



Feature Article

## Chuckles and Wacky Ideas

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Another big group of dolphins had just surfaced alongside our moving vessel —leaping and splashing and calling mysteriously back and forth in their squeally, whistly way, with many babies swift alongside their mothers. And this time, confined to just the surface of such deep and lovely lives, I was becoming unsatisfied. I wanted to know what they were experiencing, and why to us they feel so compelling and so—close. This time I allowed myself to ask them the question that for a scientist is forbidden fruit: Who are you? Scientists usually steer firmly from questions about the inner lives of animals. Surely they have inner lives of some sort. But like a child who is admonished that what they really want to ask is impolite, a young scientist is taught that the animal mind—if there is such—is unknowable. Permissible questions are “it” questions: about where it lives, what it eats, what it does when danger threatens, how it breeds. But always forbidden—always forbidden—is the one question that might open the door to the interior: Who? There are good reasons to avoid so fraught an inquiry and the cans of worms such a door could open. But the barrier between humans and animals is artificial, because humans are animals. And now, watching these dolphins, I was tired of being so artificially polite; I wanted more intimacy. I felt time slipping for both of us, and I did not want to risk having to say good-bye and realizing that I’d never really said hello. During the cruise I’d been reading about elephants, and elephant minds were on my own mind as I wondered about the dolphins and watched them pacing fluidly and freely in their ocean realm. When a poacher kills an elephant, he doesn’t just kill the elephant who dies. The family may lose the crucial memory of their elder matriarch, who knew where to travel during the very toughest years of drought to reach the food and water that would allow them to continue living. Thus one bullet may, years later, bring more deaths. Watching dolphins while thinking of elephants, what I realized is: when others recognize and depend on certain individuals, when a death makes the difference for individuals who survive, when relationships define us, we have traveled across a certain blurry boundary in the history of life on Earth—“it” has become “who.” “Who” animals know who they are; they know who their family and friends are. They know their enemies. They make strategic alliances and cope with chronic rivalries. They aspire to higher rank and wait for their chance to challenge the existing order. Their status affects their offspring’s prospects. Their life follows the arc of a career. Personal relationships define them. Sound familiar? Of course. “They” includes us. But a vivid, familiar life is not the domain of humans alone. We look at the world through our own eyes, naturally. But by looking from the inside out, we see an inside-out world. This book takes the perspective of the world outside us—a world in which humans are not the measure of all things, a human race among other races. To understand anything, really, one must go deep, to the roots. In our estrangement from nature we have severed our sense of the community of life and lost touch with the experience of other animals. So while I went in search of particular “who” animals,

I delved into new findings about thought, emotion, and consciousness that apply to many animals. And because everything about life occurs along a sliding scale, understanding the human animal becomes easier in context, seeing our human thread woven into the living web among the strands of so many others. This project differs from other “animal thinking” books in one fundamental way. I’d intended to take a bit of a break from my usual writing about conservation issues, to circle back to my first love: simply seeing what animals do, and asking why they do it. I traveled to observe some of the most protected creatures in the world—elephants of Amboseli in Kenya, wolves of Yellowstone in the United States, and killer whales in the waters of the Pacific Northwest—yet in each place I found the animals feeling human pressures that directly affect what they do, where they go, how long they live, and how their families fare. So in this book we encounter the minds of other animals and we listen—to what they need us to hear. The story that tells itself is not just what’s at stake but who is at stake. The greatest realization is that all life is one. I was seven years old when my father and I fixed up a small shed in our Brooklyn yard and got some homing pigeons. Watching how they built nests in their cubbyholes, seeing them courting, arguing, caring for their babies, flying off and faithfully returning, how they needed food, water, a home, and one another, I realized that they lived in their apartments just as we lived in ours. Just like us, but in a different way. Over my lifetime, living with, studying, and working with many other animals in their world and ours has only broadened and deepened—and reaffirmed—my impression of our shared life. That’s the impression I’ll endeavor to share with you in the pages that follow.

**Keywords.** Ethology, theory of mind, behaviorism, progress of science.

This chapter is an excerpt from a book of the author (C. Safina, *Beyond Words: What Animals Think and Feel*, Henry Holt And Company, New York, 2015). The same book is available in Italian as: “*Al di là delle parole*” by Adelphi Press (2015). For more contents please visit the website: [CarlSafina.org](http://CarlSafina.org).

I’d never deny that formal scientific research in controlled conditions has been exceptionally helpful. I’ll also never lose sight of the fact that the real lives of animals are too expansive for laboratories to adequately reflect. Yet many behaviorists work only in labs (or, far worse, philosophy departments). Now we’ll see how, by slicing reality salami-thin and marinating it in jargon, researchers who confuse sometimes amuse.

The search for intelligent life on Earth produces a few chuckles along the way. One dog-loving researcher videotaped dogs in a neighborhood park during two years before arriving at the following conclusions: If a dog wanted to play with another dog it was facing, it would usually perform the “play invitation” (that familiar bow: front end crouched low, rear end high). But if the dog the play seeker wanted to romp with was facing away, the play seeker would first get the other dog’s attention – with a paw, for instance, or by barking. In one of those science-marches-on moments, the researcher tells us, “They seem to be reacting to distinct cognitive states.” In everyday terms: from two years of video analysis she discovered that a dog can distinguish another dog’s face from its butt. May I please say this: a dog’s behind is not a “distinct cognitive state.” Why not just say that dogs get other dogs’ attention before inviting play? Too obvious to seem like science?

Just minutes after I started searching the formal academic literature for “theory of mind,” a typical recent study popped up. Titled “On the Lack of Evidence That Non-Human Animals Possess Anything Remotely Resembling a ‘Theory of Mind,’” it was published in the *Philosophical Transactions of the Royal Society*. The authors begin, “Theory of mind entails the capacity to make lawful inferences about the behaviour of other agents on the basis of abstract, theory-like representations of the causal relation between unobservable mental states and observable states of affairs.” (Translation: by watching another’s behavior, we can guess at what they may be thinking.) They continue: “We are entirely agnostic (for our present purposes anyway) about whether an organism’s states are modal or amodal, discrete or distributed, symbolic or connectionist or even about how they come to have their representational or informational qualities to begin with... Of course, there are innumerable other factors that also contribute to shaping a biological organism’s behavior.”

I can probably understand that study—I just don’t want to.

Two guys from Rutgers University (where I got my own PhD, so I am favorably inclined) have published a review called “Reading One’s Own Mind: A Cognitive Theory of Self-Awareness.” Here we go: “We’ll start by examining what is probably the most widely held account of self-awareness, the ‘Theory Theory’ (TT). The basic idea of the TT of self-awareness is that one’s access to one’s own mind depends on the same cognitive mechanism that plays a central role in attributing mental states to others... Theory Theorists argue that the TT is supported by evidence about psychological development and psychopathologies... After making our case against

the TT and in favor of our theory, we will consider two other theories of self-awareness to be found in the recent literature.”

No, thanks! Theorizing about theorizing seems a very poor substitute for actually watching living beings do their thing.

“Theory of mind” is probably the most oversold concept in human psychology, as well as the most underappreciated, oft-denied aspect of non-human minds. We’ve all been in relationships where we thought, “I don’t know where I stand with her” or “I don’t know what to expect of him.”

As John Locke said in the 1600s, “one man’s mind could not pass into another man’s body.” The painter Paul Gauguin wrote of his thirteen-year-old Tahitian wife, “I strive to see and think through this child.” Joni Mitchell sang, “There’s no comprehending, / Just how close to the bone and the skin and the eyes / And the lips you can get / And still feel so alone.” The Roman poet Lucretius—in what W. B. Yeats called “the finest description of sexual intercourse ever written” (not to mention a good translation)—observed bleakly,

*They gripe, they squeeze, their humid tongues they dart, As each would force their way to t’others heart:*

*In vain: they only cruise about the coast,*

*For bodies cannot pierce, nor be in bodies lost.... All ways they try, successful all they prove,*

*To cure the secret sore of ling’ring love.*

“The tragedy of sexual intercourse,” Yeats howled, “is the perpetual virginity of the soul.” Paul Valéry, another poet, noted that “the interchange of human things between men requires that brains be impenetrable.” Praise the poets for being good scientists. The scientist Nicholas Humphrey, says, “There are no doors between one consciousness and another. Everyone knows directly only of his or her own consciousness and not anyone else’s!”

If I want to sneak up on you, or fantasize while flirting, or steal from you, it is crucial that my mind remain unreadable. The more we *could* open into each other’s minds, the more our brains would need a way to get up and lock the door. So yes, we observe, we resonate, but ultimately we guess. That’s the most we can do. We can choose to reveal ourselves or hide our cards. But the choice is ours.

Chimps have mainly a theory of chimp mind, if we might put it that way; dolphins, mainly of dolphin mind. Humans often experience difficulty understanding even human needs and predicting other people’s actions. And

humans who assume that other animals are not even conscious—or who ignore their capacity for conscious experience—show how faulty our theory-of-mind talents are.

People in Japan and the Faeroe Islands kill dolphins and pilot whales by running steel rods into their spinal columns while they squeal in pain and terror and thrash in agony. (In Japan, it’s illegal to kill cows and pigs as painfully and inhumanely as they kill dolphins.) The lack of compassion for dolphins and whales indicates that humans’ “theory of mind” is incomplete. We have an empathy shortfall, a compassion deficit. And human-on-human violence, abuse, and ethnic and religious genocide are all too pervasive in our world. No elephant will ever pilot a jetliner. And no elephant will ever pilot a jetliner into the World Trade Center. We have the capacity for wider compassion, but we don’t fully live up to ourselves. Why do human egos seem so threatened by the thought that other animals think and feel? Is it because acknowledging the mind of another makes it harder to abuse them? We seem so unfinished and so defensive. Maybe incompleteness is one of the things that “makes us human.”

While some people seem unable to sense the minds of non-human animals, other people see human-like minds in everything. Our minds automatically discern human-like faces in things like clouds, the moon, even in food. Many believe that rocks, trees, streams, volcanoes, fire, and other things have thoughts, that *everything* has a mind and is inhabited by spirits that might act for or against us. That’s called *panpsychism*. The religion that follows from this primal human assumption is *pantheism*. It is common among tribal hunter-gatherer peoples, and it’s also alive and well in modern life. On the summit of Mount Kilauea, in Hawaii, I’ve seen offerings of money and liquor, put there by people who think that volcanoes have a god within who watches, tallies favors, and sometimes acts vindictively. Don’t get the volcano mad by ignoring it. A little more booze and a few more bills, some flowers and some food and a roast pig occasionally, and the volcano’s fiery goddess, Pele, will perhaps be mollified. And this is in the United States, where anyone can just stroll into the visitors’ center and learn some volcano geology. (Park rangers have asked visitors to stop leaving offerings of food, money, flowers, incense, and liquor on Kilauea because in sum the offerings are more clearly appreciated by rats, flies, and roaches than by the goddess.) It appears that deep belief in the supernatural comes naturally to us.

“Nonhuman animals may arrive at beliefs based on evidence,” writes philosopher Christine M. Korsgaard,

“but it is a further step to be the sort of animal that can ask oneself whether the evidence really justifies the belief, and can adjust one’s conclusions accordingly. “Yet it is many *humans* who are demonstrably incapable of asking whether evidence justifies their beliefs, then adjusting their conclusions. Other animals are great and consummate realists. Only humans cling unshakably to dogmas and ideologies that enjoy complete freedom from evidence, despite all evidence to the contrary. The great divide between rationality and faith depends on some people choosing faith over rationality, and viceversa.

Other animals’ actions and beliefs are evidence-based; they don’t believe anything *unless* the evidence justifies it. Other animals attribute awareness only to things that are actually aware. While a dog might bark to rouse someone sleeping on the living room couch, they never seek assistance from the sofa itself. Or from volcanoes. They easily discriminate living things from inanimate objects and even from impostors. True, skilled duck hunters’ decoys and calls fool passing ducks enough to get them to swerve into gun range, but the ruse must be elaborate or it won’t work. Fish can be hard to fool even with artificial lures painstakingly designed to look and act like the real thing.

Years ago, while doing research that involved tagging migrating falcons, I lured the falcons to my net with tethered live starlings. The frightened starlings did not enjoy this; nor did I. So I put a stuffed starling on a string, wings in flight position, behind the net. Of course, in nature absolutely everything that looks like a bird and is covered with feathers and has a gleaming eye and moves up and down *is* a bird. Yet the stuffed bird never fooled one single falcon. They all sized it up, at a glance, as somehow “not real,” and ignored it. *That* is impressive. Other animals are exceptionally good at identifying and reacting to predators, rivals, and friends. They never act as if they believe that rivers or trees are inhabited by spirits who are watching. In all these ways other animals continually demonstrate their working knowledge that they live in a world brimming with other minds, as well as their knowledge of those minds’ boundaries. Their understanding seems more acute, pragmatic, and, frankly, better than ours at distinguishing real from fake.

So I wonder: Do humans really have a better-developed theory of mind than other animals? People watching a cartoon of nothing more than a circle and a triangle moving around and interacting almost always infer a story, involving motives and personalities and genders. Children talk to dolls for years, half-believing

– or firmly believing – that the doll hears and feels and is a worthwhile confidant. Many adults pray to statues, fervently believing that they’re listening. When I was a teenager, our next-door neighbors (Americans who’d been born and raised in New York) kept religious statues in every room except their bedroom, lest the Virgin witness human lust. All of this indicates a common human inability to distinguish conscious minds from inanimate objects and evidence from nonsense.

Children often talk to a fully *imaginary* friend whom they believe listens and has thoughts. Monotheism might be the adult version. We populate our world with imaginary conscious forces and beings – good and evil. Most present-day people believe they’re helped or hindered by deceased relatives, angels, saints, spirit guides, demons, and gods. In the world’s most technologically advanced, most informed societies, a majority of people take it for granted that disembodied spirits are watching, judging, and acting on them. Most leaders of modern nations trust that a sky god can be asked to protect their nation during disasters and conflicts with other nations.

All of this is “theory of mind” gone wild, like an unguided fire hose, spraying the whole universe with presumed consciousness. Humans’ “superior” theory of mind is in part pathology. The oft-repeated line “Humans are rational beings” is probably our most half-true assertion about ourselves. There is in nature an overriding sanity and often, in humankind, an undermining insanity. We, among all animals, are also frequently irrational, distortional, delusional, worried.

Yet I also wonder: Is our pathological ability to generate false beliefs, to elaborate upon what does not exist, also the very root of human creativity? Is our tendency to imagine and even cling to what is false the foundation of all our inventive genius?

Perhaps believing false things comes bundled with our peculiar, oddly brilliant ability to envision what is not yet, and to imagine a better world. No one has explained where creativity arises, but some human minds lurch along sparking new ideas like a train with a stuck wheel. It’s not rationality that’s uniquely human; it’s irrationality. It’s the crucial ability to envision what is not, and to pursue unreasonable ideas.

Perhaps other animals don’t need to manipulate logic because their actions are logical. They don’t need tools because they are self-sufficient in their special abilities. Perhaps humans need logic and tools because without them we cannot survive, in a sense unable to succeed just as we are. Perhaps this is intuited in the story of the Fall, the trade-off in going from self-contained creatures like all the others to creatures needing a new way to access new knowledge so that, with much craft and

effort, our distinctly human abilities might compensate for our distinctly human frailties.

Insight, shared to various degrees by other apes, wolves and dogs, dolphins, ravens, and a few other creatures, relies on an ability to see what is not there. As does turning homeward, or waiting for the mate who happens to be gone at the moment. Perhaps the depth of human insight comes with genes that give us a capacity not just to imagine what isn't there but to insist on it, to fervently hold and pursue unmoored beliefs. What is

more irrational than a nonexistent melody, or the dream of human flight, or holding fixed the light of an image, or capturing a musical performance so that it may be heard again and again, or diving deep into the sea and breathing underwater? Who could have imagined such things? Who else.

Along for the ride on that singular ability to imagine comes sheer brilliance and utter madness. And maybe more than anything, what "makes us human" is our ability to generate wacky ideas.