Discussion

GAVERICK MATHENY

LEAST HARM: A DEFENSE OF VEGETARIANISM FROM STEVEN DAVIS'S OMNIVOROUS PROPOSAL

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ABSTRACT. In his article, "Least Harm," Steven Davis argues that the number of animals killed in ruminant-pasture production is less than the number of animals killed in crop production. Davis then concludes the adoption of an omnivorous diet would cause less harm than the adoption of a vegetarian diet. Davis's argument fails on three counts: first, Davis makes a mathematical error in using total rather than per capita estimates of animals killed; second, he focuses on the number of animals killed in production and ignores the welfare of these animals; and third, he does not count the number of animals who may be prevented from existing. When we correct these errors, Davis's argument makes a strong case for, rather than against, adopting a vegetarian diet: vegetarianism kills fewer animals, involves better treatment of animals, and likely allows a greater number of animals with lives worth living to exist.

KEY WORDS: animal production, animal rights, animal welfare, least harm, population, utilitarianism, vegetarianism

Each year in the United States, approximately ten billion land animals are raised and slaughtered for human consumption. Given the suffering these animals endure, and given that all our nutritional needs can easily be satisfied without eating these animals, arguments that vegetarianism is morally required have been advanced from a wide range of ethical perspectives: utilitarianism (Singer, 2002), rights-based deontology (Regan, 1983), contractarianism (Rowlands, 2002; Bernstein, 1997), virtue ethics (Hursthouse, 2000), common-sense morality (DeGrazia, 1996; Engel, 1999; Sapontzis 1987), and religious moralities (Linzey and Regan, 1988). Common to these arguments is the belief that vegetarian diets cause the *least harm* – to animals, human health, and the environment – and are thereby morally obligatory.

In his article, "Least Harm," Steven Davis (2003) accepts the common moral intuition that we should cause the least harm (the "least harm principle") but challenges the empirical claim that vegetarian diets do in fact cause the least harm. Davis argues the number of wild animals (mice, rabbits, amphibians, birds, and other species) who are killed in

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crop production from "plowing, disking, harrowing, planting, cultivating, applying herbicides and pesticides as well as harvesting" is *greater* than the number of wild animals *and* farmed animals who die in ruminant-pasture production. Given the least harm principle, Davis concludes the collective adoption of an omnivorous diet consisting both of free-range ruminant meat and vegetarian fare would be more ethical than that of a strictly vegetarian (vegan) diet.[1]

While eating animals who are grazed rather than intensively confined would vastly improve the welfare of farmed animals given their current mistreatment, Davis does not succeed in showing this is preferable to vegetarianism. First, Davis makes a mathematical error in using total rather than per capita estimates of animals killed; second, he focuses on the number of animals killed in ruminant and crop production systems and ignores important considerations about the welfare of animals under both systems; and third, he does not consider the number of animals who are prevented from existing under the two systems. After correcting for these errors, Davis's argument makes a strong case for, rather than against, adopting a vegetarian diet.

First, Davis makes an error in calculating how many animals would be killed to feed a vegan-vegetarian population. He explains,

> There are 120 million ha of cropland harvested in the USA each year. If all of that land was used to produce crops to support a vegan diet, and if 15 animals of the field are killed per ha per year, then 15 × 120 million = 1800 million or 1.8 billion animals would be killed annually to produce a vegan diet for the USA.

Davis estimates that only 7.5 animals of the field per hectare die in ruminant-pasture. If we were to convert half of the 120 million hectares of US cropland to ruminant-pasture and half to growing vegetables, Davis claims we could feed the US population on a diet of ruminant meat and crops and kill only 1.35 billion animals annually in the process. Thus, Davis concludes his omnivorous proposal would save the lives of 450 million animals each year.

Davis mistakenly assumes the two systems – crops only and crops with ruminant-pasture – using the same total amount of land, would feed identical numbers of people (i.e., the US population). In fact, crop and ruminant systems produce different amounts of food per hectare – the two systems would feed different numbers of people. To properly compare the harm caused by the two systems, we ought to calculate how many animals are killed in feeding equal populations – or the number of animals killed *per consumer*.

[1] It is important to note that Davis's proposal is radically unsupportive of the *status quo* in animal agriculture. In effect, his proposal calls for the complete abolition of intensive confinement and an end to poultry and pork production.

Davis suggests the number of wild animals killed per hectare in crop production (15) is twice that killed in ruminant-pasture (7.5). If this is true, then as long as crop production uses less than half as many hectares as ruminant-pasture to deliver the same amount of food, a vegetarian will kill fewer animals than an omnivore. In fact, crop production uses less than half as many hectares as grass-fed dairy and one-tenth as many hectares as grass-fed beef to deliver the same amount of protein. In one year, 1,000 kilograms of protein can be produced on as few as 1.0 hectares planted with soy and corn, 2.6 hectares used as pasture for grass-fed dairy cows, or 10 hectares used as pasture for grass-fed beef cattle (Vandehaar, 1998; UNFAO, 1996). As such, to obtain the 20 kilograms of protein per year recommended for adults, a vegan-vegetarian would kill 0.3 wild animals annually, a lacto-vegetarian would kill 0.39 wild animals, while a Davis-style omnivore would kill 1.5 wild animals. Thus, correcting Davis's math, we see that a vegan-vegetarian population would kill the fewest number of wild animals, followed closely by a lacto-vegetarian population.

However, suppose this were not the case and that, in fact, fewer animals would be killed under Davis's omnivorism. Would it follow that Davis's plan causes the least harm? Not necessarily. Early in the paper, Davis shifts from discussing *the harm done to animals* under different agricultural systems to *the number of animals killed*. This shift is not explained by Davis and is not justified by the most common moral views, all of which recognize harms other than death.

Utilitarians, for instance, believe harm is done by decreasing the total amount of pleasure or preference-satisfaction in the world. Thus animals are harmed whenever they experience pain or are left unable to satisfy their preferences. The prolongation of life may be one of these preferences, but there are certainly others – for instance, a life free of confinement and physical mutilation.

Like utilitarians, deontologists are not concerned exclusively with killing. Regan, for instance, believes animals have a right to "respectful treatment" – which includes a right against non-lethal mistreatment (Regan, 1983). The violation of this right would qualify as a harm. We would say, for instance, a person who beats his dogs or cats without killing them has still harmed them.

Similarly, virtue theorists disapprove of non-lethal mistreatment of animals as such actions demonstrate a disregard for animal suffering. If we believe sympathy, benevolence, and compassion are virtues, then we would not expect a virtuous agent to ignore the suffering endured by farmed animals before their deaths (Hursthouse, 2000).

I cannot think of an ethical theory that equates "harm" with "number of deaths." All the theories of which I am aware are quite concerned with the

treatment of animals up to their deaths. Davis, in discussing the number of animals killed rather than their treatment prior to death, ignores an important question that must be answered in order to assess which system of agriculture causes the least harm.

In comparing the harms caused by crop and ruminant production, we should compare the treatment of, say, a wild mouse up until his or her death in a harvester, with that of a grass-fed cow. The wild mouse lives free of confinement and is able to practice natural habits like roaming, breeding, and foraging. In contrast, the grass-fed cow, while able to roam some distance in a fenced pasture, may suffer third-degree burns (branding), have holes punched in his ears (tagging), be castrated, have his horns scooped out of his head (dehorning), and be kept from breeding naturally. Once reaching market weight, he can be transported up to several hundred miles without food, water, or protection from extreme heat or cold; then he is killed in a conventional slaughterhouse. The conditions of slaughterhouses have been described in detail elsewhere (Eisnitz, 1997). Suffice it to say, it is hard to imagine that the pain experienced by a mouse as she or he is killed in a harvester compares to the pain even a *grass-fed* cow must endure before being killed. Likewise, those who are concerned principally with the treatment of animals, rather than simply the number of animals' deaths, have more reason to become vegetarian. Again, this is because vegetarianism causes the least harm, understood in terms of animal suffering, compared to any system of animal agriculture, Davis's included.

As mentioned above, utilitarians are concerned not with the number of animals killed, but with their total pleasure or preference-satisfaction. This raises an additional problem with Davis's argument for "total-view" utilitarians, who believe we ought to maximize the amount of pleasure or preference-satisfaction in the world not only by increasing the happiness of *existing* animals, but also by increasing the total *population* of happy animals (Parfit, 1984; Singer, 1993; Hare, 1993). A total-view utilitarian thinks, all else being equal, it is better to have two happy animals than one. In the past, this view has been used to justify the consumption of meat, since farmed animals would not exist if not for meat production. This argument, sometimes called "The Logic of the Larder" (Stephen, 1896), is rebutted by recognizing that while a particular animal may have a life worth living, he or she may harm a number of other animals and/or prevent other animals from existing. In such cases, it may be better if that particular animal had not existed (Gruzalski, 1989).

For example, consider an invasive species such as feral cats on the islands of Northwest Mexico. These cats are responsible for the decline

of many seabird colonies and the extinction of multiple terrestrial bird species. The total wildlife population on the islands would have benefited had the feral cat population not increased. For total-view utilitarians, more is merrier until introducing additional animals decreases the total welfare in the population – because these additional animals don't have lives worth living, harm existing animals, or prevent some greater number of animals from existing.

These considerations typically are not germane to conventional animal farming. The conditions in which most farmed animals are now raised are believed by many to be so inhumane, it would be better had these animals not existed. Of course deciding what makes a life worth living is no simple matter, but we can think how we consider whether or not to euthanize a hopelessly sick dog or cat. I suspect the suffering experienced by animals in factory farms is greater than that experienced by many of those sick dogs and cats we choose to euthanize, as factory farmed animals often experience an entire lifetime of suffering compared with a few weeks or months of pain. If, for instance, we knew our dog or cat would have no choice but to be confined in a cage so restrictive turning around or freely stretching limbs is difficult if not impossible, live in his own excrement, be castrated, debeaked, dehorned, or have his teeth, tail, and toes sliced off without anesthesia, I suspect most of us would believe euthanizing the animal would be the humane choice. It would be better, then, if farmed animals who endure these conditions did not exist.

Davis does not address factory farmed animals, as he limits his argument to free-range ruminants, including grass-fed cows. Do these animals have lives worth living? I suspect so, despite the trauma they undergo during transportation and slaughter. This does not mean, however, that it is better off that they exist than not, as we saw in the case of the feral cats in Mexico. For by using land and resources formerly or otherwise available to wild animals, grazing cattle prevent some number of smaller wild animals from existing. In contrast to the earlier point made regarding the number of animals killed, this issue is concerned with the total number of animals with lives worth living who exist at any one time. For total-view utilitarians, it is the second number that matters.

What should such utilitarians think about Davis's proposal to increase the number of grazed animals in the United States by a factor of ten? I doubt they should support it.

We have a few reasons to think feeding a vegetarian population allows more animals to exist than feeding an omnivorous population. With only one-fifth of US beef cattle grass-fed, the negative effects of overgrazing on wildlife populations are already well-documented (Donahue, 1999). These

ruminants graze on 160 million hectares, which is about three times the land area used to grow crops for human consumption. What would happen if the number of grazed animals were multiplied by ten, as Davis proposes? More forest and grassland would have to be converted to pasture, more soil erosion and watershed contamination would occur, and more wild habitats would be destroyed.

As we already saw, ruminant production uses ten times as much land as crop production to yield the same amount of food. Thus, as long as the combined number of wild animals on nine wild acres plus one cultivated acre is greater than the number of animals on ten grazed acres, a vegan-vegetarian will allow the greatest number of wild animals to exist. This should not fully persuade the total-view utilitarian, as we have not compared the welfare of wild animals living on wild acres and among crops to those living among grazing animals. Nevertheless, assuming there are not broad differences in the welfare of these wild animals, it seems likely that a total utilitarian ought to adopt a vegetarian diet.

We have seen the case for vegetarianism is stronger than the case for eating ruminants – namely, vegetarianism kills fewer animals, involves better treatment of animals, and likely allows a greater number of animals with lives worth living to exist. These arguments stand alone, yet it is worthwhile to mention the additional benefits of vegetarianism to human health, which are considerable (ADA, 1997), and to charity. Regarding the latter, a vegetarian diet costs less money to sustain than an omnivorous diet and thereby allows us to spend our money on projects more philanthropic than our own food purchases.

Although Davis does not show omnivorism is preferable to vegetarianism, he should be commended for emphasizing the importance of farmed animal welfare as a moral issue, now emerging as one of the most significant of the day. Predictably, his argument has been cited as a justification for traditional omnivorism (Corliss, 2002), a misreading Davis did not intend and one that any faithful reading of his paper should prevent. The type of ruminant production Davis proposes is a world apart from the omnivorism prevalent in the United States. I, for one, would be delighted if US animal agriculture would shift toward Davis's proposed system, as it would greatly improve the lives of farmed animals now intensively confined. In fact, even a shift from eating intensively-confined chicken to eating intensively-confined beef would be a vast improvement. Nevertheless, in the end, the case for vegetarianism is still stronger.[2]

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School of Public Health
Johns Hopkins University
E-mail: jmatheny@jhsph.edu