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Conceptions of Humor: Lakota (Sioux), Koestlerian, and Computational

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Abstract: *The Lakota (Sioux) sacred clowns (heyoka) of traditional religious practice offer a glimpse of the clown phenomenon found in many of the world's indigenous traditions. By illustrating the unified Lakota and Western conceptions of humor, the logic of how particular entities of the natural environment are understood as relatives according to Lakota thought is brought to light in hopes of introducing the idea that such insights were not only statements or observations about the external, physical world, but also about the internal or mental world.*

Introduction and Prefatory Remarks

Any investigation into any non-Western social paradigm (or "culture") will be fraught with difficulties if the investigator is too hasty by immediately "fragmenting" the body of knowledge held under scrutiny according to his or her own intellectual tradition's dicta (Battiste & Youngblood Henderson 2000; Deloria Jr. 1979; Gayton this volume). It is part of this author's intention to attempt to understand and convey one related *sliver* of a particular tradition of the Plains. It should be understood that this glimpse is vastly incomplete and truly lies within a much broader context and network of Lakota thought. A result of this tendency, relegating or equating a specific population's *thought* to the category of *religion* is not accurate if the tradition under scrutiny does not separate the two.

Moreover, it would be erroneous to claim that the following investigation probes "religion", rather, if anything, it is an examination of a portion of a culture as it is a way in which a people view a number of phenomena (hence "thought"). The Lakota (Sioux) tradition does not, nor does their lexicon reflect such a qualitative distinction between "religion", "thought", or "social paradigm". Take, for instance, the observation that the nature of the experience of humor (i.e. laughter) resembles lightning is not a "religious" observation, per se. Rather, it is and can be understood in a completely secular manner. In one sense,

then, it is the author's intentions to *elevate*—at the very least—this small portion of Lakota thought to one of *philosophy*, rather than religious, as its complexity and subtleties merits philosophical scrutiny, rather than any investment of faith. The problem inherent in doing this, of course, is the fact that some may not find what more or less amounts to a secularization of a particular tradition entirely appropriate either. While laughter is seen as sacred among the Lakota, it is my intention to make observations and report them, rather than make claims without the qualification or aptitude of what determining what precisely "sacred" is. Moreover, by elevating "religion" to the status of philosophy, it makes it available to serious, critical analysis.

The following discussion, then, is an attempt to look at one particular cluster of concepts and their relationships, which is discussed by both Lakota and Koestler in surprisingly similar terms followed by a brief sketch of what a computational theory of humor might look like based on this unified starting point. While "culture" and "humor" are equally elusive, there are differences. The problem with talking about "culture" is that while it is difficult to pin down precisely what it is, whatever one says will probably be at least a little correct because it is so *big*. The problem with talking about humor is that it is so *small*. "Social paradigm" is preferred as the discussion is primarily on the shared information that a particular social body shares and uses to view the world. That said, at the very least, the concluding sketch of a computational theory was highly influenced by Lakota and Koestlerian philosophy alike.

Humor

As a starting point for discussion, one of the key components of *heyoka* behavior is humor and their employment thereof. As much of the *heyoka's* behavior is typically rendered humorous, investigating the logic of how humor generally works as informed by both Lakota traditional knowledge and the insights provided by Western philosophers is important in order to understand the relationships between the symbolic incorporations of the (rest of the) physical environment and the associations or relationships that are made between them. However, an initial discussion of previous investigation into the phenomenon of humor from the Western intellectual tradition is in order.
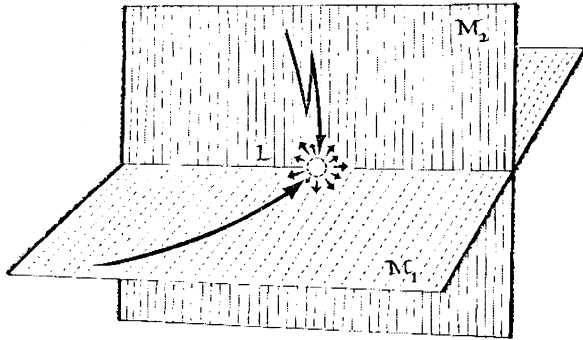
Figure 1. The Bissociative Shock (Koestler 1964: 35)

Much has been written on the psychology of humor since Plato, and most renowned philosophers touched upon the topic and some point. In his *Critique of Judgment,* Kant notes that humor "belongs to originality of mind...*Humour,* in a good sense, means the talent for being able to put oneself at will into a certain frame of mind in which everything is estimated on lines that go quite off the beaten track, (a topsy-turvy view of things,) and yet on lines that follow certain principles, rational in the case of such a mental temperament" (Kant 1928: 203). Furthering the thesis, Arthur Koestler notes that "Humour depends primarily on its surprise effect: the bisociative shock. To cause surprise the humorist must have a modicum of originality—the ability to break away from the stereotyped routines of thought" (Koestler 1967: 91). Koestler defines "bisociative" as the dual-association with "routine skills of thinking" and "the creative act" (Fig. 1).

Koestler's model depicts *"the perceiving of a situation or idea, L, in two self-consistent but habitually incompatible frames of reference, M_1 and M_2...*The event L, in which the two intersect, is made to vibrate simultaneously on two different wavelengths, as it were. While this unusual situation lasts, L is not merely linked to one associate context, but *bisociated* with two" (35). Take, for instance, someone belching loudly during a moment of prayer at a Christian mass. The *bisociative* shock occurs when one context (the sanctity and silence of prayer) suddenly clashes with another (the general rudeness of eructation). In this case, however, few would find it very humorous. Humor, then, must contain a bisociative shock, but must be cognitively "coded positively" rather than negatively (for further discussion, see below). In this case, then, Koestler's discussion of the relationship

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between creativity and humor would only be applicable if the belching individual erupted on purpose. Note Koestler's zigzagged illustration of the clash of the two frames.

Humor, then, being "originality of mind" is the meeting place between two areas of thought. Pinker (1997), in reference to Koestler's observations, explains this quite well:

Humor...begins with a train of thought in one frame of reference that bumps up against an anomaly: an event or statement that makes no sense in the context of what has come before. The anomaly can be resolved by shifting to a different frame of reference, one in which the event does makes [sic] sense. And within *that* frame, someone's dignity has been downgraded (549).

The "downgraded dignity" that Pinker refers to will be investigated below with respect to the Lakota clowns. What should be kept in mind, however, is the fact that this downgrading is one of the *functions* or an *example* or *type* of humor.

Kant defines laughter—the behavioral or external expression of humor—on the other hand as *"an affection arising from a* [cognitively based] *strained expectation being suddenly reduced to nothing"* (Kant 1928: 199). What makes a joke funny is an unexpected punch-line, slapstick humor is surprising, and linguistic humor is an employment of an inappropriate word/style for describing something. What makes humor emotional is the pleasant psychological state that ensues. In sum, humor is equal parts surprise and happiness. However, as mentioned above, sometimes what is intended to be humorous can be taken as an affront, in radical opposition to "happiness" (see below). Some attempts at humor are rendered inappropriate for two primary reasons: the joke is judged as poor taste both qualitatively (e.g. a dirty joke) and temporally (e.g. "not the right time for that").

At its core—but stripped of its emotional component—humor is a *violation* of our intuitions; what we judge to be funny results in the "beaten track" or "normalcy" of the medium (e.g. narrative, someone walking, etc.) being shocked off of the track suddenly (e.g. punch line, slipping on a banana peel)—with the extra feature of being "coded" positively by whomever witnesses the act or idea (see below for further discussion). Miller (2000) notes that "Comedy depends on showing how many ways something can go wrong—on violating expectations, not solving problems" (415). The term "intuitions" is preferable because "expectations" are quite specific and conclusive whereas intuition reflects an *active process*, rather than a representation. A simple joke, typically, is set up in a baiting fashion and the punch line

contains an element of surprise. Slapstick humor, on the other hand, is employed in a similar fashion; the "punch-line" in this case being a physical surprise of the body doing something typically uncomfortable (e.g. The Three Stooges). Veatch (1998) argues that humor is a "subjective moral violation" because it "violates a principle about which the perceiver believes, 'This is the way things *should* be'". While is many (or even most) cases, this would is correct, the fact that many cases of, take say, political humor makes fun of those in high status. For those who dislike the target of the joke, the "moral principle" involved is *not* violated, but rather *maintained*. Nevertheless, the key component to Veatch's theory of humor is the fact that we have to be able to code such violations positively, or render the violation "alright" (Taylor 2004: 22).

For such examples, we may consider them "representations" in order to get to the bottom of the present investigation. For all intents and purposes, "representation" may be used synonymously with "idea" or "occurrence"; it is a basic unit of analysis of information to which one may be exposed. Again, when we are confronted with a representation of something intended to be humorous (assuming we "get it"), sometimes the incoming information is decidedly *unfunny* or objectionable. Such is the case of the Lakota clowns.

Heyoka

Heyokas are the sacred clowns or contraries among the Sioux. These figures are, according to Lewis, "loosely organized [and] at least partly [a] secret society...[and] by systematically breaking the customs and prohibitions of the community the contrary achieves a personal mysteriousness that translates into the magical and the sacred." (Lewis 1992: 140) It must be noted that this "breaking the customs" and violating taboos are sanctioned only insofar as the individual that actually breaks the custom is indeed a *heyoka*, even though some, as revealed below, still find them objectionable. In other words, these institutionalized rebels, through their actual breaking of the rules, are enforcers and perpetuators of the holy—in order for the clowns to fulfill their role or obligations *as heyoka*, they break the rules.

The *heyoka*, according to John Fire Lame Deer, "is an upside-down, backward-forward, yes-and-no-man, a contrary wise...Being a clown brings you honor, but also shame" (Lame Deer & Erdoes 1972: 236). When a contrary is asked a question, he will answer in opposites, they have been known to wear next to nothing in cold weather and wear far too much in hot weather, and they've been known to ride horses backwards in battles. Such is the life of a contrary. Traditionally,

heyokas tended to dress in shabby clothes; some were reported to simply wear burlap sacks with eyeholes cut out in them. Masks the clowns sometimes wore/wear have exaggerated phallic noses, and their actions are typically full of sexual innuendo and flat-out mock performance of sexual acts. They were known to have lived in tipis with the tarps or skins on the *inside* with the frame exposed to the elements.

On the one hand, Feraca (1998) notes that "Lakotas do not consider clowns an especially amusing or comical group. In fact, their very presence constitutes a potential danger, particularly at religious functions" (50). Such "potential dangers" range from causing poor weather, a reversal/nullification of a particular rite, etc. On the other, as an insider, Lame Deer observes that "the no-account people and winos make fun of the *heyokas*, but the wise old people know that the clowns...protect the people from lightning and storms and that his capers, which make people laugh, are holy. Laughter—that is something very sacred" (Lame Deer & Erdoes 1972: 237). Their receptions among the Sioux are obviously mixed, yet their impact on individuals and social gatherings alike, is unquestionable. On a practical level, the clown acts as a catalyst to bring psychological and emotional balance to others. Henry Crow Dog explains that

White people depict us in their books and movies as stony-faced folks with the corners of our mouths turned down, always looking grim. But we are not like that. Among ourselves we joke and laugh. With all that suffering and poverty our people can survive only by laughing at misfortune. That's why we have the sacred clown, heyoka...he makes us laugh through our tears (Crow Dog & Erdoes 1995: 60).

Black Elk mused that "When people are already in despair, maybe the laughing face is better for them; and when they feel too good and are too sure of being safe, maybe the weeping face is better for them to see. And so I think that is what the heyoka ceremony is for" (Neihardt 2000: 145). This balance is maintained by the clowns themselves, who in turn act as an emotional equalizer for the people; through his "extreme" acts, the clown moderates the excesses of others.

One formally becomes a contrary when he (or she, rarely) dreams of the Thunderbirds (*Wakinyan*) or one of their underlings' representations ranging from dragonflies, white animals such as horses, dogs, snowbirds, frogs, and hailstorms (Walker 1991: 101). According to Thomas Tyon, "the *Wakinyan* often command the man who dreams of them to do certain things" which are typically quite embarrassing for the initiate. If one fails to do whatever they are instructed to do by the

Thunderbirds (or lieutenants), "the *Wakinyan* will surely kill them" by lightning strike (155-156). In sum, the Thunderbirds will "gift" the dreamer with a scenario that he must act out in public—in some cases, it is claimed that the conditions and people that are in the dream are also revealed making the act quite specific in terms of timing.

According to Lame Deer, "A *heyoka*, if he follows his dream to the letter, has to dress up as he saw himself in his vision". Such instructions in the dreams, according to written accounts, are to be carried out in everyday life. While there are specific behaviors a *heyoka* must fulfill, being a clown is more of a *lifestyle*, for lack of a better word; one does not become a clown only during specific times, but rather are perpetually in a state of behaving in opposites and making others laugh. In the case of the highly organized rites of the Sioux, the clowns typically cause mass disruption by chastising rite participants and the audience in their usual manner. However, in the clowns' efforts to bridge the sacred and quotidian, "sacred" and highly individualized rites are performed as almost daily prescriptions, rather than an elaborate ritual. For instance, Lame Deer himself, in accordance to his dream, became a *winkte* or cross-dresser by the name of "Alice Jitterbug" who performed as a rodeo clown. Though not what one would immediately assume to be a "religious act", provoking laughter in a large audience under the prescription of the Thunderbirds, is, however. There is, however, a specific clown ceremony (*heyoka kaga*) for inductees.

There are two clear variations of the *heyoka kaga*. Holy Dance, an Oglala, describes the variations as a highly formalized rite which may be due to the initiate's being a woman. After the obligatory *inipi* (sweatlodge purification), eight *heyokas* enter a tipi to get dressed in their respective regalia, while the clowns conducting the ceremony remain in the *initi* (actual lodge). Two of the eight clowns leave the first tipi, only to walk a few yards to a second tipi, where they will remain singing for the rest of the ritual. More highly organized dancing, singing, and prayer occur, until a pot of boiling water with a dog in it is ready. Prior to this, the dog must be killed immediately to reflect the sudden nature of lightning (DeMallie 1984: 232). The initiate plunges her hands into the pot, without scalding, and pulls the dog's head out. *Heyoka tapejuta*, or "clown medicine" (*Malvastrum coccineum*), prevents the clowns from getting scalded. *Malvastrum coccineum* is commonly known as red false mallow or prairie mallow. It is a grey "moss root" (Buechel & Manhart 2002: 83). It is chewed up and spread over the hands and arms in order to tolerate the boiling water, although according to the Sioux, it is only functional on a true *heyoka*. Holy Dance states that if "anyone in the crowd belong[s] to

that [*heyoka*] organization, they will rush toward her taking the dog head, which is very hot." They all return to the first tipi, concluding the ceremony (Lewis 1992: 145).

Some sources claim that the vision of the *heyoka* dictates how long one must serve as a clown, while others indicated there is a level of personal choice involved. Either way, a ceremony is held to "formalize" the *heyoka*'s transition from being a clown to becoming either a different sort of practitioner or reintroduced to "normal" life. As in the *heyoka kaga*, a sacred dog is boiled and the clown ending his "term" plunges his hands into the boiling water and pulls the dog's head out, tossing it to someone who is not a *heyoka*. According to Lame Deer, the clown runs, "guided…by the spirit, by what he has dreamed, to whom to give this dog's head. He will give it to a certain sick man or woman [who] quickly [throws] it to another man." Non-clowns toss the head around, getting scalded, while the other clowns gather the rest of the dog meat with their bare hands. The meat then is distributed to the "poor and the sick. [The clown's] dreams told them whom to give it to. That's a good medicine" (Lame Deer & Erdoes 1972: 245). This version is much less structured and formal than the initiation into "*heyokism*".

The logic of performing the *heyoka kaga* and the rite which terminates one's service as a contrary is a perfect reflection of the *heyoka's* nature. One enters, formally through the rite, his or her "clownship" in order to serve the *Wakinyan*. When one's term is nearly complete, they perform (still as clowns) the *heyoka kaga* once again. Obviously, the opposite of *ending* one's service as a contrary would be *beginning* one's service, hence the near exactitude of rites—the only difference being the level of formalization. This may, however, simply be due to individual variation in ritual practice.

Being contraries, the clowns must perform certain aspects of various ceremonies backwards, or simply act ridiculously during sacred rites. The actual *heyoka* ceremony itself illustrates the nature of these clowns. John Plant notes that, in conjunction with the contrariness of the *heyoka*, "Die Musik für die Zeremonie [ist] entweder dumpf oder unharmonisch. Man konnte sie als 'verkehrte Musik' bezeichnen." How is this "reverse" or anti-music possible? He observes that "Eine gedämpfte Trommelmusik wurde auch erreict, indem man mit Stöcken aif ein am Boden aufgespanntes Fell schlug" (Plant 1994: 95).[1]

As the *Wakinyan* govern the clowns, there are a number of common threads throughout the literature including a number of associations that are made between the clowns, the theme of opposites/dichotomies, the Thunderbirds, humor, shock, creativity,

procreation, and specific animals. The question begs: why are these associations made and/or observed?

Non-Human Elements of the Environment

As previously mentioned, dreaming of lightning is a sure sign of one's "assignment" of being a heyoka. Depictions of lightning look like a single bolt, which forks into two (sometimes feathered) branches (Fig. 2). Lame Deer notes that the forked lightning bolt represents the dualistic nature of the clowns, as the power of the Thunderbirds "is the power of the hot and the cold clashing way above the clouds...It is good and bad" (Lame Deer & Erdoes 1972: 240).
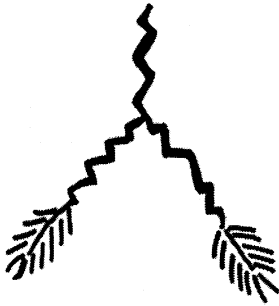
Figure 2. *Wakinyan* (Illustration Adapted from Lame Deer & Erdoes, 1972: 240).

Clearly, the occurrence of lightning and thunder is startling, but we do not associate the nature of lightning to be *humorous* per se. The logic is the same, however, with the replacement of elation with fear. All illustrations of lightning are illustrated with forked ends, emphasizing both the dual nature of the clowns as well as their reception among non-clowns. Here, again, we have the shock or clash of opposites—as illustrated by both Koestler (Fig. 3) and the Lakota (Fig. 2)—coming from a single source.
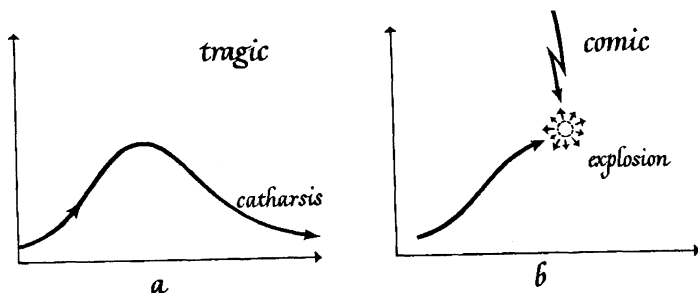
Figure 3. Model of the Tragic vs. Comedic Experience
(Koestler 1967: 34)

Koestler compares the experience of witnessing a tragic presentation with that of a comedic presentation. The emotional buildup of the tragedy (and those that experience it) peaks smoothly and concludes by tapering. The comedic moment, however, is a clear bolt; the experience is explosive and concludes with reflexive laughter. Once again, this explosion is a result from an unexpected turn (Fig. 2).

Another lieutenant or related entity of the *Wakinyan* is the common barn swallow (*Hirundo rustica*). As a means of morphological comparison, the forked tail of the swallow parallels quite well with the illustration of lightning. However, simple observation also reveals that the flight pattern of these small birds is as erratic and zigzagged as the lightning bolt. Particularly when they are feeding, swallows do not fly in a linear fashion, but take sudden, quick, and seemingly aimless turns, unlike most avian species. According to Lakota observations swallows make a significant presence before a thunderstorm (Brown 1992: 45). This relationship/observation is also established in Lakota cosmological stories. For instance, in George Sword's telling of the story "A Myth of the Lakotas as It Is Told in Their Winter Camps", a number of brothers are afraid to press forth on their journey as they approach a range of mountains with an emerging storm. A swallow informs them that he is the messenger of the *Wakinyan* (Walker 1983: 81). It should be noted that the bat actually seems not to be associated or directly related to the *Wakinyan*. The bat is an aide to Yata, a blind giant that lives in the mountains. However, it should be noted that Yata is described as "not wise and often does things foolishly" by Red Rabbit (Walker 1983).

This reveals a clear relationship between both the form and logic of humor and the Thunderbirds and swallows. Miller discusses the "logic of proteanism" with his investigation of unpredictable

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behavior as an evolutionary adaptation: "Predictability is punished by hostile animals capable of prediction. Instead of fleeing in a straight line, rabbits tend to zigzag erratically—a protean escape behavior that makes rabbits much harder to catch. Like the moth, the rabbit probably evolved special brain mechanisms to randomize its escape path" (Miller 2000: 398). Compare this with Lame Deer's recollection of one contrary who was being chased by some "cowboys on horseback". He says that "they were trying to lasso him, but they never came close. He was running in front of them, and sometimes he would turn somersaults. Sometimes he would turn around and run backward, and when they got near him he'd turn around once more and get away." Lame Deer continues to note that the cowboys gave up, left, and the *heyoka* turned out to be "an old man in his seventies...An old white-haired grandfather, but the thunder-beings had given him the power to run fast."(Lame Deer & Erdoes 1972: 248)

A *heyoka* is seen as an impersonator of a form of a "Supernatural" or "Mystery" in the pantheon of Lakota cosmology. According to one source, the *Wakinyan* appears occasionally as *Heyoka*, a "God" who is an "amiable giant." In one story, the Thunderbird appears as this giant upon the swallow fulfilling the role of being a clown. Once the swallow sees this, he is no longer required to impersonate the deity (Walker 1991: 318, 221). Reverend Eugene Buechel, a Jesuit who worked with and among the Lakota defined *heyoka* as "the name of a Dakota god called by some the anti-natural god. He is represented as a little old man with a cocked hat on his head, a bow and arrows in his hands and quiver on his back. In winter he goes naked, and in summer he wraps his buffalo robe around himself" (Buechel 1970: 274). No other practitioner is required to impersonate a "Mystery", yet the clowns are specifically required to carry out their orders as a "*Heyoka* impersonator", or they suffer the consequences. This, however, is not typical of only clowns, as "public displays of ritual [or vision] were required before a man could control the powers that had been given him" (DeMallie 1985: 88). White animals in general represent a natural anomaly considering how rare albinism and white coloring occur—particularly on the Plains. If *Heyoka* is described as an "anti-natural god", the affiliation with "unnaturally" colored animals makes perfect sense.

Here is another clear association between these relationships with that of creativity in all of its forms. Koestler has three criteria of the "humorist's technique" and the creative enterprise in general: originality, emphasis, and implicitness (Koestler 1967: 333). The relationship between humor and creativity should be quite clear; humor is hinged on novelty or sudden violations of intuition and creativity is

the progression from the extant to the novel. This is reflected in most trickster literature, and Lakota stories are no exception.

In Walker's account of the Lakota creation story, "*Inyan* [the stone] has two offspring. The older was brought forth full-grown from an egg in an *antinatural* manner by *Wakinyan*. His name was *Ksa* and he was the God of wisdom but he become [sic] the imp of mischief and his name is *Iktomi*". The second offspring, interestingly enough, is *Iya* "who is utterly evil and the chief of all evil beings" (Walker 1991: 51). Iktomi the Spider-man is described as being "the size of an ordinary man. His body was big and round like a bug. His legs and arms were slim like a bug's" (1991: 101). Other accounts claim that "Spiders were made from the blood of ancient people who died in a great flood. Ikto can be powerless, a nobody, lower than a worm. But he can also be a creator, more cunning than humans...He can transform himself. He is a mischief maker. He is good and bad at the same time—quick thinking, taking advantage of every opportunity" (Erdoes & Ortiz 1998: xv). Recall Miller's definition of "proteanism"—Iktomi reflects unpredictability and shape shifting.

Iktomi is attributed with creating language and giving names to people and animals as well as arrowheads and war clubs (Brown 1992: 47; Walker 1991: 106). Old Horse recalls that "*Iktomi* is *heyoka* for he talks with the Thunderbird. He will not play his tricks on the *heyoka*" (1991: 129). Among the many *Iktomi* trickster tales, there are three main qualities that are fundamental to him and trickster figures in general: voracious sexual and nutritional hunger, and pulling pranks on others. Here, Iktomi's sexual exploits (i.e. constantly trying to "create") relate quite nicely, once again, to the relationship between creativity and humor as illustrated by Koestler. Pranks require baiting others (much like a punch line) to behave in some way in order to trick them (violation of intuitions). Lewis Hyde notes:

Trickster is a boundary-crosser. Every group has its edge, its sense of in and out, and trickster is always there...We constantly distinguish— right and wrong, sacred and profane, clean and dirty, male and female, young and old, living and dead—and in every case trickster will cross the line and confuse the distinction. Trickster is the creative idiot, therefore, the wise fool, the gray-haired baby, the cross-dresser, the speaker of sacred profanities (Hyde 1998: 7).

Hyde also brings up an interesting fact which parallels both the role of the *heyoka* and the sacred clown himself: namely, the trickster transcends morality.

He notes, "When someone's sense of honorable behavior has left him unable to act, trickster will appear to suggest an amoral action, something right/wrong that will get life going again. Trickster is the mythic embodiment of ambiguity and ambivalence, doubleness and duplicity, contradiction of paradox" (1998: 7). It would not be unreasonable to see the "amorality" and the trickster's transcendence of the good/bad dichotomy contained within the illustration of lightning. Moreover, Iktomi's fundamental conflict—being perpetually "hungry", yet being responsible for the creative experience—is clear within the *Wakinyan* model. Here, the oft-quoted statement of Black Elk offers even more significance: "when a vision comes from the thunder beings...it comes with terror like a thunder storm; but when the vision has passed, the world is greener and happier; for wherever the truth of vision comes upon the world, it is like a rain. The world, you see, is happier after the terror of the storm" (Neihardt 2000: 145). This is also reflected in Lakota thought as Iktomi is responsible for bringing death to the world in order to make room for more creation (Brown 1992: 48).

Anthropologist Victor Turner (1995) states that "nothing underlines regularity so well as absurdity or paradox...nothing satisfies as much as extravagant or temporarily permitted illicit behavior" (176). In the *liminal* state, in which the clowns clearly are, he or she functions as a preserver of the rites and ceremonies through his absurd acts and interference. Turner states that "liminal entities...are betwixt and between the positions assigned and arrayed by law, custom, convention, and ceremonial" (1995: 99). Moreover, "if liminality is regarded as a time and place of withdrawal from normal modes of social action, it can be seen as potentially a period of scrutinization of central values and axioms of the culture in which it occurs" (1995: 167). Obviously, the contraries are indeed in a state of "withdrawal from normal modes of social action", whereas the times spent "scrutinizing" is enacted in the form of outright dissidence. Here is where the fundamental contradictory nature of the clown reveals itself.

The *heyoka*, being under the influence of the *Wakinyan* have clear associations with the pipe and what it represents. When used in a ceremonial manner, the pipe is meant to uphold and maintain the truth. Black Elk states that when "you are about to put this pipe to your mouth, you should tell us nothing but the truth. The pipe is *wakan* [sacred] and knows all things; you cannot fool it." He also states that the *Wakinyan* "guards the pipe." By extension, then, the clowns, through their opposite nature, reinforce and uphold truth by consciously doing and saying exactly the opposite. The connection between the Thunderbirds and Truth is also embedded in a statement made when

what one says is challenged or a promise is made: *"Na ecel lila Wakinyan agli—wakinyan namahon"* (Lame Deer & Erdoes 1972: 241).[2]

Lakota thought clearly reflects an observed relationship with the internal (mental) and external environments. While lightning may occur "out there" it also, in a sense, occurs within. The relationships between features of the internal (mental and social) environment such as wisdom, truth, and mischief and protean behavior are reflections of features of the external environment as seen in storms, swallows, spiders, and other anomalies.

Toward a Computational Account of Humor

There have been very impressive recent attempts to understand the computational (i.e. on a computer) recognition of particular humorous statements (Taylor 2004). One of the most remarkable things, however, about *human* processes of humor is that it is a cognitive reflex ("objective") but requires the constraints of the sense of humor (SoH) in order to trigger the reflex ("subjective"). How can we account for a universal, deep-rooted cognitive reflex and the individually differentiated, schematic/surface differences? One of the merits of the modular theory of mind is the fact that it bridges the age-old divide between biology (universal) and learned information (individual). According to modularity theory, the mind/brain can be divided *conceptually* into various functions or faculties. Fodor (1983) thus defines "faculty psychology" as the "view that many fundamentally different kinds of psychological mechanisms must be postulated in order to explain the facts of mental life" (1). In other words, there are a number of innate, cognitive mental mechanisms that are responsible for *particular* types of information (rather than all or many types of information) processing or domain-specific (Hirschfeld & Gelman 1994). The remaining discussion in this essay focuses specifically on mental functions, not the brain as a biological structure. Regardless, when discussing mental activity or faculties, we can assume safely, as does Chomsky, that all things mental "ultimately lead to the brain", hence the term "mind/brain" (Chomsky 1980: 5).

Fodor (1998) renders a faculty to be modular if it has four distinct criteria: encapsulation, inaccessibility, domain specificity, and innateness (127-128). Encapsulation, or "informational encapsulation" is the idea that modules have hardwired information within them, which informs perception and that they cannot be altered by outside information (127). In other words, the limits of whether or not these "mental organs" can work in tandem is regulated by other features of

the mind/brain rather than conscious effort. "Inaccessibility" refers to the idea that while incoming information cannot alter the state of or the information contained within the target module (encapsulation) itself, the target module cannot inform outside information—in other words, "it is supposed not to be available for the subject's voluntary report" (127).

Clearly there is an innate component to humor and laughter (see Gervais & Wilson in press for a thorough evolutionary discussion of humor and laughter). Children learn to laugh and find things funny on their own; they do not need to be trained to experience humor (quite the opposite, actually). The fact that laughter is reflexive indicates that something is informing us that the incoming stimulus is funny, but it has to successfully pass through our "sense of humor" (Fig. 4). Some of us enjoy dark, visceral humor whereas others find such humor always inappropriate. There are many interesting developmental questions regarding the precise types or nature of a particular sense of humor, but such an investigation is beyond the scope of this essay. Nevertheless, whatever mechanism that causes laughter must be informed, somehow, by both the constraints of the sense of humor and the mechanism (if indeed one exists) that codes incoming information has "funny".
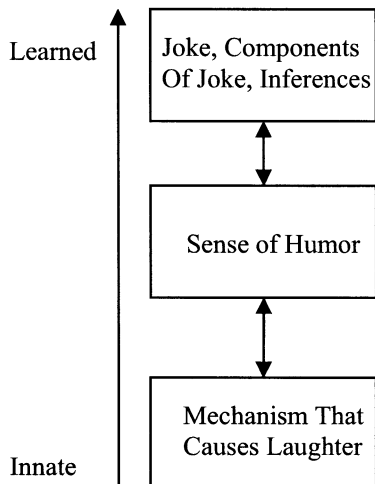

Figure 4. The Relationship between Learned and Innate Information

Tooby and Cosmides investigate the main theoretical difference between behaviorist and nativist/innatist approaches to the mind. They distinguish between what they call the Standard Social

Science Model (SSSM) and the Integrated Causal Model (ICM). The SSSM is "The consensus view of the nature of social and cultural phenomena that has served for a century as the intellectual framework for the organization of psychology and the social sciences and the intellectual justification for their claims of autonomy from the rest of science" (Cosmides & Tooby 1992). Because of this century-long stagnation of development, "the central concept in psychology [has been] learning", rather than innateness or the interaction between nature and nurture.

In other words, the assumption that most behavior is learned, rather than an expression of genetically endowed faculties. And such learning, according to the SSSM, must be "equipotential, content-free, content-independent, general-purpose, domain-general…these mechanisms [of learning] must be constructed in such a way that they can absorb any kind of cultural message or environmental input equally well" (Cosmides & Tooby 1992). The ICM, on the other hand, attempts to locate specific qualities of the mind, their function(s), and under what conditions are they optimal. Quite likely, one's sense (or frame) of humor is partially learned or culturally inherited, but the relationship to the biological basis of humor and the learned sense of humor—and the appropriate stimuli—ought to be clearer.

While specific surface-features of humor-inducing information may be "culturally" specific (e.g. "horny spiders"), the laughing reflex is most certainly genetically determined. It seems that such a mechanism automatically distinguishes between varieties of representations; we do not laugh a just anything. The SoH, I argue, "checks" incoming information in the following grossly general categories: a) intuitive or extant and b) counterintuitive or novel (Fig. 3). Consider the following examples:

1) A man walked down the street and considered buying flowers for his wife.

2) A flower walked down the street and considered buying humans for his wife.

The first is perfectly normal in our society whereas the latter, as far as most can tell, is not. One does not need to be told/taught that flowers do not do such things, but one needs to learn the symbolic gesture of gifting a flower. The knowledge of the fact that people in our culture attribute the gifting of plants with colorful petals as some sign of affection is required to "get" the humor of the joke which is crafted from a reversal of the relationship between man and flowers.

One could conceivably find the idea of a flower walking down the street as humorous as well, but for other reasons (Purzycki 2006). This reversal constitutes Koestler's "bisociative shock" as two frames of reference clash in unexpected ways. However, it is a violation of intuitions because there is a breach of the ongoing process of accessing related material. "A flower walked down the street" may stimulate a number of expected outcomes, but the process of accessing all we know about flowers, walking, and streets entails branching out (intuiting) to particular features we associate with each of these. It is only the moment of "buying humans for his wife" does this access the appropriate association of flowers and the kind gesture of buying them for a loved one. The reversal is the "shock to the inferential system", and thusly produces laughter.

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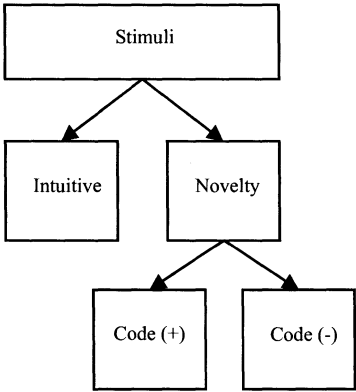
Figure 5. Skeletal Model of Coding

Figure 5 is a skeletal model of how incoming information is coded computationally. The crucial component here is the "novelty" determination. The very nature of the novelty, however, determines what actually follows (e.g. stored better in the memory, triggering of laughter or disgust, etc.). Let us look at another example to illustrate the point: suppose someone were to tell you to "Go Foucault yourself".

Now, there are a number of ways one can take this, given the conditions provided by you, the reader. But keep in mind your mental reflexes. In order to fully "get the joke", a rudimentary understanding of who Foucault is (or those who claim some intellectual allegiance with him), post-modern is/claims to be, and what this sort of work consists of, etc. is imperative. However, if one *does* in fact know/think they know what post-modernism is and as a reflex, rendered the statement inappropriate or felt as though their personal intellectual

paradigm has been affronted, then "humorous" is not quite an accurate term to describe the experience.

When we are confronted with something novel—we do not actively reflect on everything we've experienced in order to consciously determine whether or not something is new. Rather, we immediately react as though the stimulus is—and we are capable of acknowledging its novelty. This trigger explains why, for instance, a joke is no longer humorous once it has already been told; the novelty-detection system renders the stimulus "extant". In the "post-modern" joke, you *immediately* knew whether or not you've heard the joke before (but it may have *sounded* like something you've heard before, which makes it funny), which is yet another interesting facet of the humorous experience; our deep-rooted reflexes become quite accustomed to repeated jokes. Old jokes lose their novelty after a telling or two as the joke becomes integrated into the "intuitive".

Again, while it may be argued that it is ultimately subjective, there are decidedly objective components to humor, its use, and judgment as previously examined. Schematic or surface (learned) differences comprise the basis for judgment between individuals: what one finds funny, another may find intolerable and/or morally corrupt/objectionable. The primary components, as discussed above, are a humorous idea's novelty or violation of intuitions and the automatic coding of "positive". Statements judged intolerable arguably contain the same element, they are simply coded negatively (and elaborated with conscious judgments such as "inappropriate" or "immoral"). Again, the fact that we do not have to recall everything we have previously experienced to know whether something is novel/funny/unacceptable—it is an automatic judgment made by the SoH is an important feature. The detection device requires access to previously internalized information and experience. If a novelty triggers the jolt of humor and is coded positively, we laugh. Koestler notes that *"Humor is the only domain of creative activity where a stimulus on a high level of complexity produces a massive and sharply defined response on the level of physiological reflexes"* (31). Laughter arises as an automatic reflex of computing incoming stimuli as "funny". However, the immediate reaction requires some access to previously acquired information as well as the immediate identification of the stimulus as novel.

It accesses the schematic information we accumulate, evaluates the data according to that previously acquired information and produces a reactionary judgment. It goes without saying that we rarely have to intellectually decide whether or not something is funny—it is a knee-jerk reaction.

Conclusion

The key elements of humor—violation of intuitions, positive reactions, and the cultural stimulation required—provide enough to further develop a computational theory of humor. As the cross-cultural, unified understanding of humor and its related phenomena such as creativity and novelty provide an important starting point, further elaboration of a computational account of humor is rendered easier.

Footnotes

[1] The first part translates: "The music for the ceremony is either vague or unharmonic. One can characterize it as 'reverse music'." The second part translates: "A quiet drumming is attained, while they hit a skin [or drumless drumhead] spread out on the ground with sticks."

[2] This translates roughly as "Thus the winged, and as it really is, thunder comes back—Thunder hears me." This is more or less the English equivalent of "If I am lying, may God strike me down [with a bolt of lightning]".

Acknowledgements

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