are a very quiet people, which is a lifestyle that is informed by their mythos as well as their sense of sociality. However, this does not mean the serious Guayaki forsake the activity of laughter entirely; in fact in one ceremony, the group engages in a ritual tickling where they play and excite each other to uncontrollable laughter (ibid.).

Moreover, this dichotomy of good and bad laughter is further embodied in Makushi conceptions of laughter: for this Amazonian group, laughter can either be positive and healing, which is described as “laughter with others” (Scherberger, 2005). This form of laughter is similar to how Overing describes convivial laughter of the Piaroa, but occupies a space more liminal and revered as it is used in Makushi healing and shamanic rituals. Negative laughter, which consists of directed and derisive laughter, is also more significant for the Makushi as it is associated with the dangerous laughter of the howler monkey, and so with sorcery and malintent as well.

Beyond ethnographies of Amerindians, anthropologists have found that laughter also maintains an invaluable role to the ritual practices of other societies, such as those of the South Pacific. The Makeo people of Papua New Guinea, for example, humor is an important mechanism in funerary practices: in these rituals, the Makeo feed and engorge one another’s kin in a manner they find absolutely hilarious (Mitchell, 1992). In this case, laughter seeks to sublimate the feelings of grief while instilling a sense of support among affinal kin. In an
example that resembles Klumbyté’s ethnography of Bahraini women, the Lusi-Kaliai use mimesis in rituals to mimic and taunt opposite gender roles (ibid.).

With regards to each of these examples, laughter persists thematically as a component of ritual processes; these are essential to what are considered to be liminal events—the purpose of these in-between moments in the cultural praxis of these peoples is to reinforce the social and symbolic bonds among the groups that already occupy this space in the first place (Turner, 1966). That humor and laughter occur in these processes so frequently, I argue, is because laughter is itself a liminal process as what it causes participants in examples of “ritual play” to do is reflect upon a dissonant chord in one’s social logic, which is embedded with cultural symbols.

The incongruity of the joke brings the meanings of, for example, gender roles, kinship ties or cosmologies, into question: in evaluating these symbols and institutions within the context of the joke, they are brought into a liminal area, cognitively and experientially; after resolving the symbolic problem of the joke, the audience’s laughter is not only a queue that the joke’s purpose has been fulfilled, but it is also a distinct affective display that further reifies the reality of a group’s social bonds. The synthesis, in regard to a humor dialectic, is a social bond that reifies the place of—in the context of Turner—structural and anti-structural symbols.

What these ethnographies also indicate is that laughter’s role in a society or other form of collective is highly variable; for the Guayaki, who revere silence in both ritual and everyday praxis, laughter is often dangerous. For the Makushi and the Chulupi, directed laughter is problematic as it is associated with malevolence and sorcery, while also being regarded as socially destructive. In the majority of these ethnographic accounts of the nature of laughter, among other indigenous groups, laughter is enacted in a way where good and bad laughter are made distinct from one another, in discourse and to a lesser extent in social practice. That is,
while social frameworks allow differential forms of laughter (nervous, joyful, and humorous) to be understood and discussed distinctively, they are not always easily distinguishable in everyday social activity (Scherberger, 2005).

**On the Politics of Humor**

This scrutiny of the role and place of laughter, in discourse and social practice, is consistent among each of these groups, and in a way both distinct and parallel to the modern biosocial gelotology of non-western society; laughter remains a liminal affective display that is under the constant symbolic negotiation and evaluation of joke tellers and recipients. What I argue, however, is that the conditions of political and symbolic structures apparent in so-called eurocentric societies makes the liminal process of laughter exceedingly more complicated, and so these acts become more questionable in the interpretive process intrinsic to the incongruity theory of laughter.

Euro-American societies do have the language to describe the vast spectrum of meanings behind laughter; humor can be in bad taste, mean-spirited, or derisive. Good humor is exactly that—uplifting and cheerful. However the difference here is that with peoples like the Makushi where this spectrum of meaning is accounted for within social praxis, making these distinctions consistently feasible within their own social logic; meanwhile the structures discussed in the first half of this essay—political and social institutions, such as Christian theology and monarchic and democratic government—contribute to a different symbolic understanding of what laughter means and does in these societies.

With these institutions there are clear impacts that people within them have on the relations of power in Euro-American societies: theology and biology bear a hegemonic authority over models of thought and the epistemologies of the body and mind. With the strength of these
paradigms as sources of knowledge claims, they possess a great deal of rapport among our imaginary of the etiologies of laughter; in this process, laughter is discursively remodeled from an enactment of power and sociability into a bodily function, a base natural response.

However despite these distinctions we make in the discourse of humor and the meaning of laughter do not exclude it from the inevitable redistribution of meaning and power that are implicit in humor— they only make this process more problematic. Indeed humorists and satirists still provoke and taunt powerful, dangerous forces of the western world: historically western society had Jonathan Swift and Voltaire, and in the modern day, cartoonists make iconoclastic images of the prophet Mohammed and comedians taunt politicians. In the case of the 2015 Charlie Hebdo shooting, we have seen that such provocation can incite real symbolic and political violence and consequences.

This is why the device of political humor becomes a powerful and potentially dangerous agent in the strata of power in our society, because the synthesis of a humor dialectic like this is produced by the joke recipient, and the results can prove deadly when people don’t think it’s funny. Also by political humor, I do not refer to jokes that are simply of a political context (e.g. editorial cartoons), but rather humor that is designed intentionally to take advantage of the production of incongruent representations and imaginings of symbols; that is, a form of laughter that delineates the imagining of a political figure, belief or structure from its real position of power. Humor becomes political in this sense when its producer seeks to gain or detract power from the target of this humor. Insofar as this process is conducive to directed laughter, it necessarily draws skepticism from societies where such laughter is pejorative.

However at first glance it will appear that from every paradigm and philosophy of laughter that I have reviewed in this essay demonize such directed laughter, schadenfreude or
“sudden glory”; because of this, the next question I wish to raise is this: what connections can we draw between, for example, the practice of bawdy, mythic storytelling in the Chulupi and the Piaroa and the parodic practice of political humor in western societies? In essence, each of these enacts such dangerous laughter for a seemingly “political” end. Those Amazonian peoples engage with the bawdy myth in—what Clastres lays out as, and I would argue to be—an effort to exercise agency over seemingly unstoppable and dangerous cosmological forces.

Where all of these ideas come together, in regard to the politics of humor, is that with Bakhtin’s construction of the carnival and grotesque, in tandem with the concept of Turnarian liminality, we can critique the production and enactment of political humor in Euro-American societies. This is possible because, if laughter’s place is mediated and confined to convivial and liminal ritual spaces—such as Bakhtin’s conception of the Renaissance carnival space where laughter is allowed—then carnivalesque humor discourses where culturally dominant ideas are contested are limited to these spaces as well. In a Foucauldian sense, then, when a biosocial canon of laughter relegates these social acts to the categories of behavior and bodily function, the capacity for humorists to enact the carnivalesque to combat the regimes of truth wherein these symbols become contested in the first place. As neuroscientist Sophie Scott glibly puts it, in regard to human laughter in this biosocial paradigm, “you and me baby ain’t nothin’ but mammals” (2015).

Conclusion

In this thesis I have offered an introspective look into the social imaginings of laughter, both old and new, in Euro-American societies. This has consisted of the historical philosophies, cosmologies and aesthetics of humor that have shaped the way westerners have looked at laughter across time. Aristotle believed an infant’s first laugh coincides with its ensoulment;
Pliny said that “only one man, Zoroaster, began to laugh at the time of his birth; this was interpreted as an omen of his divine wisdom” (Bakhtin, 69: 1968). This part of the paper illustrated that laughter has not only been a discursive focus of thinkers, humorists, etc but also an area of contention for these figures.

The reason for this contention is twofold: first, there is the moral dilemma that laughter brings to those who produce and enact it that has left westerners unsure of its role and place as social and affective display. Additionally, laughter as an emotional performance, in and of itself, becomes a part of a dichotomy with rationality, where an excess of laughter—a quantity conservatively defined by the likes of Plato or the 4th Earl of Chesterfield—overrides and opposes human rationality. Each of these perspectives on laughter echoes their respective proponents’ attitudes toward humanity: Hobbes, who believed human behavior is governed by the preservation and interest of the self, extends similar sentiments toward laughter. Moreover, philosophers and temperate (but haughty) socialites demonize laughter for its connection to the emotional, lesser side of the human condition. Philosophers like Kant and Hutcheson, whose focuses on aesthetics and human understanding led them toward divergent and more indulgent opinions on laughter.

These two conflicts in discourse, of morality and the conditionality of humanity, have led to a millennia long conversation about the role and place of laughter in western societies. Following the path of these philosophies of laughter, or gelotologies, I produced a sort of ethnography of the bioscientific paradigm and its evaluation of laughter in the past century; this section illustrated that many of the same convictions that western thinkers established long ago have been reinforced by the research produced by academics of evolutionary biology and psychology. The position that laughter is “good” for you has been reinforced equally versus the
notion that it is deleterious to your health: laughter has been shown to improve one’s immune system and overall physical health—at the same time, we see that it is dangerous to one’s psychological condition, and in excess is pathologized as a psychogenic illness. And so on the imagined analytical axes of laughter’s place, in relation to health and illness, and to emotion and rationality, modern science has found humor and laughing to exist on various coordinates within this model.

By looking into these biosocial studies, in an “anthropology of experts,” we have learned that scientific research has gained a lot of traction in understanding laughter’s evolutionary origins: from chimps to rats, evolutionary psychologists have found that other mammals from humankind’s evolutionary track exhibit a sort of laughter response that is associated with play and sociability. These sorts of conclusions reflect the new biosocial paradigm regarding the human condition: when humanity is predicated by genetic and physiological conditions, we imagine laughter framed in a similar way: in this model, the human laugh exists as a pre-verbal form of communication, meaning that there is a clear evolutionary purpose not only to laughter but sociality in general. Moreover, scientists confine laughter’s place as a bodily function—and like other functions of the body, laughter is deemed “natural” and serves many biological and social purposes, but is embedded in a primeval set of behaviors that precede human rationality, and so we must mediate the enactment of laughter from ourselves and others.

Such notions are the inevitable conclusions of this bioscientific gelotology. They resonate with the paradigm of older sciences and discussions of laughter as well; the moral dimensions of human laughter that dictated these old gelotologies are reinforced by and conflated with the biological conditions of laughter in this new science. What were originally mere beliefs—that laughter often is dangerous, scornful and unruly—are now canonized as knowledge claims by
the empirical lens of the biosciences. Laughter is no longer just morally questionable, but also biologically base and crude. Soured Calvinist beliefs blend with a hegemonic knowledge system to produce what Overing refers to as a “Christian physiology” (2000); that is, in the Euro-American discourse on laughter, we see the authority these institutions of faith and science bear over our understanding of the human body and its capacity for understanding. In our biosocial imagining of the body, and so of humanity, laughter’s place and role in western social universes are confined within the parameters of this model.

However this is only one philosophy of a universal human behavior, reduced and simplified in ways that leave our understanding of laughter still confused and inconsistent. In response to this discourse, I reviewed the many ethnographic accounts of the production and enactment of social laughter and humor across human societies and collectives. An anthropology of laughter provides alternate frameworks to engage with laughter; from academics and from the gelotologies of natives themselves, we see how different social imaginings of humanity impact the discourse and practice of laughter. In this cross-cultural analysis of anthropological literature on different human societies, I illustrated how laughter’s meaning persists and changes throughout spaces and imaginaries. There exists no society where laughter does not exist; however some practice humor less than others, such as the Guayaki of Amazonia (Clastres, 1998).

From this review of literature on the subject of laughter in ethnography, we have learned that, ranging from daily social processes to intimate ritual practice, the production of laughter through joking, storytelling, clowning and mimesis is a cornerstone of sociality across collectives in humankind. In observing so-called primitive societies, we have learned that indigenous peoples laugh at puns and plays on words (Clastres, 2000: 132), as much as they do about
scatological humor (Mitchell, 1992; Overing and Passes, 2000)—a phrase I which I have come to understand as what academics use when they’re not comfortable with saying “poop jokes.” Not only is humor consistently apparent throughout human societies, but it is also relatable in content and form; but it offers a distinct purpose and social significance per the place it is reserved among a people’s imaginary of emotions.

Laughter’s role and place in the production of human sociality, as well as the mediation and evaluation of representations, is largely important to many human collectives, whether we all like to admit it or not; moreover, we can observe that laughter continues to be invaluable as a means of empowerment and healing in western societies as well (Klumbyté, 2014; Boyer and Yurchak, 2010; Van Blerkom and Miller, 1995). This capacity for humans to enact humor and laughter to accomplish these things socially is limited only by the imagining of laughter’s role and place within the human condition, or in other words, what laughter means to us.

What this review of the biosocial discourse on the origins and purposes of laughter, as well as native gelotologies found in ethnography reveal to us, is that there is no really good way of defining laughter or answering big questions about it: laughter, this thing humans do by going “haha!” or “hehehe!” sounds familiar to a person no matter what—but discerning the meaning of these “words” requires more than a philosophy regarding the subject. To define even a single instance of laughter, we need the symbolic context of both the joke teller and her audience, as well as the semantics and social meanings at work behind the joke itself.

This is the system that mediates the production of humor dialectics whereby people laugh funny laughs—it is highly variable and, in social structures where politics and economies are dictated by ideas and symbols, it can be very powerful. But it is also not the only form of laughter that emerges from these analyses; there is also laughter produced by anxiety, as well as
the uncontrollable sort of laughter that we make when we are being tickled; each of these continues to have important roles in producing sociality and relationality across human collectives (Clastres, 1998; Mitchell, 1992).

What anthropology offers us, instead of a tight explanation of each of these forms of human laughter, is a framework through which we can understand these discussions about it at large. The discourses at hand range from the biosocial to the cosmological, from Estonia to Amazonia. And from what we’ve seen among all of these, while there are many questions left unanswered, it seems important to have a good sense of humor, and to not take oneself so seriously after all; because the funny thing about laughter is that in every effort we (as an entire human race) have made to reduce and explain dilemmas such as, why we should or should not laugh, or what purpose laughing has, we are met with contradictions and conflicts of interests, regardless of our side of the argument. No matter one’s outlook on laughter, and outlook on the human condition as well, laughter has never failed to stump us. We can see through these frameworks that laughter is socially complex and undoubtedly important to the tacit liminal processes through which we engage with and understand the world, but ultimately, perhaps the answer to these questions is the punchline that we will never quite “get.”
Bibliography

Apte, Mahadev

Bakhtin, Michail
1968 *Rabelais and His World*. Cambridge: Massachusetts Institute of Technology.

Berk, Lee

Billig, Michael

Bloom, Allan

Boyer, Dominic and Yurchak, Alexei

Clastres, Pierre

2000 *Society Against the State*. Zone Books.

Darwin, Charles

Douglas, Mary

Emery, Charles; Suh, Sooyeon; Diaz, Phillip; and Lebowitz, Kim

Freud, Sigmund

Foucault, Michel

Klumbytė, Neringa

McCallum, Cecilia

Mitchell, William

Overing, Joannna and Passes, Alan

Panksepp, Jaak and Burgdoff, Jeff
2003  “‘Laughing’ rats and the evolutionary antecedents of human joy?” from *Physiology and Behavior*. Elsevier Inc.

Provine, Robert


Scott, Sophie
2015  “Why We Laugh” via TED Talks.
https://www.ted.com/talks/sophie_scott_why_we_laugh?language=en

Scherberger, Laura

Smuts, Aaron

Telfer, Elizabeth

Van Blerkom, Linda Miller

Wilkins, Julia and Eisenbraun, Amy Janel