

Empathy and the Common Good

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The names have changed over time. In the ancient world it was called cynicism. Five hundred years ago, it was called innate depravity. More recently, postmodern philosophers have called it irony. In the 1980s, Professor Gary Becker at the University of Chicago was calling it "rational actor theory," and for that he won a Nobel Prize in economics in 1992. It might as well have been called the Nobel Prize in cynicism: he insisted that altruism is an illusion--that all of us are motivated only by our own self interest, no matter what.

Becker's claim was soon enough debunked both other economists who challenged his mathematics and by sociologists collecting empirical evidence about human behavior, but "rational actor theory" nonetheless took hold in popular culture. It took hold because it re-stated yet again a point of view with deep roots in Western thought.

By whatever labels, what we are talking about here is a bleak despair about human nature. Nobody gives a damn about anyone else. Nobody cares. Everybody is out for himself. Look out for #1, because nobody else will. Nice guys finish last. On Sunday morning we may sit around agreeing that we should love our neighbors as ourselves and be compassionate to all sentient beings. But on Monday morning it's back to the rat race--and all of us are rats.

This postmodern despair about human nature can generate something like a culture-wide clinical depression. Like depression in an individual, it's thoroughly irrational, difficult to dislodge, and very very dangerous. It's dangerous because it generates a social aura of cynicism, anger, isolation, despair, and helplessness. As a society, as a

nation, we can feel overwhelmed by the problems we face. We can give up on ourselves as a society, just as depressed individuals give up on themselves personally. We can lose our ability to work together intelligently, just as depressed individuals lose their ability to interact with others in a healthy, happy, and productive manner.

Supposedly, supposedly, the "objective" basis for this bleak despair is the fact of evolutionary pressure. Supposedly, supposedly, the biological fact is that we are all locked into a brutal competition for survival, and in that competition kindness to others is simply stupid. Self-interest is the only way to survive.

I'm here to say that that's false. It's as false an account of our biological origins as intelligent design is false. The real facts about evolutionary pressure paint a very different picture of who we are. Biologically speaking, we are hard-wired to be compassionate with others and responsible to the common good. Not everyone is, of course. But evolution selects for compassion and responsibility just as evolution selects for, say, visual acuity among hawks. Some hawks may be near-sighted just some people may be jerks--but you can't generalize from that fact to a blanket condemnation of the species.

Frans deWaal is a Dutch zoologist who is currently at Emory University in Atlanta. He's one of the world's leading experts on primate behavior, and he has written several books on the biological and evolutionary origins of human morality. One of his most recent books takes direct aim at idea that moral norms are a pretense or a fragile overlay disguising the brutal truth about human nature.

In his book *Primates and Philosophers*, DeWaal contends that evolution selects for the development of morality among social animals. The core logic of his argument goes like this. Evolution will favor individuals who cooperate with others if cooperators survive in greater numbers than those who remain solitary (p. 13). That's a rudimentary fact about how evolution works. Humans come from a very long evolutionary line of animals for

whom living in a groups has become the only way to survive (p. 13). We are what biologists call "social obligates." Our survival depends upon the group.

DeWaal explains that all species that rely on cooperation--all social obligates--show loyalty to their group, and furthermore a tendency to help other group members (p. 15). In order to cooperate, however, any social animal needs certain cognitive skills. In particular, they need the capacity to respond quickly and adeptly to the behaviors of others.

Over time, and depending upon the intellectual resources of the creatures involved, simply responding to each other's behavior can evolve toward coordinated action. Think of wolves hunting together; think of prairie dogs taking turns babysitting or standing sentinel while others forage for food. As it is strengthened over time by evolutionary pressure, this capacity for coordinated action can generalize into an ever clearer tendency to help those in need generally (p. 25). Evolutionary pressure to survive by cooperating also selects for higher intelligence, which in turn makes even more sophisticated cooperation possible.

But cooperation also demands the ability to communicate. De Waal contends that all social animals are capable of picking up what other animals feel, and they use this information to guide how they respond to one another (p. 25).

Humans and primates and no doubt other social obligates can pick up one another's emotions simply by seeing one another--but especially by seeing emotionally expressive features like faces. We can do so because watching someone else do anything triggers specialized brain cells called mirror neurons.

For instance, if I'm going to wave my hand, brain cells in my motor cortex have to fire. Eighty percent of those brain cells control muscles. The remaining 20 percent are mirror neurons. Got that? Two kinds of neurons are firing in my brain. When you watch me wave, mirror neurons in your motor cortex also fire. These are the same mirror neurons

that fire when you wave your own hand. That same 20 percent. Your mirror neurons mimic mine, quite exactly.

Another example. A more complicated example. As you with me so far, or should I back up and repeat what I just said about mirror neurons? Now: imagine that you are driving down the street in your own neighborhood, and you see a neighbor wave like this [smile and social wave]. What would you do?

What if your neighbor does this instead? [anxious look; hail-cab gesture] What do you do? Your mirror neurons let you feel what your neighbor is feeling. You recognize it immediately. You're not thinking; it's not a process of inference. MRIs prove that it's not. You understand instantaneously because your mirror neurons are blazing away. Are you with me still?

Another example. In the last couple of minutes I've asked repeatedly whether you understand, and each time I've paused and looked around inquisitively. Lots of you have made direct eye contact with me. As I've looked at your faces, each face, face by face, mirror neurons linked to my facial muscles have fired. A new face, a new array of mirror neurons. That's how I understand what your facial expressions mean. My mirror neurons let me feel what you are feeling. Mirror neurons fire in response to anything that we see someone else do: their gestures, the look on their face, their body posture, the whole shebang.

Let me say it again. Mirror neurons are the brain mechanism that makes it possible for us to understand what someone is feeling--and, potentially, why they might be feeling that way. In a very powerful, ongoing ways, the mirror neurons in our brains generate models or simulations of whatever the people around us are doing. That information is relayed to the brain structures managing our emotional responses, and from there forward into the areas governing our judgment and our problem-solving and critical thinking. Monkeys have mirror neurons too. In fact, they were first discovered in monkeys. Odds are very good that every social animal has mirror neurons.

Research into mirror neurons is less than fifteen years old. It's cutting edge stuff: there's a lot to be worked out yet. The key thing I'd like you to remember this morning is that mirror neurons are the mechanism hard-wiring us for compassion with others.

"Feminine intuition" has often been dismissed as folklore and denounced as witchcraft, but in fact it's simply mirror neurons at work. But all of us have mirror neurons, regardless of gender. Even kids with autism have mirror neurons, but for whatever reason these neurons are not as responsive as they should be, perhaps because kids with autism tend not to make much eye contact.

Mirror neurons explain why we flinch when we see someone else fall on the ice. They explain why a brief interaction with a sour, gloomy co-worker can ruin our whole day, leaving us sour and gloomy when we had been feeling relaxed and productive. Mirror neurons account for how a consistently upbeat, friendly, warm, and appreciative member of a team make the whole team more productive. *Science News* recently reported a study in which an actor feigning depression could derail the productivity of an entire team of MBAs who were going to be rewarded on the basis of their productivity on some task. Through our mirror neurons, we can catch feelings from one another with astounding speed.

I have a set of baby pictures that demonstrate this speed. My husband took these shots on the day our twins were baptized. In the first picture, they are relaxed and content in their infant seats. They are only three weeks old, so they are sitting with their arms and legs curled in. The second picture captures how violently one twin was startled by the flashbulb that went off as the first picture was taken: his arms and legs are extended, his mouth and eyes are widely open. The second twin is still just sitting there. In the third picture, the startled twin is screaming, and the quiet twin has turned toward him. Her brow is furrowed with alarm and bewilderment. In the final picture, both twins are screaming. The whole sequence took seconds--click, click, click. Our pediatrician called this contagion "sympathetic screaming." Parents of twins live with lots of it. Emotional contagion isn't empathy, but it's the biological foundation upon which empathy is built.

Mirror neurons also explain why we can say things in an email that we would never be able to say to someone's face. In person, face-to-face, we are constrained by the ancient biological mechanisms of emotional contagion. We will see and thus feel the distress we are causing. As social obligates, we are hard-wired to react to one another's pain, and especially to pain we are causing. That wiring is not a moral choice or a personal virtue. It's just a fact about how our brains work. Nonetheless, this biological capability is the evolutionary foundation of morality.

With high enough intelligence, emotional contagion can develop seamlessly into empathy--into the ability to pick up what others are feeling while recognizing that this is their feeling, not our own. Once empathy emerges, an individual can assess a situation, understand the reasons for someone else's emotions, and respond appropriately in some helpful way.

Empathy marks the emergence of genuine moral concern: not simply distress when someone else is distressed, but distress at another's distress and an active aversion to causing distress in others. Rhesus monkeys refused to pull a chain that brought food into their cages if doing so caused an electrical shock to one of their companions. One monkey starved himself for five days, another for twelve days, after they saw what an electrical shock did to another of their kind (p. 29).

Empathy also extends our biological aversion to one another's pain into a capacity for social reciprocity, social obligation, and a commitment to fair play. Capuchin monkeys, for instance, will refuse to cooperate with experimenters if their reward for cooperating is not equal to the reward given to the monkey in the next cage over (p.44-49) .

Chimpanzees don't ordinarily share food--but they will share their lunch with an animal who groomed them earlier in the morning (p. 42-44).

Chimps also have an acute sense of social obligation: deWaal describes a colony of chimps where no animal got its dinner until all of them had come inside for the night. One lovely summer evening, two adolescents refused to come in. Everyone's dinner was two hours late. Zookeepers caged the offending youngsters separately to avoid

retribution by the group. But the next day, when the entire colony of animals was released outside, the teenagers were chased down and soundly beaten. Thereafter they came inside right on time (p. 172).

Complicated cooperation--and nuanced morality--demand something more than the social obligation, fairness, and social reciprocity these stories illustrate. We also have to be able to understand that what someone else wants, or needs, can be entirely distinct from what we want or need for ourselves. For instance, he describes the day a bird crashed into the chimp enclosure at a zoo in San Diego. A chimp went over, picked up the stunned bird, climbed a tree, gently spread the bird's wings, and tried to throw it out of the enclosure (pp. 30-31).

Another time an older female chimp wanted a particular tire from a whole row of tires lined up on a long horizontal post. She wanted it because there was cold water puddled in the bottom of it. But she couldn't figure out how to get this tire free. An adolescent male watched her struggle, and when she gave up he went over, removed the tires one by one to get to the one she wanted, and carried it over to her without spilling a drop (pp. 31-32).

Individual chimps also undertake surprisingly complex and adept efforts to mediate conflicts and to maintain or enforce the social norms of the group (pp. 170-173).

DeWaal has all sorts of stories about them too--and about how dramatically the well-being of a troop of chimps is enhanced by the presence of one of these peace-maker social-chairman chimps. Folks who see to social bonding make a huge contribution to the common good.

DeWaal contends that we need to look to social skills like these to see the keenest displays of animal intelligence--not to tool-making or the ability to count or other cognitive tests that human can devise. The evolutionary pressure on social skills can be acute, because an individual's survival and its reproductive chances depend upon how well it gets along within its immediate social group (p. 27).

As a result, de Waal argues, we need to realize that the pressure of evolution is not simply for the survival of the fittest. For social obligates like human beings, the pressure of evolution is also for the survival of the kindest (p. 180). The primates who are closest to us both genetically and in neurological complexity display the most sophisticated capacity to seek the good and to avoid evil.

But the core of their morality is not the cerebral capacity to reason logically about rights and responsibilities. These primates are not proto-philosophers. The basis of morality is the visceral, neurological ability to feel what others are feeling, plus acute evolutionary pressure to react in ways that alleviate one another's suffering and serve the common good of the group.

In short, we are not innately depraved rational actors. We are innately compassionate and cooperative. So how do we explain the violence permeating human history? As de Waal carefully and repeatedly explains, moral obligation among primates is sharply limited to what he calls the within-group. Among humans, that's the family, the clan, the tribe, the nation.

The challenge before us now, the challenge of our times, is to realize that our own well-being is massively entangled with the well-being of villagers half the world away and more. Television and the Internet lets them see how opulently we live. It lets us see how acutely they suffer. Meanwhile both climate change and the global economy demonstrate that none of us can survive at the expense of other people elsewhere. We are not isolated troops of chimps defending our own little turf in the jungle. In a wired global society there is one common good and we are all part of it, all of us, everywhere. The only question is whether we are smart enough to cooperate on this scale.

Which brings me back to Gary Becker and rational actor theory. If we think we are innately selfish, if we think we are inescapably self-centered, then we won't even try to devise the complex cooperation our problems demand. We will fail to hold one another deeply responsible to the common good. But if chimpanzees can do it, so can we. The facts of evolution are remarkably clear: we are hard-wired by evolution to cooperate, to

care about one another, and to seek the common good. Globally, historically, religions have been saying that for thousands of years. Leaders of hundreds and hundreds of religions meeting as the Parliament of the World's Religions in 1993 signed a document asserting, in part, "Every human being has the right to be treated humanely."

All we have to do is to remember that, in the end, we are in fact social obligates. Our survival depends upon the well-being of everyone else. That's an evolutionary problem that primates began solving thousands and thousands of generations ago, when getting smarter offered new and better ways to cooperate.

We are the smartest primates around. My guess is that we have what it takes.