

# GIGGLING TO GUFFAWING

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## LAUGHTER!

Back in the day when our home was filled with bunches of children of all ages, relatives and occasionally displaced friends -- when the deep February snows stranded restless travelers with us, and cabin fever threatened, the Giggle Game trumped it all.

Everyone of every age, condition and temperament abruptly lay in a great circle on the floor, each with her or his head on the belly of the next person – and then, the giggling began – slow and stilted “te-hes” to “te-he-hes”, quickly bursting into bellys-full of laughs, bouncing the heads resting on the bellys and erupting into uncontrollable tear-jerking, roaring, cleansing laughter until we could laugh no more. All tensions purged, the giggles gave every one of us a wonderful fresh start.

As the baby in the high chair teaches, laughter is one of the early human responses.

It matters little who you are, where on our planet or when you were or are born, how old you are, your race, beliefs, culture, sex or talents. If you are human, the gift of laughter is yours.

Laughter connects you with other people, known and unknown. Anywhere, at any time, among any language group on our planet, laughter is understandable by any other humans for just what it is: laughter. “Laughter is instinctive behavior programmed by our genes, not by the vocal community in which we grow up.”<sup>1</sup>

Even among deaf people who use sign language, “(l)laughter punctuates speech, occurring during pauses and at phrase boundaries where punctuation would be placed in a transcript of a conversation. Likewise, laughter punctuates signing among the deaf.”<sup>2</sup>

Although it is now accepted that a particular person has a “signature” laugh produced by her or his particular vocal equipment,<sup>3</sup> in my family, people who knew my maternal grandmother often remarked that when I laughed, they heard her.

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<sup>1</sup> Provine, Robert R. *Laughter, A Scientific Investigation by Robert R. Provine.* NY. Penguin Books. 2000

<sup>2</sup> Provine R.R., Emmorey K. *Laughter Among Deaf Signers.*  
[http://www.ncbi.nlm.nih.gov/pubmed/16891353.](http://www.ncbi.nlm.nih.gov/pubmed/16891353)

Laughter is almost, but not quite, ours alone -- Aristotle, who asserted that people are “the only creatures that laugh”, to the contrary notwithstanding.<sup>4</sup>

Charles Darwin observed that chimpanzees, when tickled or responding to pratfalls, pant with delight.<sup>5</sup> And Jane Goodall agrees but notes that “(c)ommon chimpanzee laughter is not readily recognizable to humans as such....”<sup>6</sup>

Evolutionists Matthew Gervais and David Sloan Wilson postulate that “what separates mammals from reptiles are the raw materials of laughter – play and the ability to communicate vocally.”<sup>7</sup>

Not all mammals laugh, not even so-called “laughing” hyenas. Our beloved wagging dogs and purring cats are showing us something wonderful with their wags and purrs, but it is not laughter.

It is only our nearest relatives: chimpanzees, who share 96% of our DNA,<sup>8</sup> including bonobos (pigmy chimps), as well as gorillas, and orangutans, who, like us, predictably respond to tickling and playing with grins and sort-of chuckles and breathy laugh-like sounds.

Chimps make their laugh sounds while both inhaling and exhaling, panting, really. We humans however, laugh as we exhale, and unlike our great ape relatives, we also can speak, and we can and do speak even while we laugh.

Although chimps, bonobos, orangutans and gorillas respond to pratfalls and tickle one another while voicing “short, repetitive, single-breath pants”<sup>9</sup> which we associate with laughter; human laughter is much, much more. It is rich and robust, powerful and potent, engaging and enriching, utterly amazing.

Although laughter is not linguistic, Dr. Dacher Keltner, psychologist and Director of University of California at Berkeley’s Greater Good Science Center calls laughter a “language unto its own,”<sup>10</sup> “stunning in its diversity and complexity,”<sup>11</sup> and distinguishing such qualities as “derisive laughs, flirtatious laughs, sing-song laughs, piercing laughs, laughs of tension, euphoric

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<sup>3</sup> Keltner, Dacher. *Born to Be Good. The Science of Meaningful Life*, (p. 135). NY. W.W. Norton & Company. 2009.

<sup>4</sup> People are “the only creatures that laugh.” Aristotle. *Parts of Animals – Do We Reign Alone*. (p. 281).

<sup>5</sup> Ode Magazine, (p. 35). August 2009. <http://www.odemagazine.com>

<sup>6</sup> Goodall, Jane. (1986). *The Chimpanzees of Gombe: Patterns of Behavior*. Cambridge, Mass.: Belknap Press of Harvard University Press.

<http://en.wikipedia.org/wiki/Chimpanzee>.

See: Jane Goodall on *What Separates Us from the Apes*. Video at

[http://www.ted.com/talks/lang/eng/jane\\_goodall\\_on\\_what\\_separates\\_us\\_from\\_the\\_ape\\_s.html](http://www.ted.com/talks/lang/eng/jane_goodall_on_what_separates_us_from_the_ape_s.html)

<sup>7</sup> Keltner, Dacher. *Born to Be Good. The Science of Meaningful Life*, (p. 124). NY. W.W. Norton & Company. 2009.

<sup>8</sup> Smithsonian Magazine (pp. 38-40). March 2010.

<sup>9</sup> Keltner, Dacher. *Born to Be Good. The Science of Meaningful Life* (p. 124). NY. W.W. Norton & Company. 2009.

<sup>10</sup> *Id.*, p. 125

<sup>11</sup> *Id.*, p.125.

laughs, barrel-chested laughs of strength, contemptuous laughs that signal privilege and class, and laughs that are little more than grunts or growls.”<sup>12</sup>

The tone and tones of laughter can be powerful communicators: Think of lascivious laughter, to say nothing of the intent and impact of snorts, and barks, and sniggers, and whinnies, or hoots, catcalls, soaring cackles, sinister hisses, shrieks of laughter, in addition to classic tee-hee-hees.

Beyond the intonations, ranges, postures and vocal qualities, under full-tilt laughter, one’s whole body can be overtaken and one can feel everything going soft, collapsing. Tear bursts and paroxysms, even deep sighs, are not uncommon.

Speaking of laughter and our bodies, back in the 1970’s Norman Cousins, faced with the challenges of arthritis, published bestsellers *Anatomy of an Illness*, followed by *The Healing Heart*, urging the therapeutic effects of laughter – instigated for him by the Marx Brothers -- along with mega doses of Vitamin C, and positive thinking. “...(T)en minutes of genuine belly laughter had an anesthetic effect and would give me at least two hours of pain-free sleep,”<sup>13</sup> he said. These bestsellers taught the public that laughter releases endorphins and by activating the body’s opiate receptors, endorphins cause an analgesic effect and lessen pain. Although the efficacy of laughter as a healer has not been scientifically demonstrated, Cousins’ ideas have had staying power with the public. Discovery Channel’s Dr. Know recommends “a daily dose of chocolates and a daily dose of chuckles.”<sup>14</sup>

“Laughter is the best medicine” is an old piece of folk wisdom still brightly heard in the land. Yet, Robert Provine, who presents himself as “the world’s leading scientific expert on laughter” questions whether it is laughter or humor which does the trick.

And yet, among us humans, laughter shows not only its bright and efficacious sides but, sometimes, its dark sides. Summer carnivals and Halloween Spook Houses feature diabolical laughter, wicked witches cackle, scary space creatures hiss and shriek, bullies laugh to humiliate, and “torturers at Abu Ghraib were heard to laugh at their victims.”<sup>15</sup>

Franco-Czech writer Milan Kundera, in his powerful work, *The Book of Laughter and Forgetting*<sup>16</sup> uses the devil’s laugh to “denote the absurdity of things” and the angels’ laughs to stand for beauty and to bring “lovers, friends and comrades together in common purpose.”<sup>17</sup>

“I said to my sister or she said to me, come over, shall we play laughter? We stretched out side by side on a bed and began, by pretending, of course. Forced laughter. Laughable laughter. Laughter so laughable it made us laugh. Then it came, real laughter, total laughter, taking us into its immense tide. Bursts of repeated, rushing, unleashed laughter, magnificent laughter, sumptuous and mad....And we laugh our laughter to the infinity of laughter....O laughter! Laughter of sensual pleasure, sensual pleasure of laughter; to laugh is to live

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<sup>12</sup> *Id.*, p. 125.

<sup>13</sup> Cousins, Norman. *The Healing Heart*. NY. Norton, 1983; *Anatomy of an Illness*. NY. Norton, 1979.

<sup>14</sup> <http://health.discovery.com/videos/dr-know-laughter.html>

<sup>15</sup> Keltner, Dacher. *Born to Be Good. The Science of Meaningful Life* (p. 136). NY. W.W. Norton & Company. 2009.

<sup>16</sup> Kundera, Milan. *The Book of Laughter and Forgetting*. NY. Harper. 1994.

<sup>17</sup> *Id.* at pp. 87, 77-106; 215-262. Leclerc, Annie. *Parole de femme*. 1976.

profoundly.” ... Kundara explains: “The two sisters...are not laughing about anything in particular, their laughter has no object, it is the expression of being rejoicing in being...”<sup>18</sup>

Although we have all laughed alone, laughter is primarily a social response, and it often trumps whatever else is going on. Victor Borge put it well: “Laughter is the shortest distance between two people.” Dacher Keltner cites estimates that laughter is thirty times more likely to occur around others than in isolation.<sup>19</sup> This may help explain why laughter emerged in the evolution of humans, inviting fruitful interaction and attachments.

Some propose that laughter is “the behavioral output of the experience of humor.”

The nature of jokes includes coherence, incongruity, and surprise. For example, “Do you date within your species?” or, “You know there is a problem with the education system when you realize that out of the 3Rs only one begins with an R.”<sup>20</sup>

Yet gelotologist (gelotology is the study of humor and laughter) and neuroscientist Robert R. Provine’s research showed that more than 80% of laughter was not a response to humor at all, rather it was responses to bland statements like these: “I see your point.” “Why are you telling me this?” “Are you sure?” I was surprised that Dr. Provine found that conversation without any humor provoking the laughter was the rule; rather, humor was the exception.<sup>21</sup>

Of course, not all forms of humor yield laughter. Consider satire.

Canned laughter began in 1922 in a live radio broadcast by vaudeville star Ed Wynn who was having difficulty performing on an empty stage with no feedback. It morphed into laugh tracks for sitcoms and Muzak.<sup>22</sup>

We should note that “Holy laughter” is common in some Pentacostal and charismatic churches, relying, perhaps, on Psalms 126:2 “Our mouths were full of laughter and our tongues sang aloud for joy.”<sup>23</sup> Laughing revivals are, in America, said to be gaining popularity.

But that’s not all. In 1962 there was a 16 day long “laugh epidemic” at a girls mission school in what is now called Tanzania affecting 95 of the 159 students. When some of the girls went home to Nshamba, 217 of 10,000 villagers joined the epidemic. It spread like wildfire, affecting only females. Over the next 2½ years other laugh epidemics, all connected to the first, occurred, closing more than 14 schools and affecting about 1,000 people around Lake Victoria. Not surprisingly, a psychogenic-hysterical origin of the epidemic was established.<sup>24</sup>

Dr. Jo-Anne Bachorowski of Vanderbilt University<sup>25</sup> has investigated human laughter using acoustic analysis of thousands of “cackles, hisses, breathy pants, snorts, grunts, and songlike laughs with mellifluous acoustic structure.”<sup>26</sup> Among her discoveries was that men are

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<sup>18</sup> Kundara, Milan. *The Book of Laughter and Forgetting*. ( p. 79). NY, Harper. 1994.

<sup>19</sup> Keltner, Dacher. *Born to Be Good. The Science of Meaningful Life*, (p. 127). NY. W.W. Norton & Company. 2009.

<sup>20</sup> Dennis Miller, comedian.

<sup>21</sup> Keltner, Dacher. *Born to Be Good. The Science of Meaningful Life*, (p. 133). NY. W.W. Norton & Company. 2009.

<sup>22</sup> Provine, Robert R. *Laughter*, (pp.140-141). NY. Penguin Books. (2000)

<sup>23</sup> Psalms 126:2.

<sup>24</sup> *Tanganyika Laughter Epidemic*.

[http://en.wikipedia.org/wiki/Tanganyika\\_laughter\\_epidemic](http://en.wikipedia.org/wiki/Tanganyika_laughter_epidemic).

<sup>25</sup> [www.psy.vanderbilt.edu/fac/bachorowski/laughter.htm](http://www.psy.vanderbilt.edu/fac/bachorowski/laughter.htm).

<sup>26</sup> Keltner, Dacher. *Born to Be Good. The Science of Meaningful Life*, (p. 130). NY. W.W. Norton & Company. 2009.

much more likely than women to snort and grunt their laughs. Women, however, were found by Dr. Robert Provine, to laugh more often than men.

Through her analytical research, Dr. Bachorowski discerned how laughs play off of one another and she compared this phenomenon to instruments in an orchestra. Among friends, she noted, laughs quickly become “overlapping, intertwined sounds whose acoustic qualities mimic each other – laughter which unites people....”<sup>27</sup>

Then, Dr. Bachorowski made a discovery of particular importance: she found that “laughs occupy a part of acoustic space that is different from vowel sounds like “ahhh” and “eee”.<sup>28</sup> “English speaking people may write laughter as “ha ha ha” or “hee hee hee,” but the acoustic structure of laughter is distinct from that of the vowels we use to represent laughter.”<sup>29</sup>

Particular areas of our “vocal apparatus produce the vowels and consonants that make up human speech.”<sup>30</sup> However, Dr. Bachorowski discovered that laughter originates from another “register” of that apparatus, “another form of output – laughter – with different origins and functions than human speech.”<sup>31</sup>

This has given heft to the -- to me -- fascinating, assumption that laughter actually preceded language in human evolution. “This is significantly earlier than when humans started to put together vowels and consonants in phonemes”<sup>32</sup> -- perceptually different units of sound that distinguish one word from another – “and those phonemes into words and sentences.”<sup>33</sup> That this “special realm of sound is reserved for laughs”, and that “it is an ancient one that predates language,” found in old areas of the human nervous system, Dr. Keltner compares to “the confines of a circus or theater, a social realm for acts of pretense and the imagination.”<sup>34</sup>

Recent neuro-scientific data on laughter, summarized by Dr. Willibald Ruch of the University of Zurich, yields a similar conclusion about the early appearance of human laughter in evolution.<sup>35</sup> Ruch’s studies suggest that when humans laugh, it is the sleeping and breathing area of the brain, the pons, and other subcortical limbic areas of the brain and brainstem that respond. The limbic system controls basic emotions and instinct.<sup>36</sup> According to Dacher Keltner, “These areas of the brain are much older evolutionarily than the cortical regions involved in language, suggesting that the deeper meaning of laughter is intertwined with breathing.”<sup>37</sup> And this lends support to the proposition that long before we humans spoke even rudimentary language, we laughed.<sup>38</sup>

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<sup>27</sup> Id. at 131.

<sup>28</sup> Id. at 131.

<sup>29</sup> Id. at 131.

<sup>30</sup> Id. at 131.

<sup>31</sup> Id. at 131.

<sup>32</sup> Keltner, Dacher. Born to Be Good. The Science of Meaningful Life, (p. 131). NY. W.W. Norton & Company. 2009.

<sup>33</sup> Id. at 131.

<sup>34</sup> Id. at 139.

<sup>35</sup> Ruch, Dr. Willibald. p. 131.

<sup>36</sup> Keltner, Dacher. Born to Be Good. The Science of Meaningful Life, (p. 132). NY. W.W. Norton & Company. 2009.

<sup>37</sup> Id. at 132.

<sup>38</sup> Provine, Robert. “Contagious Laughter: Laughter is a Sufficient Stimulus for Laughs and Smiles.” (pp. 1-4). *Bulletin of the Psychonomic Society*. 30 (1992).

Like yawning, laughter is contagious, which helps account for its social aspects. “Laughter spreads to others, it washes over them, sticks in people like darts, it fills rooms with a certain quality, it prompts others to begin laughing for no reason intelligible to the conscious mind.”<sup>39</sup>

Laughter may be induced, as in our family Giggle Game, or in response to an *I Love Lucy* laugh track. Recent research suggests it is contagious because “when we hear others laugh, mirror neurons represent that expressive behavior and quickly activate action tendencies and experiences that stimulate the original laugh in the listener’s brain. When we hear others laugh, this system of mirror neurons acts as if the listener is laughing.”<sup>40</sup> Neuroscientists at Imperial College London and University of College London posit that both laughter and yawning depend on mirror neurons.<sup>41</sup>

Best of all, you burn more calories when you laugh.<sup>42</sup> And there is always Sebastien Gendry’s American School of Laughter Yoga!<sup>43</sup>

Finally, whatever the span and content of our lives may be, the fact is that each day when we wake up, we are going to be spending a day of our life. As beautiful music does, laughter can capture and envelope us in a wondrous space of that precious time. As comedian Milton Berle said, laughter is “an instant vacation.”<sup>44</sup>

Our capacity to experience laughter, our own laughter and that of others, momentarily erases the “encumbrances, burdens, and gravity of the world”<sup>45</sup> – it is rather like the hot fudge on our sundae, the pop in the popcorn, the icing on the cake.

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<sup>39</sup> Keltner, Dacher. Born to Be Good. The Science of Meaningful Life, (p. 127). NY. W.W. Norton & Company. 2009.

<sup>40</sup> Keltner, Dacher. Born to Be Good. The Science of Meaningful Life, (p. 134). NY. W.W. Norton & Company. 2009.

<sup>41</sup> Ode Magazine (p. 35). August 2009. <http://www.odemagazine.com>.

<sup>42</sup> Ode Magazine (p. 48). August 2009. <http://www.odemagazine.com>

<sup>43</sup> <http://www.laughteryogaamerica.com/>

<sup>44</sup> Keltner, Dacher. Born to Be Good. The Science of Meaningful Life, (p. 131). NY. W.W. Norton & Company. 2009.

<sup>45</sup> Id. at 139.

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