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Temple Grandin, Catherine Johnson. *Animals in Translation: Using the Mysteries of Autism to Decode Animal Behavior.* New York: Harvest Books, 2005. 356 pp. $15.00 (paper), ISBN 978-0-15-603144-8.

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Inside Out: Helping Animals by Knowing Them

I believe the most famous and influential philosophy text on the ethics of treating animals is Peter Singer's *Animal Liberation* .[1] In that book, Singer made the infamous conclusion that the lives of some mentally disabled people matter less, morally speaking, than the lives of some highly functioning animals. He also assumed that the more conscious you are, the more pain you feel, and that the reduction of pain is what matters most to animals and to humans. These two assumptions explain his conclusion about the mentally disabled: because some mentally disabled people have less consciousness than some highly functioning animals, reducing pain in those animals ought to be more urgent than reducing pain in those people. Singer's approach is still central to philosophical discussions of the ethics of animal treatment.

Temple Grandin, an autistic animal scientist and reformer of the meat industry, and Catherine Johnson, a psychologist specializing in autism, show how mistaken Singer's assumptions are. They do so, first and foremost, from Grandin's own experience, because as an autistic person she understands animals better than most people. In other words, she has a kind of intelligence Singer does not have, and this lets her see what Singer does not understand about animals. The irony is considerable. According to Grandin and Johnson, backed up by brain science and animal research, the less conscious you are–in the sense of "conscious" that Singer has in mind, neocortical activity–the more pain you feel, because the frontal lobe can actually inhibit and cope with our pain. Secondly, and more importantly, pain is not an animal's worst enemy–fear is. Fear sends an animal into serious stress, but pain is often not a serious problem for animals. If Grandin and Johnson are correct, we should put Singer's book in a showcase of the museum of philosophical antiquities.

The irony does not stop there.[2] Singer is a utilitarian and so aims to reduce the maximum amount of pain in the world. Singer himself advocated vegetarianism (in part because of the human hunger than can be ameliorated by using grain directly for consumption, without the waste of energy that is part of eating a higher trophic level up from grain), and the animal liberation movement his book promoted often adopted a no-dirty-hands approach to reform of the meat industry: Don't touch those products. Meanwhile, meat-eating rose around the world as industrial production spread and globalization increased its intensity. I do not see any end to this augmentation in sight.

Grandin, on the other hand, works with McDonalds, Burger King, Wendy's and KFC. These are the villains of many an animal liberationist. Grandin's slaughterhouse systems and auditing criteria were adopted by McDonalds and spread throughout the industry. They reduce pain in ways that are objective and reachable (e.g., 100 percent of animals must remain unconscious after stunning; only one out of twenty can not be stunned or killed correctly on the first try; no more than three out of a hundred animals may vocalize–"squeal, bellow, or moo"–during handling and stunning; only a very few cows can

be seen limping [p. 267]). More importantly, they reduce fear, using Grandin's insights into the detail orientation of animals to make a comfortable environment that does not terrorize the animals. All in all, Grandin's slaughterhouse systems and auditing criteria seem to have reduced more discomfort to animals than anything animal liberation in Singer's or the more puritan forms has done. Grandin has been more useful to animals.

Animal Intelligence

The central idea in Grandin and Johnson's book is that animals are much more intelligent than animal science–and I would add, philosophy–has yet admitted. The key is to understand the ways their intelligence is different from human intelligence. Here, Grandin and Johnson's method involves the second most important idea of the book: animal intelligence is very close in form to that of autistic people. Accordingly, autistic people can have an insight into the kind of intelligence animals have. Grandin uses her experience as an autistic person to cue her into what animal scientists are not seeing. She and Johnson then back up Grandin's intuitions with animal and brain research, experiments, and a style of reasoning based on evolutionary biology.

Before I synthesize Grandin and Johnson's insights, I would like to point out that their strategy is important for unworking speciesism, the discrimination against animals with which Singer charged most human societies. David Schmidtz has already pointed out that Singer was–again ironically–being speciesist in *Animal Liberation.*[3] Singer assumes that consciousness is what makes a species worthwhile. But there are many other capacities that are remarkable in the animal kingdom, such as the capacity to run 140 km an hour or swing between trees easily. Why should we take one capacity as the source of value? What Grandin and Johnson do can be seen as similar to what Schmidtz did. They suggest there are different kinds of intelligence, and that it is something of a prejudice to assert our kind as the most intelligent kind. After all, can we memorize a thousand-mile migration pattern after one trip, or sense when a person is going to have a seizure up to thirty minutes beforehand? These abilities are learned, not hardwired. Animal scientists and philosophers are being speciesist with their conceptions of intelligence.

Grandin and Johnson's view of animal intelligence centers around two important facts, which are correlated. First, animal neocortexes are smaller than those of humans. Second, animals appear to think in pictures. Autists do, too, and have trouble with various kinds of frontal lobe activity in their neocortexes. That is how Grandin has an insight into the kind of intelligence animals have. Because both autists and animals think in pictures, both are highly detail-oriented and have trouble generalizing using the abstraction language provides. Grandin and Johnson further claim that animals tend to be specialists, not generalists, at least in part because of the detail orientation in their thinking. Oriented to detail by what they perceive, not by what they abstract, they can focus on tasks to a great degree. This specialization, in turn, appears to enable some animals to have "animal genius," which Grandin and Johnson liken to the abilities of "idiot savants." Such savants are people with a mental disability who can accomplish extraordinary mental feats, such as the autist in *Rain Man* who could count cards so rapidly and thoroughly that he won inordinately at blackjack. Animal genius involves a combination of hyper-attuned sensory perception with specialization, such as when a bird memorizes a thousand-mile migration pattern after only one trip, a dog learns how to sense an owner's seizure long before it happens, or a bird remembers 90 percent of the thousand places it has buried seeds. In other words, Grandin and Johnson appear to chart a vector away from abstract thought grounded in language's generalizations and toward sensory pictures where detail, specificity, specialization, and even genius come into play.

But that is not all. In one of the most provocative parts of their book, Grandin and Johnson assert that a large number of kinds of animals should be seen as capable of language, regardless of the size of their neocortexes (pp. 272-283). Grandin and Johnson think that the evolutionary need to communicate is what we should focus on, not brain mass. Hence, birds and prairie dogs emerge as big language-users, right alongside dolphins. The authors even challenge Chomsky, suggesting that some animals, such as Alex–a famous parrot who learned to spell on his own–can create sentences on their own by understanding the rules underlying what they have memorized. Unfortunately, Grandin and Johnson's remarks on language, while interesting, are not entirely clear–a matter to which I now turn.

Ad hoc-ness

Grandin and Johnson's book is worth reading, even for people uninterested in animals. I consider it as a kind of consciousness-raising, and I looked forward to picking it up to read each time. Still, the book has some limitations from the standpoint of its argumentation and is uneven in terms of its purpose. I wish the authors would

have rectified these limitations before publication.

The major limitation appears to be the *ad hoc* nature of the book's conclusions. For example, the book's main thesis appears to be driven by a set of assumptions about animal intelligence, and yet these very assumptions are upended when it comes to animal communication. If I understood them correctly, Grandin and Johnson correlate neocortical activity with the linguistic ability to abstract or generalize. Yet they later explore animal communication in a way that suggests language is not correlated with the ability to abstract or generalize. While I imagine they can explain this apparent discrepancy, the absence of a more thorough explanation of what they mean by language and how the ability to generalize relates to language weakens the book. It makes the book appear *ad hoc*.

This appearance is reinforced by other aspects of the book. Grandin and Johnson often cite studies as support for their conclusions, but they seldom work through contradicting studies, and the reader therefore does not get a sense of how well established much of their support evidence is. When this vagueness is added to the many speculations Grandin, in particular, makes about what might really be going on in animals, the reader is left feeling that a lot of the book should be taken on faith. Grandin and Johnson do signal clearly when they are making a guess, and they also signal when their view is in a minority among researchers, but the reader is not presented with a thorough argument in many cases. This limitation in the book is also complicated by the fact that Grandin's hunches are fascinating and should be aired to spark research.

Morally speaking, the book also appears *ad hoc*. At several points, Grandin shows why she works with the meat industry: she cares for animals and wants them to have better lives in an industry that is not going away anytime soon, if ever (she and Johnson argue briefly for the necessity for carnivory for some people). I have no doubts that Grandin is motivated ethically by animal welfare more than or the same as most environmentalists. For one, she and Johnson think animals–especially dogs–made us human, accentuating caring traits and allowing our frontal lobes to grow over basic security functions farther down in the brain. That means they think we can't even respect ourselves fully without respecting animals. Grandin relates to animals at a very deep level. Yet she and Johnson never once discuss the ethics of experimentation on animals. Study after study in their book is provided thanks to this or that animal's brain being sliced open, modified, shocked, etc., and countless other cruelties are behind the numerous studies they cite. The absence of even acknowledging this issue in a book so otherwise informed by concern for animals is baffling and, I regret to say, irresponsible. I wish Grandin would turn to reforming science as well.

Finally, the book's purpose is unclear. Its main argument is to produce a thesis about animal intelligence. But the book also serves as a training guide, trouble-shooting guide for people in industry, and a collection of stories. At one point, I even felt the book was indirect autobiography. I do not think it is bad for a book to be so heterogeneous. I enjoyed it in this case. But I do worry that this heterogeneous quality, coupled with the other inconsistencies I mentioned, weakens the book's argument and makes the book pitch itself not to the skeptical but to the already impressed. Note, too, that this is not just a problem for a professor used to reading academic books. When clearly the book's genre is popular, it is a problem for arguments aimed at truth. One of the most endearing things about Grandin is that she is a straight shooter, with her own skeptical mind aiming at truth, especially when it is covered over by people's assumptions.

Overall, *Animals in Translation* is a thought-provoking book. I think its most interesting contribution is that it shows we care about animals by getting to know them first. This is such an obvious conclusion as to seem trivial. But I have never seen an environmental ethics class or course reader that started with this assumption.

Notes

[1]. Peter Singer, *Animal Liberation* (New York: Harper, 2001 [originally published in 1975]).

[2]. The irony that Temple Grandin, a mentally disabled person, should set Peter Singer, seen by many as an enemy of disability rights, straight about animal suffering. Singer's arguments created a furor among disability rights activists.

[3]. David Schmidtz, "Are All Species Equal?" in *Environmental Ethics: What Really Matters, What Really Works*, ed. David Schmidtz and Elizabeth Willott (New York: Oxford University Press, 2002), 96-103.

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