6

CONCLUSION

> I question whether the spiritual life does not get its surest and most ample guarantees when it is learned that the laws and conditions of righteousness are implicated in the working processes of the universe; when it is found that man in his conscious struggles, in his doubts, temptations and defeats, in his aspirations and successes, is moved on and buoyed up by the forces which have developed nature.
>
> **John Dewey**[1]

Even if animals other than ourselves act in ways tantamount to moral behavior, their behavior does not necessarily rest on deliberations of the kind we engage in. It is hard to believe that animals weigh their own interests against the rights of others, that they develop a vision of the greater good of society, or that they feel lifelong guilt about something they should not have done.

What Does It Take to Be Moral?

Members of some species may reach tacit consensus about what kind of behavior to tolerate or inhibit in their midst, but without language the principles behind such decisions cannot be conceptualized, let alone debated. To communicate intentions and feelings is one thing; to clarify what is right, and why, and what is wrong, and why, is quite something else. Animals are no moral philosophers.

But then, how many *people* are? "We have a tendency to compare animal behavior with the most dizzying accomplishments of our race, and to be smugly satisfied when a thousand monkeys with a thousand typewriters do not come close to William Shakespeare. Is this a reason

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to classify ourselves as smart, and animals as stupid? Are we not much of the time considerably less rational than advertised? People seem far better at explaining their behavior after the fact than at considering the consequences beforehand. There is no denying that we are creatures of intellect; it is also evident that we are born with powerful inclinations and emotions that bias our thinking and behavior.

A chimpanzee stroking and patting a victim of attack or sharing her food with a hungry companion shows attitudes that are hard to distinguish from those of a person picking up a crying child, or doing volunteer work in a soup kitchen. To classify the chimpanzee's behavior as based on instinct and the person's behavior as proof of moral decency is misleading, and probably incorrect. First of all, it is uneconomic in that it assumes different processes for similar behavior in two closely related species. Second, it ignores the growing body of evidence for mental complexity in the chimpanzee, including the possibility of empathy. I hesitate to call the members of any species other than our own "moral beings," yet I also believe that many of the sentiments and cognitive abilities underlying human morality antedate the appearance of our species on this planet.

The question of whether animals have morality is a bit like the question of whether they have culture, politics, or language. If we take the full-blown human phenomenon as a yardstick, they most definitely do not. On the other hand, if we break the relevant human abilities into their component parts, some are recognizable in other animals (see page 211).

Culture: Field primatologists have noticed differences in tool use and communication among populations of the same species. Thus, in one chimpanzee community all adults may crack nuts with stones, whereas another community totally lacks this technology. Group-specific signals and habits have been documented in bonobos as well as chimpanzees. Increasingly, primatologists explain these differences as learned traditions handed down from one generation to the next.[2]

Language: For decades apes have been taught vocabularies of hand signals (such as American Sign Language) and computerized symbols. Koko, Kanzi, Washoe, and several other anthropoids have learned to effectively communicate their needs and desires through this medium.

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It is hard to imagine human morality without the following tendencies and capacities found also in other species.

Sympathy-Related Traits

Attachment, succorance, and emotional contagion.

Learned adjustment to and special treatment of the disabled and injured.

Ability to trade places mentally with others: cognitive empathy.*

Norm-Related Characteristics

Prescriptive social rules.

Internalization of rules and anticipation of punishment.*

Reciprocity

A concept of giving, trading, and revenge.

Moralistic aggression against violators of reciprocity rules.

Getting Along

Peacemaking and avoidance of conflict.

Community concern and maintenance of good relationships*

Accommodation of conflicting interests through negotiation.

* It is particularly in these areas—empathy, internalization of rules and sense of justice, and community concern—that humans seem to have gone considerably further than most other animals.

Politics: Tendencies basic to human political systems have been observed in other primates, such as alliances that challenge the status quo, and tit-for-tat deals between a leader and his supporters. As a result, status struggles are as much popularity contests as physical battles.

In each of these domains, nonhuman primates show impressive intelligence yet do not integrate information quite the way we do. The utterances of language-trained apes, for example, show little if any evidence of grammar. The transmission of knowledge from one generation to the next is rarely, if ever, achieved through active teaching. And it is still ambiguous how much planning and foresight, if any, go into the social careers of monkeys and apes.

Despite these limitations, I see no reason to avoid labels such as "primate culture," "ape language," or "chimpanzee politics" as long as it is understood that this terminology points out fundamental similarities without in any way claiming *identity* between ape and

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human behavior. Such terms serve to stimulate debate about how much or little animals share with us. To focus attention on those aspects in which we differ—a favorite tactic of the detractors of the evolutionary perspective—overlooks the critical importance of what we have in common. Inasmuch as shared characteristics most likely derive from the common ancestor, they probably laid the groundwork for much that followed, including whatever we claim as uniquely ours. To disparage this common ground is a bit like arriving at the top of a tower only to declare that the rest of the building is irrelevant, that the precious concept of "tower" ought to be reserved for the summit.

While making for good academic fights, semantics are mostly a waste of time. Are animals moral? Let us simply conclude that they occupy a number of floors of the tower of morality. Rejection of even this modest proposal can only result in an impoverished view of the structure as a whole.

Floating Pyramids

It is hard to take care of others without taking care of oneself first. Not that people need a mansion and a fat bank account before they can be altruistic, but certainly we do not expect much assistance from someone in poor health without the most basic means of subsistence. Paradoxically, therefore, altruism starts with an obligation to oneself.

The form of altruism closest to egoism is care of the immediate family. In species after species, we see signs of kin selection: altruism is disproportionally directed at relatives. Humans are no exception. A father returning home with a loaf of bread will ignore the plight of whomever he meets on his path; his first obligation is to feed his family. This pattern of course says nothing about the inherent value of his own children compared to the others living in the neighborhood. If his family were well fed and everybody else were starving, it would be a different matter—but if his family is as hungry as the rest, the man has no choice.

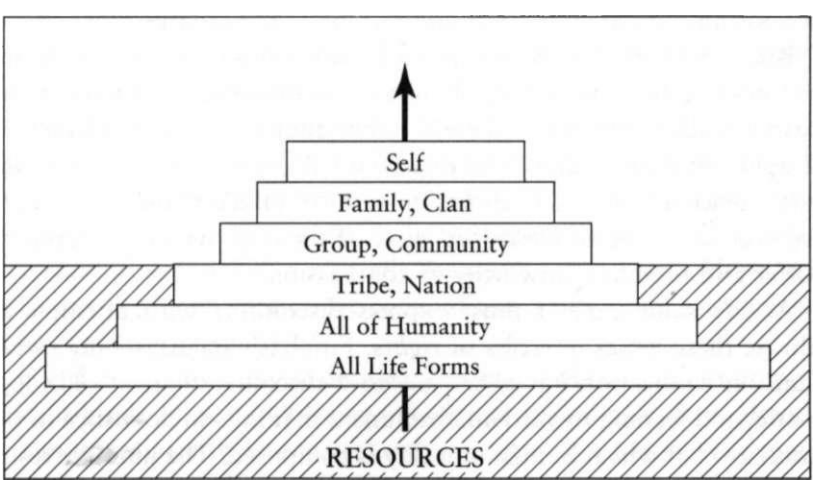
The circle of altruism and moral obligation widens to extended family, clan, and group, up to and including tribe and nation. Benevolence decreases with increasing distance between people. Going against the grain of this natural gradient meets with sharp disapproval. Spies are despised precisely because they help an out-group at

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the expense of the in-group. Similarly, we are shocked that people under the East German communist regime informed on parents and spouses, putting nation before family. And if the father in the above example had come home empty-handed because of sympathy for strangers, his family would have shown very little understanding.

Altruism is bound by what one can afford. The circle of morality reaches out farther and farther only if the health and survival of the innermost circles are secure. For this reason, rather than an expanding circle I prefer the image of a floating pyramid. The force lifting the pyramid out of the water—its buoyancy—is provided by the available resources. Its size above the surface reflects the extent of moral inclusion. The higher the pyramid rises, the wider the network of aid and obligation. People on the brink of starvation can afford only a tiny tip of the moral pyramid: it will be every man for himself. It is only under the most extreme conditions, however, perhaps like those described for the Ik by Colin Turnbull, that such "lifeboat ethics" apply.

As soon as the immediate threat to survival is removed, members of our species take care of kin and build exchange networks with fellow human beings both inside and outside their group. Compared



The expanding circle of human morality is actually a floating pyramid. Altruism is spread thinner the farther away we get from our immediate family or clan. Its reach depends on resources and affordability; the pyramid's buoyancy determines how much of it will emerge from the water. The moral inclusion of outer circles is thus constrained by obligations to the inner ones.

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to other primates, we are a remarkably giving species. Moral inclusion does not imply, though, that every person is valued exactly the same. In principle they may be equal, but in practice human kindness and cooperativeness are spread thinner the farther we get from kin and community.

The ideal of universal brotherhood is unrealistic in that it fails to distinguish between these innermost and outermost circles of obligation. The American human ecologist Garrett Hardin disdainfully refers to indiscriminate kindness as "promiscuous altruism." If altruism evolved because of a need to cooperate against hostile forces, solidarity with what is close against what is distant is an integral part. As observed by the French anarchist Pierre-Joseph Proudhon more than a century ago: "If everyone is my brother, I have no brothers."[3]

Depending on what a society can afford, then, the moral pyramid may swell to giant size, in principle embracing all of humanity, but always retaining its fundamental shape. Life forms other than our own may be included. Recent studies of animal behavior, mine included, provide ample reason to reconsider the way animals are used for science, entertainment, food, education, and other purposes. We need to re-evaluate traditional attitudes developed over a long history without realistic alternatives, and without awareness of the sensibilities and cognitive abilities of animals. This process is well under way at zoos and research institutions, and in society at large.

Because I feel close to the animals with whom I work, I welcome this development. I certainly do not subscribe to the position that we have a God-given right to do with other animals whatever pleases us. If apes, elephants, dolphins, dogs, and the rest indeed possess the intelligence and incipient morality we have talked about, how could we ever subscribe to Descartes' view of them as machines unable to suffer and therefore unworthy of compassion?

At the same time, I must express discomfort with attempts to phrase these issues in terms of *rights.* Emphasis on autonomy rather than on connection has given rise to a discourse that is cold, dogmatic, and leaning toward an absolutism that fails to do justice to the gray areas of which human morality is composed. The ultimate result is a call for the abolition of *all* use of *all* animals under *all* circumstances, from hunting to meat consumption, from keeping them in zoos to having them work on the farm. In the process, we sometimes ignore our first obligation, which is to fellow human beings.

A particularly radical proposal is that of Paola Cavalieri and Peter Singer. Together with a number of prominent scientists, in a volume

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entitled *The Great Ape Project,* they advocate a "community of equals" consisting of apes and humans. They see no good reason why animals as close and similar to us as the great apes should fall into a different moral category. Why not elevate them to the same legal status as their bipedal relatives?

The logical flaw in this proposal is its blatant anthropocentrism. How can one make similarity to a particular species the touchstone of moral inclusion without ranking that species above the rest? If rights increase in proportion to the number of humanlike characteristics possessed by a species, it is hard to escape the conclusion that humans themselves deserve the most rights of all.

A second problem is that rights are normally accompanied by responsibilities, which cannot possibly apply to apes. The authors reply that since mentally retarded people are exempt from this linkage, why not apes?

To my mind, Cavalieri and Singer's plea reflects profound condescension. Have we really reached the point at which respect for apes is most effectively advocated by depicting them as retarded people in furry suits? And while we are at it, why should we not then classify a baboon as a mentally challenged ape? It seems endless: once apes are granted equal status on such questionable grounds, there is no way to keep out cockroaches. My own feeling is that we must take the inherent beauty and dignity of animals as our starting point.

No matter how well intentioned the concerns of animal rights advocates, they are often presented in a manner infuriating to anyone concerned about *both* people and animals. Human morality as we know it would unravel very rapidly indeed if it failed to place human life at its core. Again, there is no judgment here about the objective value of our lives compared to the lives of other creatures. Personally, I do not feel superior to a butterfly, let alone to a cat or a whale. But who can deny our species the right to construct its moral universe from a human perspective?

It will be up to society to decide whether it will continue to support certain kinds of research on certain kinds of animals. It is already common practice in biomedical research that if a particular experiment on monkeys is considered no more effective than on rats, the monkey study will never be conducted. Similarly, if an experiment on chimpanzees is judged no more effective than one on monkeys, the first study will simply not take place.

Unfortunately for the animals, they are not the only ones hanging in the balance. Human lives are also at stake. Anyone who enters a

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hospital or picks up a prescription at the pharmacy makes use of animal testing. Few people consider it trivial to fight diseases such as AIDS, that affect millions. If a vaccine could be developed without using animals, of course that would be preferable. But there are no signs that this stage will be reached anytime soon. Choices must be made, and these get more difficult the more complex the life forms serving as guinea pigs.

How much do we care and what can we afford? There are excellent reasons to insist on respect and concern for animals that serve the human cause. Apes do warrant special consideration. We should either phase out experiments on certain species altogether, or if humanity cannot forgo the benefits derived from them, we must at least enrich and enhance their lives in captivity and reduce their suffering. Phrasing the issue, as I do here, in terms of our *responsibility* to other life forms leaves the moral pyramid intact, and may lead to less radical conclusions than phrasing it in terms of rights. All the same, it is no easier to resolve the dilemmas facing us.[4]

A Hole in the Head

On September 13 of 1848 Phineas Gage, while leveling terrain for a railroad track in New England, suffered a hideous accident that would make him a neurological *cause celebre.* Owing to a momentary distraction, Gage triggered a blast while leaning over a hole filled with explosive powder. The pointed tamping iron that he held in his hands was hurled like a rocket straight through his left eye, brain, and skull. Incredibly, Gage was only briefly stunned. He instantly regained consciousness and was able to walk and talk immediately afterward. The meter-long iron lay in the sand, meters away.

The twenty-five-year-old foreman recovered completely, retained all elementary mental functions, and remained able-bodied for the rest of his life. His speech was normal, he absorbed new information as before, and he showed no lapses of memory. However, his personality changed. From a pleasant and reliable fellow, popular among his peers, he turned into someone who could not hold a job because he had lost all respect for social conventions. He would lie and curse uncontrollably. Perhaps the greatest change was that his sense of responsibility vanished: he could not be trusted to honor commitments. According to his physician, the equilibrium between intellectual faculties and lower impulses had been disturbed by the accident.

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Lifeboat ethics with dog (1981 The Far Side cartoon by Gary Larson is reprinted by permission of Chronicle Features, San Francisco, California. All rights reserved.)

The neurologist Hanna Damasio and her coworkers recently reported on an inspection of Gage's skull and the tamping iron—both preserved in a museum at Harvard University. They made computer models of the brain damage. Apparently the transformation from an upright citizen into a man with serious character flaws had been brought about by lesions in the ventromedial frontal region of his brain. This pattern fits that of a dozen other brain-damaged patients known to science who have intact logical and memory functions but compromised abilities to manage personal and social affairs. It is as if the moral compass of these people has been demagnetized, causing it to spin out of control.

What this incident teaches us is that conscience is not some disembodied concept that can be understood only on the basis of culture and religion. Morality is as firmly grounded in neurobiology as anything else we do or are. Once thought of as purely spiritual matters,

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honesty, guilt, and the weighing of ethical dilemmas are traceable to specific areas of the brain. It should not surprise us, therefore, to find animal parallels. The human brain is a product of evolution. Despite its larger volume and greater complexity, it is fundamentally similar to the central nervous system of other mammals.

We seem to be reaching a point at which science can wrest morality from the hands of philosophers. That this is already happening—albeit largely at a theoretical level—is evident from recent books by, among others, Richard Alexander, Robert Frank, James Q. Wilson, and Robert Wright. The occasional disagreements within this budding field are far outweighed by the shared belief that evolution needs to be part of any satisfactory explanation of morality.

Gardener and garden are one and the same. The fact that the human moral sense goes so far back in evolutionary history that other species show signs of it plants morality firmly near the center of our much-maligned nature. It is neither a recent innovation nor a thin layer that covers a beastly and selfish makeup.

It takes up space in our heads, it reaches out to fellow human beings, and it is as much a part of what we are as the tendencies that it holds in check.

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