

# A Study on Humor in the Literature of Shakespeare

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## Abstract

Humor seems uniquely human, but it has deep biological roots. Laughter, the best evidence suggests, derives from the ritualized breathing and open-mouth display common in animal play. Play evolved as training for the unexpected, in creatures putting themselves at risk of losing balance or dominance so that they learn to recover. Humor in turn involves play with the expectations we share—whether innate or acquired—in order to catch one another off guard in ways that simulate risk and stimulate recovery. An evolutionary approach to three great literary humorists, Shakespeare, Nabokov and Beckett, shows that a species-wide explanation not only cuts deeper but in no way diminishes individual difference.

**Keywords:** Humor, Shakespeare, Novels, Literature.

## Introduction

So much for the data. How do we explain its effect on us? How do we explain humor, and how can I show that an evolutionary approach to humor, and to literature, can be fruitful and even necessary? Let me list some of the problems of studying humor. Why do we find funny so many different kinds of things—words, intonations, accents, appearances, characters, actions, situations—whether or not they are designed to be funny? The jokes and quips and courtroom blips above all have human language in common, but we can laugh without language, and even without humans. I recently watched the documentary *Travelling Birds*, 4 which apart from an intermittent voice-over consists simply of long shots of birds of one species at a time migrating seasonally from one part of the globe to the other. There was nothing to cue anybody for laughter, but when among a crowd of long-legged cranes standing on ice, one lost its balance, tried to regain it, slipped further, and toppled right over, the whole cinema audience laughed. Why? Why is our reaction to what we find funny laughter, and why do we laugh when there's not necessarily any joke? Laughter is difficult to explain in

evolutionary terms. Evolution has many strange behaviors to explain, of course. The philosopher and evolutionist Daniel Dennett, for instance, writes of

a species of primate in South America, more gregarious than most other mammals, with a curious behavior. The members of this species often gather in groups, large and small, and in the course of their mutual chattering, under a wide variety of circumstances, they are induced to engage in bouts of involuntary, convulsive respiration, a sort of loud, helpless, mutually reinforcing group panting that sometimes is so severe as to incapacitate them. Far from being aversive, however, these attacks seem to be sought out by most members of the species, some of whom even appear to be addicted to them.

Dennett adds that: “We might be tempted to think that if only we knew what it was like to be them, from the inside, we’d understand this curious addiction of theirs. If we could see it ‘from their point of view,’ we would know what it was for. But,” he explains, “the species is *Homo sapiens* (which does indeed inhabit South America, among other places), and the behavior is laughter.” He asks, “What do we do better than we otherwise would do, thanks to the mechanisms that carry with them, as a price worth paying, our susceptibility to—our near addiction to—laughter?”<sup>5</sup> How could evolution have designed such a behavior? How could it be so much a part of our species, whatever culture or clan we come from?

There’s much else to explain about laughter. Why do we enjoy laughter so much? Why do we especially enjoy laughing together? Why should it be that when we perceive something as funny, we have this particular, almost involuntary, response in faces and lungs? How does laughter relate to smiling? How does it relate to other sounds our mouths make, especially speech? How can we find it impossible to define what’s funny and yet generally find ourselves all laughing at the same time? Why do we laugh more often, as research shows, at things that aren’t jokes than at things that are?<sup>6</sup> Why does humor sometimes act like a balm, a sweet social stimulant, and sometimes like a barb?

Humor theorists agree that there are three main traditional theories of humor, with much overlap among them. One, the most widespread, is now usually referred to as the incongruity-resolution theory. Kant writes that “Laughter is an affection arising from the sudden transformation of a strained expectation into nothing”: in other words, when we hear the punch line, the tension of our expectations disappears, it is resolved in a flash.<sup>8</sup> Schopenhauer also agrees that our success at resolving incongruity is expressed in laughter.

This explains part of “That was great for you, how was it for me?” or “Why bring strangers into the house?” We don’t expect the reversal of the familiar question in the first instance, or the application of another familiar formula to having a child in the second, and we do quickly resolve them, in terms of behaviorists’ assumptions that we cannot see into the mind and should therefore focus only on actions, or in terms of Lenny Bruce’s misgivings about becoming a parent. But incongruity resolution cannot explain a good deal of our laughter outside jokes, such as at the sliding and collapsing crane, or at characters from Mrs. Bennet to Mr. Micawber.

Another main theory of humor is now called the superiority theory:

According to Hobbes, laughter is an expression of our feelings of superiority over others, or over our own former position of inferiority. In *On Human Nature* he presents what has become the classic statement on the subject: “the passion of laughter [. . .] is nothing else but sudden glory arising from some sudden conception of some eminency in ourselves, by comparison with the infirmity of others, or with our own formerly.”

This may explain our laughter at the crane: sitting or standing upright as we watch, we literally have an “eminency” over the bird now sprawled on the ground. It may explain slapstick humor, slipping on banana peels, custard-pies-in-the-face, and the blunders in the courtroom (“Oral” and Co.), as well as laughter as an instrument of aggression, ridicule, satire, censure (the behaviorist joke, if we read that as satire). But it does nothing to explain Lenny Bruce’s “Why bring strangers into the house?” or many other verbal jokes, like Bob Hope’s comic riff on being born in England: “I still have a bit of British in me. In fact, my blood type is solid marmalade.” Nor can a superiority theory of humor explain why humour is more often balm than barb.

A third main theory of humor is now known as the relief theory. Although a version of this dates back to Aristotle, and it was developed by Herbert Spencer, Freud elaborated it most fully, first in *Jokes and Their Relation to the Unconscious* (1905), and then in his 1927 essay “Humour.” Paul Grant summarizes Freud: “In humour . . . we prepare ourselves to feel emotions such as fear or pity, but realize that we have no cause to be concerned; the energy summoned is found to be superfluous and released in laughter.” For Freud, humor has a “heroic function in the sense of liberation it achieves in allowing us to stand aloof from the trials and tribulations of life.” Freud has something here, in the idea that we can brace

ourselves in humor, but it is hard to find ourselves bracing for fear or pity or anything else in examples like “Oral” or “Tell that to Mrs Coolidge.”

These theories of humor, and others, attempt to explain why we find things funny, but not why laughter is the outward form of our finding things funny. Laughter varies slightly from culture to culture, but it is nevertheless a human universal—which suggests the need for an evolutionary explanation. Such an explanation might also be able to show not only why we find certain things funny (and why we find funny all the kinds of things we find funny) but also why that sense of something as funny has its expression in laughter, why we find humor and laughter so intensely pleasurable, and why we usually find them such a social lubricant but why they can also sometimes be a social abrasive.

Not only can an evolutionary explanation of humor explain more of what is funny and why it results in laughter, but it can also explain much more than verbal humor. Verbal examples are of course the easiest to discuss. But laughter, while often triggered by words, is itself pre-verbal and non-verbal. Laughter and sobbing are “the first two social vocalizations that children make”; unlike speech, they are relatively involuntary, socially contagious, and with a consistent emotional valence; like other primate social calls they do not require fine articulation but only an “alternation of the presence and absence of vocal sounds, superimposed on relatively more stable mouth postures,” and their motor activity depends on mid-brain and brain stem circuits rather than the higher speech centers. Like many social signals, laughter and sobbing have evolved as a contrasted pair: laughter is produced by exhalation, which we also use in producing speech, and sobbing, by inhalation. Although chimpanzees can vocalize as readily in inhalation as in exhalation, humans find it difficult, almost painful, to speak while inhaling. Sobbing captures and signals that pain; laughter makes the most of the relaxed effortlessness of our vocalizing while exhaling. Because of the differences between the social calls of laughter and sobbing on the one hand and articulated speech on the other, we need to look for a deeper explanation for humor and laughter than in-jokes.

There are a number of competing evolutionary theories of humor and/or laughter. One is in terms of aggression or mockery, like chimpanzees that hoot together at a common enemy. This is close to Hobbes and the superiority theory of humor, but neither for chimpanzees nor for children does laughter in fact begin in intimidating derogation. Another evolutionary explanation is in terms of disarming aggression, as a signal of submission, but as Robert

Storey notes, one chimpanzee will never try to disarm another lurching ominously closer by greeting it with laughter. A third explanation is in terms of expressing relief at the passing of danger or alerting others to the passing of a threat, but there is no evident selective advantage for such a signal. A fourth explanation, far more promising, explains laughter in terms of play. It has been most fully developed by the Dutch primatologist Jan van Hooff, but the psychologist Robert Provine, the evolutionary psycholinguist Steven Pinker, and the neuroscientist Terrence Deacon is also fundamentally in accord.

Van Hooff locates the origins of laughter in the relaxed open-mouth face those primates and other mammal and even birds display in play. Animal behaviours and expressions often become what ethologists call ritualized, stylized in a fixed and distinctive pattern that serves as a clear signal within a species so that its members can understand each other and waste as little energy, time and health as possible in friction or fighting or needlessly acting at cross-purposes. A ritualized behaviour such as the widespread mammalian relaxed open-mouth display, or human laughter, does not emerge simply as an expression of some internal state but evolves gradually into a well-defined social signal only because it is useful for senders to have receivers construe it in a certain way. Over time, minute differences of expression, gesture and posture become intensified, to the point where, say, signs of anger such as bristling hair and tight lips suggest to another, “Back off,” while a smile suggests: “You may safely approach.” In humans, facial expressions of sadness, happiness, surprise, fear, disgust and anger can be recognized from any culture to any other, because these expressions have evolved to be as distinctive across our species as the human social calls of laughter and sobbing Why did the relaxed open-mouth display evolve? In order to explain it, we will need to explain the first play, and then social play.

The play has been observed in many animal species, including all mammals in which it has been looked for, and especially in rats, canids (dogs and wolves), primates and cetaceans (dolphins and whales). Easily recognized by experts and non-experts alike,<sup>22</sup> despite the difficulty of defining it, the play has been much studied by biologists. It seems clear that it must have an adaptive function, since it is so widespread within and across species, since it consumes valuable energy since it puts players at increased risk of predation or injury, yet remains eagerly anticipated, solicited and maintained. Pleasure is nature’s way of ensuring that creatures perform an activity, and animals and humans not only look as though they enjoy play but their brains release dopamine when they anticipate or take part in it.

There is clear evidence that juvenile play deprivation among both rats and humans is associated with serious social malfunction in later life. Young rats experimentally deprived of play grow up unable to judge how and when to defend themselves, so they veer between being far too aggressive and far too passive.<sup>24</sup> In humans such experiments, thank goodness, have not been tried, but in a large-scale study of sociopathic murderers in Texas, researchers were surprised to find no common factor, in terms of background or experience, other than an absence or an extremely reduced amount of play in childhood in 90% of the perpetrators.

While most who study play agree that it must have an adaptive value, they cannot agree on what that value is. Among the many explanations proposed are training for later life and training for the unexpected: training for the expected, if you like, versus training for the unexpected. Both appear necessary.

Training for the expected seems a natural part of the play. Boys (and to lesser extent girls) love to throw stones, cones, sticks, fruit, hand scoops of earth, mud, water, or snow, boomerangs, balls of all sizes and shapes, metal or paper darts, Frisbees, in fact, anything they can hurl through the air. Javelin and discus contests have been known for millennia; aerodynamically sophisticated spears date back at least 400,000 years, and cruder versions no doubt much further. Hunting with the aid of projectiles has mattered throughout human protohistory, and the cross-cultural boyish pleasure in practising throwing surely reflects that.

But much play seems hard to explain in terms of training for the expected. Why do children skip as well as run, why do young langur monkeys do handstands, why do lambs frisk and gambol, why do piglets run, jump, spin in mid-air, flop over and take off again, squealing with delight?<sup>27</sup> A promising recent theory advanced by Marek Spinka and his colleagues suggests that play is especially training for coping with the unexpected.<sup>28</sup> In play, animals and humans move in unusual, exaggerated and exuberant ways, testing the limits of balance and bounce and locomotion, actively putting themselves into situations that risk loss of control (think skateboarding, skiing, surfing) but allow quick recovery, in order to learn to cope with the unexpected. In the play, horses make high speed turns that are not part of their usual gait; monkeys will cavort through the branches or jump one by one from a tree into a river, again and again, more flamboyantly each time, like children bellyflopping into the water.<sup>29</sup> The likeliest explanation seems to be that this is training for the unexpectedness that will help them evade a predator or an aggressor. In a chase, the ability to make and recover from atypical movements could mean the difference between life and death.

Running and frisking and cavorting can be performed solo, but in the wild they can be dangerous, and animals rarely carry out such activities away from the vigilance of others of their kind.<sup>30</sup> But a high percentage of play is social, chasing, mock-fighting, rough-and-tumble, tickling. If mere gambolling and galumphing are training for escape from pursuit, chasing is even better, and rough-and-tumble offers training in the unexpected moves of both evasion and defence, not only against predators but against aggressive competition with conspecifics. But if such play is to be of benefit, then it must not escalate into real fighting. Animals need to furnish very clear signals to each other that they are not attacking but only playing (Bekoff, *Minding Animals*, pp. 124–25). The little nips that in many animals in the mammalian line have been the main tools of play-fighting have to be distinguished in advance from real bites. The ritualized signal of the relaxed open-mouth display has therefore evolved in species from rats and wolves to chimpanzees. The baring of the teeth before biting has moved away from the rigidity and tension of real aggressive biting toward the maximum looseness that tends to characterize all bodily movements and postures in play (vH&P, p. 267). At the same time, the breathlessness that results from the energy expenditure of intense play has been ritualized, in wolves and dogs and in primates like orangutans, gorillas, and chimpanzees, into a rhythmic pant, a volley of exhalations that together with the play face seems the origin of human laughter.<sup>31</sup> Even rats nipped behind the neck in their tireless play emit a joy chirp too high for human ears (Spinka et al., p. 159; Panksepp, p. 146). In such play, the active partner has a play face to signal that this is mock aggression, while the passive partner pants to indicate “This is fun, keep going,” as the roles rapidly switch back and forth.

Van Hooff notes two consequences of the play-face explanation for the origins of human laughter: first, the idea that laughter originates in aggression cannot be right, since there is no evidence either in closely related species or in human infants for such an origin; and second, more surprisingly, laughter and smiling appear to have quite different roots. Smiling seems to derive from a fear grin, a baring of the teeth shown by a subordinate to a dominant, a nervous signal of submissiveness common in many species, including many parts of the primate line. That remote origin can still be detected in an embarrassing human smile of apology or social deference or awkwardness. In humans, and in some other primate species, van Hooff observes, the laugh and the smile, although they have different origins, tend to converge, so that a smile can seem like a weak laugh, a laugh like a strong smile. Some primate species, like baboons and some macaques, are relatively despotic, and in these, the relaxed open-

mouth play face and the bared-teeth fear grin are very distinct; but in other species, like other macaques and humans, which are much more egalitarian, the two facial displays can converge as signs of lack of threatening intent and even friendliness.

But how do we get from the play face and play pant as social signals to human laughter in response to mastering a cognitive surprise? Let me suggest the route. The mind, as evolutionary psychology has stressed, is crammed with expectations, built-in first through natural selection and then added to by experience. Among those that natural selection incorporates in us, the most urgent of all is the expectation of danger, the unexpected manifestation of an expected threat. Young birds that have never seen a hawk before will panic when a bird-shaped kite with wings toward one end is towed overhead so that its wings are at the front, but will be unperturbed if it is towed the other way, so the wings are at the back and the shape seems more like a duck than a hawk. We are all equipped with a startle reflex, we are all programmed to dip or dive when something looms rapidly in our field of vision. Nature cannot afford to have us learn of recurrent dangers through trial and error.

## **Conclusion**

In play-fighting and in tickling animals including humans, or in human peek-a-boo games, the rough form of a threat catches the attention and primes alertness, only for the threat quickly to turn to opportunity. In rats, chimpanzees and other animals that enjoy playfighting and friendly nips or tickles, so long as there is a relaxed and trusting social atmosphere, it is the surprise movements that produce the greatest vocal release and the greatest apparent pleasure, the unexpected within the context of harmless play. And in human laughter, we find the same. It is important to remember that play can persist—and animals that play want it to—only if it can clearly be seen by both sides as play. The swing and looseness of play expressions and actions must be manifest. Each party needs to know that the other also expects only play, not serious combat, from the encounter. That confident sharing of expectations, so that there is as much room as possible for the unexpected within the rules of the expected, is essential to social play.

## **References**

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4. Cited in *New Zealand Herald*, 30 July 2003, B10.
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11. This surely relates to the prevalence of disaster in the stories of very young children, as noted by Brian Sutton-Smith; see Greta G. Fein, “Toys and Stories,” in Pellegrini, pp. 151–64, p. 160.
12. vH&P, pp. 274, 275; as Darwin himself noted, “A young child, if tickled by a strange man, would scream from fear” (cited in Provine, *Laughter*, p. 100).

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