INDIVIDUALS, SPECIES, ECOSYSTEMS: A HARTSHORNIAN VIEW.

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Since his magnum opus, Creative Systems and Philosophic Method, appeared in 1970, Charles Hartshorne has devoted a great deal of attention to animals, both as a philosopher of nature and as an expert on bird song.
In this paper, I will bring Hartshorne's thought to bear on the question of what it means to be an individual animal and, further, to use his understanding to better understand our moral relations to animal species and to ecosystems. I should make it clear that I will be offering my own "Hartshornian" view rather than offering a slavish exegesis of Hartshorne's texts themselves.

What does it mean to be an individual animal? In that ethics is concerned with social relations, we should notice that our very bodies, and nonhuman animal bodies, are cases of social organization and cooperation. What human beings have in common with the "higher" animals (i.e., vertebrates) are multicellular bodies. An organ is a society of cells, with the animal body itself being a society of societies of cells, yet each cell is an individual in a stronger sense than an organ is.

Plants are also multicellular organisms, but they are not organized societies of individuals in a sophisticated way. Animals are different from plants in that they are individuals as wholes as well. Here is where the nervous system is so important. Without a nervous system, plants are many things taken as one, but they are not individuals in any deep sense. A plant's parts, like a forest's parts, are for the most part on their own. A plant is composed of cellular individuals, but it is not an individual on the supercellular level, hence to cut it down is not, from a moral point of view, analogous to killing a deer or even a fish, but to destroying a colony of paramecia or bacteria. Plants do not thirst even though their cells need water.

The nervous system is that subsociety of cells which makes human beings and "higher" animals supercellular individuals. In dreamless sleep, we become, in a bastardized way, what we would be like without a nervous system: a mere colony of cells. As Aristotle put it, a tree is like a sleeping man who never wakes up. Botanists explain growth in plants through cells not nervous systems. And as Whitehead put it, a tree is a democracy. Individuality at the supercellular level, or in the strong sense, is not just physiological but psychological as well. To sum up, animals are sentient in two senses: (1) they are sentient in the experiences of each concrete individual at a microscopic level, experiences which occur in plants and rocks as well (Sentience 1 or S1), and (2) they have sentience per se, which consists in those experiences, lapsing in dreamless sleep, that enable an individual animal as a whole to feel pain or, at times, to remember or anticipate pain, i.e., to suffer (Sentience 2 or S2). In that S1 is not sufficient to attribute pain or suffering to plants—where S2 is needed—plants can be eaten and used with equanimity, from a moral point of view (with an aesthetic point of view to be considered later in the paper), even if they too have some inherent value, whatever that means in this context, because of S1.

We should object to unnecessary pain given to individual animals because they suffer, not simply because their cells suffer. The parts are for the whole, which is the opposite of our usual egalitarian view of politics, according to which the group is just a means of securing the welfare of the members.

What makes an animal, even a human animal, the same individual? Once the term "soul" and Aristotelian "substance" were combined an exaggerated metaphysical individualism invaded Western culture. However, "being oneself" is at most a matter of degree, and not something absolute. On the bodily level, only our nerve cells endure throughout life. Individuality is based on a pattern of interaction, not a physical or mental concrete stuff. If the concrete units of reality are unit-processes, unit-events, singular cases of becoming or creativity, then reality consists of actions, not things. What then acts? To ask this question is to force, in too crude a manner, the structure of language on that which language is about. The panpsychist view I have been talking about holds that anything concrete feels,
leaving out of the picture abstractions like "blue" and collections of concrete individuals like "two cats" (or species, ecosystems), which may feel individually but not collectively. Of course, tables do not feel, but that does not mean that there is no feeling in them. Although the table is "relatively concrete," it is really a collection of more concrete singulars: molecules, atoms, or better, subatomic particles.

If all concrete individuals are sentient, it might be asked if "sentient individual" loses its distinctive meaning. Not necessarily, because as in the cases of tables and plants, many pseudo-individual entities are not really individuals at all. The historical dualism of mind and matter mistook composites for singulars, and materialism groundlessly attributed the qualities of the apparent singulars (like rocks) to the unperceived real singulars. Obviously, as a working strategy of research I have no objection to a materialism which assumes no mental states and goes as far as it can on this parsimonious basis; it is "metaphysical" materialism that I am arguing against.

An atom is not just smaller than a table (or a mammal), it is a different kind of thing. We should all be materialists, if what is meant by "materialism" is that human beings and everything else are made up of smaller integrated units of actuality: molecules, atoms, atomic particles, or plant and animal cells. But this is not what is usually meant by the term; it usually means belief in inert, lifeless stuff as the building blocks of the world. It is only a short step from this belief to the widely shared view that nature is merely a resource for human exploitation. Dualism can also easily lead to the view that nature is there for us to plunder, in that reality is mostly mindless, except for a few minds scattered about that deserve consideration. Nonetheless, individual animals, whose experiences are true singulars, at least at a given moment, indicate that there are differences in nature in that the "experiences" of composites like geraniums are not perceived as singulars. But absolute differences cannot be found, and this because of S1. The fallacy of composition would be committed in inferring the sentience of stones from that of microscopic reality, and the fallacy of division prohibits us from inferring the insentience or at least inactivity of microscopic reality from that of stones. Thus, my panpsychism is opposed to materialism, dualism, idealism (if by "idealism" is meant that to be is to be perceived by a human mind), and emergence theory (which is, in temporal respects, a dualism consisting of mindless matter first, then minded matter). It is also obviously opposed to what Whitehead calls the fallacy of misplaced concreteness, i.e., taking abstract composites for concrete singulars.

What then do individual humans have in common with individual "higher" animals that they do not have in common with atoms, rocks, plants, animal species, and ecosystems? S2. It is this which primarily distinguishes the "higher" animals, including humans, from other forms of creation. Members of our species are on a recent branch of a tree of life billions of years old; countless steps led to the development of nervous systems and their fruition, brains. These we share with "higher" animals. In addition, the particularities of our neural structure we share with primates, whales, porpoises, wolves, horses, cows, pigs, chickens, and elephants. To assume that all of this development over so many years is mere preparation for humans is to exchange a sublime and coherent vision for a childishly arbitrary one.
tures" are for us the basic samples of reality. Dialectic takes us to nonhuman nature, even if we can never have concrete nonhuman feelings. The riddle is to try to know or at least imagine how it feels to be another subject of feeling than one's own present self. This is often difficult even for one's own past selves, as an infant, say. Because of their simplicity, chimpanzees make the project easier, strange as that may seem, but because of their vastly different lifestyles, whales are much harder. Fish and insects are subject of feeling than one's own present feelings. The riddle is to at least imagine how it feels to be another.

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Materialism dies hard, however. There are those who wish to preserve the belief that reality is made of bits of stuff. The panpsychist view I am defending, however, is that every singular active agent—there are no singular inactive ones, the seemingly inactive being composites of active agents—resembles an individual animal in having some initiative in its activity or spontaneous movement or feelings. The feelings of cells would include their internal relationships and the stimulation they receive from other cells—or in nerve cells, across synaptic connections. We have direct evidence that cells do feel, i.e., we feel pain because cellular harm is done. Our suffering is an immediate sharing in or sympathy with feeling in our cells. Granted, awareness of our cells is blurred, in that we cannot identify the microindividuals as such, but our experience of pain indicates cellular feeling nonetheless. Notice that pain is localized (although unhappiness is not), as when I stub my toe. This example should help illustrate the difference between S1 and S2. So is pleasure localized, as in sex. And where there is feeling there is valuing or mattering, and in more than an instrumental sense.

It would seem to follow from what I have said that our moral duties are to individual animals, not to animal species, because animal species do not have anything like a super-nervous system to gather together at a higher level the sentiency, internal relations, intrinsic value, and/or rationality found in individual animals. Elephantness does not feel, suffer, anticipate the future, etc.; elephants do all of these things and more, but nonetheless there are at least two reasons to consider duties "beyond" those we have to individual animals: (1) if aesthetic considerations are or ought to be viewed not as peripheral to life lived at a high level, but as integral to such a life, then there may be an "aesthetic imperative," largely but not exclusively on anthropocentric grounds, to be concerned about animal species. This view is a good one. But on the view I have been defending, even if aesthetic considerations should not be viewed as peripheral to life lived at a high level, these considerations should not confuse us into thinking that our concern for animal species is more important than our concern for individual animals.

Recently, there was a furor when twenty-three American eagles were found illegally and needlessly killed. Why such an uproar over these animals when thousands of animals are needlessly (albeit legally) slaughtered every day? Because the eagles symbolize our freedom? Or because of a concern we have for them, whether or not they are members of an endangered species, the loss of which would diminish our view of the world aesthetically?

(2) A second reason to think that we have duties to some reality "beyond" that found in individual animals, whether human or nonhuman, is that there is indeed a super-animal individual. Let me hypothesize for the moment that there are three—not two—sorts of sentiency. S1, again, is sentiency at the microscopic level of cells, atomic particles, and the like, where reality in its fundamental constituents itself seems to have at least a partially indeterminate character of self-motion. That is, the sum total of efficient causes from the past do not supply the sufficient cause to explain the behavior of the smallest units of becoming in the world. S2 is sentiency per se, sentiency in the sense of feeling of feeling. S3 is divine sentiency. The following four term analogy may help illustrate my hypothesis: S1:S2::S2:S3. On this hypothesis, the universe is a society or an organism (a Platonic World-Soul) of which one member (God, or the Platonic Demiurge) is preeminent just as humans are societies of cells of which the mental part is preeminent.

I will not offer here any arguments in
favor of the existence of S3. Rather, my point is to show what sort of being would have to exist in order for there to be moral duties to something "beyond" individual animals. Without such a being, any reasons to respect animal species or ecosystems would of necessity be aesthetic. If in the long run we will not be here, and only the everlasting whole of things will be, then perhaps this fact, if nothing else, could humble us into a consideration of individual animals and animal species and ecosystems.

It is true that humans are the only creatures that can, in addition to empathizing vividly with other creatures (which some individual animals can also do), clearly and definitely put before themselves the question, whose values ought to give way in the case of conflict? Humans can see themselves as trustees for a cosmic, divine end or an all-inclusive value vaguely understood. It is just this value in the distant as well as in the near future with which religion at its best is concerned. All will agree that the parts of an animal (its cells) have their value primarily, if not entirely, in their contribution to the whole animal. But when the inclusive or cosmic whole is considered, we hesitate. Politics misleads us here. A good state is one that fosters and protects its parts, i.e., individuals. There is no further good actualized in the state as an "individual" entity. The cosmos is different if there is indeed an S3 individual where an organic analogy may be more appropriate than a political one, as Plato realized in the Timaeus when he compared the created cosmos with a (divine) animal. Unless we use such an organic analogy, the dictum that God is to be loved with one's entire being either makes no sense or appears totalitarian. The issue here is, to paraphrase Erazim Kohak, whether we will conceive the world around us and of ourselves in it as personal, a meaningful whole, honoring its order as continuous with the moral law of our own being, or as impersonal, a chance aggregate of matter propelled by blind force, a concatenation of parts, exhibiting at most random regularities.

Obviously problems still remain. That there are laws of nature is providential on my hypothesis of S3, in order to set limits to freedom. Some new modes of behavior prove to be adaptive in evolutionary history, such that even species may change considerably, especially gregarious species like barn swallows. But the greater the power of thinking becomes, the more likely individual variety will be evidenced, even to the point of exterminating species symbiotically valuable to one's own species. This is the price one may have to pay in a universe without a tyrant idea of divine power. The less than sunburned features of freedom can be overemphasized, however. Symbiosis is far more prevalent: insects and birds help plants to propagate, and plants help birds in various ways. Only believing in God as an omnipotent tyrant creates the nasty problem of evil when freedoms collide. Animals largely serve the needs of their species through both instinct and culture, the latter of which is increasingly important in "higher" animals.

Conflict and suffering cannot be wholly excluded; such is the price of diversity, which itself is partially constitutive of beauty, whether in animals, human beings, or God. And on lower levels such conflict involves no wickedness. All animals die, although only human animals know this. Yet only some humans consider that the result of death is not chaos but simply a return to the more pervasive type of order expressive of the world. Let me make it clear that I am in favor of preserving endangered species and ecosystems, and at quite considerable economic cost. But I am arguing that the reasons for such preservation are, and in this order: (1) the fact that when animal species are extinguished, individual animals (often massive numbers of them) are extinguished, and hardly ever for any morally compelling reason, and (2) the fact that the world is aesthetically diminished for individual animals, for individual humans, and, if there is such, for God when species and ecosystems are extinguished.

Even if we stipulate that individual humans are more valuable than individual animals, and humanity more valuable than other species, we do not know if they are infinitely more valuable. We are mortal in the same sense as other creatures, save for the difference that we alone can contribute consciously to the beauty of the whole of things, a beauty which survives us. If we avoid absolutizing humanity's difference from the rest of nature, we can more easily open our eyes to what may be the really infinite
difference, that between any animal (or transitory creature) and S3.

We value each human individually, but there is a tendency to view one hermit thrush as significant chiefly as a specimen of its species. Perhaps this is because individual differences are rather slight in birds, perhaps it is because birds do not have a concept of self-identity, but neither do many humans that we respect as individuals. Although the death of a bird is very different from the death of a human, we must keep in mind that Birdhood or the Platonic Form of Cow never suffer, but his bird and that cow do. No doubt our giving individual names to pets largely accounts for the preferential treatment they often get in comparison with other animals.

Animals cannot be murdered, but the unnecessary killing of individual animals is close enough to murder that a case can be made against hunting for sport or against the wanton slaughter of animals for the table. By regulating the population sizes of animal species, humanity (perhaps legitimately) subordinates other species, but this is a far cry from uncalled for extermination of individual animals, and more drastically, whole animal species. That is, our ethical duties to individual animals outweigh, say, our culinary delight in animal food, but aesthetic considerations are nonetheless superior to a view of nature which sees it as an arena for the acquisition of capital:

To a nature lover it takes a lot of conveniences to balance a radical diminution of natural beauty. Suppose the more than seven hundred species of birds in this country were reduced to one hundred, and in any one state from two or three hundred to two or three dozen, would life remain as interesting? Not for some of us. The lovely prairie grass is gone. Every lawn begins to look about like every other. How much monotony do we want? Only a few species of trees flourish in our cities. Our parks lack the rich undergrowth that many species of animals require, and so they are dull places, scarcely better than the tiny backyards of the urban poor. (Hartshorne, "The Rights of the Subhuman World")

Suppose we grant that if it were necessary to kill a single bird to save a human life in some hypothetical situation, that the bird should be killed. Think of Jesus' claim that each of us is of more value than many sparrows, even if God cares for the fall of each sparrow. But even if we grant this position, the question is, how many more? Hartshorne himself would seriously consider giving up the remainder of his life if it would definitely save a threatened species for millenia. That is, it is highly unlikely that any one of us is of more value than all of the individual sparrows, considered concomitantly with the aesthetic worth of the sparrow species. Some solace, perhaps not much, is received on the hypothesis that however animal and human values are distributed, they all add up to a significant whole in the divine life S3.

The burden of proof when the rich tapestry in wild nature is destroyed or when individual animals are needlessly killed is not with the preservationist or the vegetarian:

We are the only animals capable of being interested in, finding some use for, taking some delight in, all the forms of life. This is why zoos and botanical gardens exist. But wild nature has values that such artificial vessels can never more than partially contain. Even from the selfish human point of view this
is true. Thus one finds some of the famous species of songbirds in zoos, but so crowded together that what one hears from them is a discordant, confused, frustrating blend of noises, nothing remotely like the symphony of distinguishable voices one may hear at daybreak in a forest or wild savannah. (Ibid.)

Exclusive concern with animal species and ecosystems, as opposed to individual animals, is callous. What is most bothersome, however, is if individual animals and whole animal species are slaughtered or extinguished. Then not only are particular animals treated unfairly, but also their species dependent mode of enjoyment and mode of giving joy come to an end.

As before, however, the species mode of enjoyment ought not to be the primary concern. Some hold that the death of one chicken makes room for the raising of another, so that the loss of value has been replaced. This utilitarian reasoning, whereby one quantity of value can be sacrificed if another replaces it, shows some concern for animals, but it is really only the Platonic Form "Chickenness" which is revered, not this particular chicken killed, which is the real locus of value. Mortality as such is not an evil; it is premature, ugly, or unnecessary modes of dying which evolve. And it is the individual animal (e.g., raised for the table) which dies in a premature, ugly, or unnecessary way. It must be granted that terms like "premature" and "ugly" must be used analogically when applied to the deaths of individual animals, but they must be used nonetheless.

The reason why these terms must be used is largely due to their possession of internal relations. An example of an external internal relation is grass being eaten by a cow or a fruit being eaten by a human (remembering, however, that the microscopic parts of grass or fruit have internal relations). A dog's being behind a tree or a rock makes a difference to the dog, say if the dog had been seeking shade, but the tree or rock remains unaffected even if the dog's repeated urination on the tree affects its growth, hence the relation is internal to the dog but external to the tree or rock. This sort of relation changes greatly when a cow is eaten by a human. A cow which is treated as a factory machine while alive, which senses its own imminent death at the slaughterhouse, and which experiences pain in the transport to the slaughterhouse, and intense pain moments before its death, is capable of internal relations, hence eating it seems to be an internal-internal relation. If ethics has something to do with the heightening of importance given to internal relations, then the above examples are instructive. For, as long as we are willing to kill and eat individual animals when it is not necessary to do so, and for as long as we treat individual animals as commodities on factory farms or in labs or on mink ranches, it is difficult to see how we will show any more concern for animals in the wild, unless of course it is

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Those interested in chairs the session or in being commentators should contact Prof. Sapontzis by September 15.

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in our own anthropocentric interest to do so.

There is no incompatibility in defending the individual dignity of persons (and animals) and claiming that our ultimate obligations are to the future in a superpersonal sense, to God, S3, again, if there is such:

The whole idea that our final obligation is to groups of animals, whether human alone or (as I would say) human and subhuman, is to my mind utterly inadequate. Here all religions largely agree. If the cosmos has no value, neither, by any rational standard, do animals or persons. The parts are for the whole, the ephemeral for the abiding. And the only aspects of the whole that we can influence or benefit are future aspects. I call this doctrine contributionism. (Hartshorne, "The Ethics of Contributionism").

That is, the rational aim of human life, at least, when our transitoriness and divine everlastingness are considered, is to contribute value to the whole of things, to the cosmos, including the value of present happiness in individual humans and animals.

Bibliography


