

Thoreau, Animal Emotions, & Us

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9 August 2020

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One of the books I've been reading to prepare for this sermon is Thoreau's Animals. Our Unitarian forebear Henry David Thoreau wrote more than two million words in his journal—which is a lot to wade through—so this book excerpting the parts about animals is helpful. The other aspect I appreciate most about this book is that it arranges Thoreau's observations not in the usual chronological order across the years, but rather *by the days of the year*. The end result is a collated journey that takes you through all of Thoreau's musings about animals from all the various months of March in which he journaled, then all the noticings about animals from all the Aprils, and so on—gathering all the entries from each month of the year, in turn, ending with February.

Now, some of you may be wondering: why start in March and end in February? The reason is Thoreau's own direct experience of the world. Thoreau was clear that in his experience, the year demonstrably begins in March, but not on any one precise date. Rather around March each year, his journals are filled with his observations of signs of when this specific year was beginning in his precise locale of Concord, Massachusetts. He was always keen to observe:

- When would the *ice begin to melt* this year?
- When would the *sap begin to flow*?
- When would the *birds return* from the south?

There was no way to know the precise day in advance, so Thoreau was always watching closely on his daily long walks (Thoreau xxiv).

I'll give you one example from his journals on one particular March 10th:

You are always surprised by the sight of the first spring bird or insect—they seem premature and there is no such evidence of spring as themselves, so that they literally *fetch* the year about. It is thus when I hear the first robin or bluebird—or looking along the brooks see the first water bugs [whirligig beetles] out circling. But you think—they have come, and Nature cannot recede. (9)

Thoreau wrote those words in 1855.

Four years later in 1859, Charles Darwin, another close observer of nature, would publish his landmark book *On the Origin of Species*. Still today, some critics continue to reject the science of evolution as offensive. But from the perspective of

Thoreau and other proponents of an Earth-centered spirituality, the science of evolution—the understanding of ourselves and all animals as descended from a common ancestor—has often been welcomed as good news. We humans may not be special acts of creation (“a little lower than the angels”). We may merely be a “little higher than the apes.” But that worldview can also be understood as an inspirational reminder that it is actually good news that humans are not separate, special, and alone. We are part of the Animal Kingdom—and deeply interconnected to the environment, ecosystems, and other beings on this planet.

One of my favorite guides to this interdependent worldview is Francis de Waal, a Professor of Primate Behavior in the Department of Psychology at Emory University in Atlanta, Georgia. In 2007, Time voted him one of the “World’s 100 Most Influential People Today.” And he has published many paradigm-shifting books (325). For this morning, I’ll be primarily drawing from his latest book on animal emotions. But he has written a whole array of worthwhile books:

- As we enter more fully into election season, some of you might enjoy revisiting his first popular book, *Chimpanzee Politics*—which was published in 1982, but remains a classic. In de Waal’s words, “the roots of politics are older than humanity.”
- Or if part of you is understandably feeling unhopeful about the future of humanity these days, you may find his award-winning book from 1989 helpful; it’s titled *Peacemaking among Primates*. This book reminds us that although aggression and war are part of our animal nature, so too are peacemaking and reconciliation.
- Relatedly, his book *The Bonobo and the Atheist* is a fascinating exploration of the ancient animal origins of ethics and morality.
- I also have a forthcoming sermon planned for around this time next year on animal intelligence, based on another of de Waal’s recent books with the wonderfully provocative title *Are We Smart Enough to Know How Smart Animals Are?*

There’s so much to say about the study of animals, and what it tells us about ourselves as human animals. And there is so much groundbreaking research being done today that it can be clarifying to have some historical perspective.

Fifty years ago, in the 1970s, de Waal’s research on reconciliation among animals was heretical. He was accused of romanticizing animals, who were understood

in the dominant scientific discourse of the time primarily to be brutes, focused exclusively on survival and reproduction (6-7). Well into the 1980s, animal cognition was considered an “oxymoron” (Reese 9). Going beyond animal intelligence to research animal *emotions* was especially considered career suicide for anyone who didn’t already have tenure. And the majority opinion in the scientific community didn’t solidly shift regarding animal intelligence and emotions until quite a few years into the twenty-first century.

Today, however, research into animal emotions and intelligence is burgeoning, and de Waal and other early pioneers have been vindicated. But here’s one especially ironic wrinkle. Early evidence for animal emotions and intelligence was championed by none other than Charles Darwin himself. Although his best known books are *On the Origin of the Species*, and *The Descent of Man*, he published a third major book a year after *The Descent of Man* titled *The Expression of the Emotions in Man and Animals*.



Darwin observed what almost any pet owner has observed: animals have emotions and their emotions are reflected in their facial expression (de Waal 7).

1. TOP LEFT Dog: snarling, bared teeth = *anger*
2. TOP RIGHT Cat: eyes wide, face flattened, hair on end = *fear*
3. BOTTON LEFT Dog: *anxiety* [wants something]
4. BOTTOM RIGHT Cat: *love* [and/or wants something]

In retrospect, it’s kinda of like—*duh*: of course animals are intelligent, of course animals have emotions. But due to various factors including human exceptionalism (denial of our close biological kinship with animals) as well as male bias against emotions (which matters in a male-dominated scientific community), Darwin’s book on animal emotions

and their corresponding facial expressions was neglected for almost a century before a growing number of scientists realized its significance anew (de Waal 50, 55).

Now for those of you who are interested in diving into the details, de Waal's book *Mama's Last Hug: Animal Emotions and What They Tell Us about Ourselves* includes extensive examples of animal emotions. But due to time constraints, I will limit myself for now to one example that was recently published in the prestigious journal *Science* about breakthrough discoveries about emotions and facial expressions in mice. Similar studies have been done with horses, donkeys, zebras, dogs, and many other animals (58). But it's even more impressive to consider the evidence of animal emotions in mice since their facial expressions are harder for many humans to read.

Here's how the experiment worked. Scientists started by setting up a camera to be able to photograph changes in the facial expressions of the mice being studied (Dolensek, et al 93). What they found was a clear correlation between certain stimuli and the resulting facial expressions in mice—just as is the case in humans and other animals:

- So when they shocked a mouse's tail, you [not surprisingly] got a facial expression representing *pain*.
- When you feed a mouse sucrose (sugar), you get a facial expression of *pleasure*.
- If you give a mouse Lithium chloride, you get *malaise*.
- Quinine = *disgust*.
- Scare them, and you get a facial expression of *fear* as they seek to escape (a "flight" response)
- Or sometime you get a "freeze" response. (Girard & Bellonea 33).

Again, in retrospect, the fact that animals have emotions may seem obvious, but there has been so much denial and resistance over the years about both animal intelligence and emotions that have increasing amounts of solid evidence is significant.

So the scientists crunched all that data from the camera and mapped and analyzed it further. The upshot is that a trained observer can now view a mouse's facial expression in isolation and tell you with 90% accuracy the underlying emotional event that triggers that facial expression (Girard/Bellonea 89). As Darwin proposed more than a century and a half ago, we are moving closer and closer toward a **"more universal**

and evolutionarily based definition and understanding of emotions and their neural underpinnings across species” (Dolensek 94).

If we move from mice to chimpanzees, our much closer cousins, our kinship with our fellow animals becomes even more obvious. Chimps, for instance, have “the exact same number of mimetic muscles as in the human face—and surprisingly few differences.” Even more interestingly, this discovery precedes Darwin by more than two hundred years.

Some of you may know Rembrandt’s 1641 painting “The Anatomy Lesson,” featuring the Dutch anatomist Dr. Nikolaas Tulp. In addition to standard gross anatomy lessons, Dr. Tulp was the first person to dissect an ape cadaver, and almost 400 years ago he noted that the body of the ape “resembled the human body so closely in its structural details, musculature, organs, and so on, that the species looked like two drops of water” (de Waal 66).

Now, let me hasten to add that no one is saying that apes or dogs or mice or earthworms have exactly the same complex emotional and cognitive capacity as humans, but scientists are showing us that we are all on an interconnected spectrum. Both emotions and intelligence “may be more developed in [human beings], but they aren’t fundamentally new” to our species (166). And that truth is deeply Darwinian and inextricably a part of our evolution from a common ancestor (170). We humans are part of the Animal Kingdom and deeply interconnected with what our UU Seventh Principle calls “the interdependent web of all existence of which we are a part.”

As I move toward my conclusion, I would also be remiss if I didn’t address the most common question that I’m asked anytime I speak about animal rights. Whenever I share new findings about how remarkably intelligent other animals are—and their capacity to experience emotions and pain—one or more people will come up to me afterward and ask, **“Wait, does this mean, I have to become a vegetarian? Or a vegan?!”**

Well, I have personally been a vegetarian for more than twenty years at this point. At the same time, I’m aware that we’re approximately five decades into the modern Animal Rights Movement, and fewer than ten percent of Americans are vegetarians, so I don’t necessarily anticipate any huge vegetarian conversion

experiences in the wake of this sermon—but if that’s the case for you, please do let me know (Reese 36). (That has actually happened a handful of times over the years, by the way.)

What’s actually more interesting to me at this point is less individual change (although I’m always grateful and encouraged by that), and more the potential for forthcoming systemic change (114).

I’m skeptical, for instance, that we’re all going to wake up this fall and start eating Tofurky at Thanksgiving. But here’s why change may be coming over the next few decades nonetheless. A truth that many meat-producers know well is that getting meat, dairy, and eggs from animals is incredibly inefficient. As long as animals are alive, they have to fuel their own body and activities, which consumes the vast majority of almost all calories they are fed. This means that, on average, **“For every ten calories of food we feed animals, we get only about one calorie of meat in return”** (xii).

And far beyond tofu and veggie burgers of the past, we have companies today such as Beyond Meat producing plant-based “chicken strips”—with no actual animal involved—that have fooled many people in blind taste tests (50-51). Furthermore, consider that, “In 2016, Tyson Foods, the most well-known U.S. meat company, invested an undisclosed amount for a 5 percent share in Beyond Meat. Its CEO later said he thinks **plant-based is the future of meat**” (54). Likewise, some of you may have tried the plant-based, animal-free Impossible Burger, which has been picked up by Burger King.

But the real game-changer coming down the pike is likely going to be “cultured meat,” grown in a lab by scientists that is literally meat from cells taken from animals, but without having to factory farm animals at all. (89). *Star Trek* is here, people. Not just in our pockets with our smart phones, but coming soon to our dinner tables. It may seem a little weird at first, but the change could be profound in decreasing both animal cruelty and stopping the toxic emissions that factory farms release into the environment. If you are interested in learning more, I recommend a recent book published by our own Beacon Press titled [The End of Factory Farming](#).

I have so much more to say about all of this, but I hope my overall point is clear. I count this sermon a success if I leave you feeling (with Thoreau) a little more in sync

with the seasons of the year, and in feeling (with Darwin and Francis de Waal) a little more in kinship with the rest of the animal kingdom.

Along these lines, I'll leave you with this outline of an ethical aspiration from the Buddhist teacher Larry Yang related to our relationship with all sentient beings. In this season of your life, what might it be like to set this intention:

[In this moment,] may I be loving, open, and aware.

If I cannot be loving, open, and aware...may I be kind.

If I cannot be kind, may I be nonjudgmental.

If I cannot be nonjudgmental, may I not cause harm.

If I cannot not cause harm, may I cause the least harm possible. (Rick Hanson, Neurodharma 77)