

Of Smiling Dogs and Laughing People  
and Why They Can't Tickle Themselves.

November 24, 1975

Number 47

My dog Taffy smiles. It usually happens when I see her after a long absence. As she walks towards me the ends of her mouth curve gently upward, and she really smiles. Taffy is not unique; I've also seen this behavior in another dog.

I've never tried to convince anyone of the fact that dogs *can* smile, or even that animals other than man can smile; and I've never seriously considered the possibility that scientific evidence would support my suspicion that my dog is really smiling--until a few months ago, when I came across an article in the *New York Times Magazine* entitled "An Uncommon Inquiry Into the Nature of a Common Phenomenon."<sup>1</sup>

In the article, Boyce Rensberger, a *Times* science reporter, tries to answer the question, "Why can't people tickle themselves?" He asserts that, "Science has no answer. A diligent search of the medical and psychological literature of the last quarter century has led me to conclude that no respected authority knows why." (As will be seen below, his use of "diligent" is dubious, if not laughable.) So he advances his own solution to the problem, citing data from animal-behavior researchers. In short, he concludes that what appears to be laughter and smiling

in animals is really a fear reaction, and that when humans are tickled their reaction is similar to that of frightened animals--they laugh. When you tickle yourself, there is no threat, no fear--and no laughter.

Rensberger justifies this speculation with the statement that, "Where scientists fear to tread, science writers readily speculate." Although Rensberger's theory seems plausible enough on the surface, one thing bothered me: when my dog smiles it is *not* out of fear. Could Rensberger's "diligent search" of the literature have missed something?

Yes. A follow-up search by ISI<sup>®</sup> staff has revealed much material which is directly relevant to Rensberger's "theory," and much more which, though not directly relevant, is nevertheless fascinating.

As far back as 1873, Charles Darwin<sup>2</sup> noted that in order for tickling to be pleasurable, the following requirements must be met:

1. The tickler must be a familiar person.
2. Someone other than the tickled must do the tickling.
3. The tickled part must be a body part not commonly touched.
4. The touch must be light.

Darwin also observed that, "From the fact that a child can hardly tickle itself, or in a much less degree than when tickled by another person, it seems that the precise point to be touched must not be known."<sup>2</sup> Thus, although Rensberger asserts that science has "overlooked" the self-tickling phenomenon, Darwin considered it over a century ago.

In 1892 Herbert Spencer<sup>3</sup> theorized that laughter is produced when "a large amount of nervous energy, instead of being allowed to expend itself in producing an equivalent amount of new thoughts and emotion which were nascent, is suddenly checked in its flow. The excess must discharge itself in some other direction, and there results an efflux through the motor nerves to various classes of muscles, producing the half-convulsive acts we term laughter."

A similar physiological explanation of laughter was recently reiterated by a researcher who held that, "Tickle, itch and pain all seem to represent the same basic phenomena.... Simply put, a tickle is 'outside' us and we attempt to push away from it, but an itch is 'on' us and we must strike at ourselves to remove it. A pain is 'in' us, and we cannot move away from it."<sup>4</sup>

A large number of studies have investigated the apparently "infectious" nature of laughter, but it seems that they have been used mainly by makers of canned-laughter tapes for television. Predictably, one such study<sup>5</sup> found that audiences rated material accompanied by canned laughter as more amusing than the same material without canned laughter. Another found that canned laughter tends to facilitate recall of specific jokes.<sup>6</sup>

Curiously, various theories have postulated an evolutionary significance for tickling and laughter. One author points out that in some folk traditions, extreme ticklishness serves as "proof of sexual integrity."<sup>4</sup> He suggests that ticklishness is used by nature to protect virgins against rape and sexual advances. Another author, relating adolescent giggling to the emerging sexual drive, concluded that giggling teenage girls are found mainly in upper and middle class families, since in the lower classes "sex is less taboo in adolescence."<sup>7</sup>

Another group of studies, probably beginning with Sigmund Freud's 1905 paper, "Jokes and Their Relation to the Unconscious," explores the symbolic significance of laughter. One author, commenting on the relationship of smoking, coughing, and laughter, observes that laughter is a "reassurance that one exists.... It is the freedom from bad introjects and we feel cleaner and better afterwards."<sup>8</sup>

The theme of laughter as communication is apparent in several studies of laughter in infants and children. One such study found that infants begin smiling in their sleep within 2 to 12 hours after delivery.<sup>9</sup> In another, researchers noted infants' reactions to various undignified stimuli: lip-popping, speaking in a squeaky voice, shouting "boom! boom! boom!," kissing the baby's stomach, tickling the baby's chin, and crawling or waddling in front of the infant. The scientists found that the stimuli eliciting the greatest amount of laughter are those which make the "greatest cognitive demands on the infant." They also suggested that laughter and fear are related:

"When an infant cries he pulls back in the high chair and turns from the stimulus, whereas when laughter occurs the baby maintains an orientation towards the agent, reaches for the object, and seeks to reproduce the situation."<sup>10</sup>

Rensberger's conclusion itself was anticipated a decade ago by Arthur Koestler, who stated, "Tickling a child will call out a wiggling and squirming response, an innate defense mechanism to escape a hostile grip on vulnerable areas which are not normally exposed to attack. But the child will laugh only--and this is the crux of the matter--if an additional condition is fulfilled: it must perceive the tickling as a *mock attack*, a caress in a mildly aggressive disguise. This explains why people laugh only when tickled by others but not when they tickle themselves...."<sup>11</sup>

In fairness, we should remember that Rensberger is neither a scientist, nor, presumably, a trained literature searcher. While most scientists also lack such training they *do* know that a thorough search should precede any serious research. Also, we should bear in mind that his tone was not authoritative, but humorous.

Nevertheless, he naively asserts that, "If any researcher anywhere has investigated the self-tickling phenomenon, he or she must have published the findings in a periodical even more obscure than the *Central African Journal of Medicine*...." Apparently he even failed to stumble upon an article published in 1971 in that obscure journal called *Nature*.<sup>12</sup>

The article, entitled "Preliminary Observations on Tickling Oneself," begins with the question, "Why is it that most people cannot tickle themselves?" Its au-

thors set about answering the question in exemplary objective fashion. They constructed a "tickle apparatus" consisting of a plastic pointer connected to a gear box which guaranteed a standard tickle stimulus. Then they tested 30 subjects in three different conditions: with the experimenter alone controlling the tickle apparatus, with the subject alone controlling the apparatus, and with both controlling it. They report that, "There was no difficulty in confirming experimentally that a self-administered tickle is less effective than an externally administered tickle." More significantly, they concluded that, "The methods used here indicate that the topic is not intractable to experimental treatment, although we have not achieved a final answer."

So while the *Times* reporter was correct in stating that "science has no answer," his accusation that science has completely ignored the tickling phenomenon is unjustified. Science has even produced evidence to support the contention that my dog *does* indeed smile. Whether or not this is learned behavior still needs to be studied: if not why don't all dogs, like most humans, smile.

According to animal behaviorist Konrad Lorenz, the slightly opened jaws and tilted angle of the mouth gives dogs the appearance of laughing. "This 'laughing' is most often seen in dogs playing with an adored master and which become so excited that they soon start panting."<sup>13</sup> Another researcher noted that a chimpanzee was "frequently observed in the process of tickling herself and laughing as a result,"<sup>14</sup> and more recent data indicates that many apes appear to laugh when their armpits are tickled.<sup>4</sup>

Aristotle held that man is the only animal that is ticklish.<sup>4</sup> But J.A.M. Meerloo (who was cited by Rensberger) disagrees, stating that, "All about us we find ample evidence to refute the old adage that laughter is typically human. Horses neigh exuberantly when allowed to run free in the meadow. In other animals comparable reactions on a more primitive level can be observed.... In these animals we discover the rudimentary beginnings of the mimicry of laughter. Laughter and play are the first biological exercises in acquiring distance from the cruder instincts, the first exercise in biological detachment."<sup>15</sup>

Until someone proves otherwise, then, I am convinced that my dog *does* smile—and I know I'm not alone. Even Thomas Mann, in his story "A Man and His Dog,"<sup>16</sup> has described his dog smiling: "...We amuse ourselves, I by tapping him on the nose, and he, by snapping at my hand as though it were a fly. It makes us both laugh. Yes. Bashan has to laugh too; and as I laugh I marvel at the sight, to me the oddest and most touching thing in the world. It is moving to see how under my teasing his thin animal cheeks and the corners of his mouth will twitch, and over his dark animal mask passes an expression like a human smile."

#### REFERENCES

1. Rensberger B. An uncommon inquiry into the nature of a common phenomenon. *New York Times Magazine* 10 August 1975, p. 63.
2. Darwin C. *The expression of the emotions in man and animals*. New York: Appleton, 1873.
3. Spencer H. *The physiology of laughter*. New York: Appleton, 1892.
4. Mintz T. Tickle—the itch that moves; a psychophysiological hypothesis. *Psychosomatic Medicine* 29(6):606-10, 1967.
5. Nosanchuk T.A. & Lightstone J. Canned laughter and public and private conformity. *J. Personality & Social Psychology* 29(1):153-56, 1974.
6. Chapman A.J. Funniness of jokes, canned laughter and recall performance. *Sociometry* 36(4): 569-78, 1973.
7. Sachs L J. On crying, weeping and laughing as defenses against sexual drives, with special consideration of adolescent giggling. *Internat. J. Psychoanalysis* 54:477-81, 1973.
8. Grotjahn M. Smoking, coughing, laughing and applause: a comparative study of respiratory symbolism. *Internat. J. Psychoanalysis* 53:345-49, 1972.
9. Wolff P H. Observations on the early development of smiling. Cited in: Rothbart M K. Laughter in young children. *Psychological Bulletin* 80:247-56, 1973.
10. Sroufe L A & Wunsch J P. The development of laughter in the first year of life. *Child Development* 43:1326-44, 1972.
11. Koestler A. *The act of creation*. Cited in: Fourer R. Give a little giggle (Letter to the editor of the) *New York Times Magazine* 31 August 1975, p. 45.
12. Weiskrantz L. Elliott J & Darlington C. Preliminary observations on tickling oneself. *Nature* 230:598-99, 1971.
13. Lorenz K. *Man meets dog*. New York: Penguin, 1965.
14. Kellogg W N & Kellogg L A. *The ape and the child*. New York: McGraw Hill, 1933.
15. Meerloo J A M. The biology of Laughter. *Psychoanalytical Review* 53:189-208, 1966.
16. Mann T. "A man and his dog." In: *Stories of a lifetime*. London: Secker & Warburg, 1961.