

Bugging the Strict Vegan

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Abstract Entomophagy—eating insects—is getting a lot of attention these days. However, strict vegans are often uncomfortable with entomophagy based on some version of the precautionary principle: if you aren't sure that a being isn't sentient, then you should treat it as though it is. But not only do precautionary principle-based arguments against entomophagy fail, they seem to support the opposite conclusion: strict vegans ought to eat bugs.

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Entomophagy—eating insects—appears to be gaining steam. It's been promoted in *The Economist*,¹ *Slate*,² *The Huffington Post*,³ and *The Guardian*.⁴ There's a popular TED talk about the practice.⁵ Austin, TX just hosted its 8th Annual Bug Festival—an event devoted to edible insects—and the University of Arizona is about to host its 5th. Even some philosophers have gotten on the bandwagon, such as Meyers (2013). Insects, it seems, are in.

¹ <http://www.economist.com/news/science-and-technology/21620560-merits-and-challenges-turning-bugs-food-insect-mix-and-health>.

² http://www.slate.com/articles/technology/future_tense/2012/06/edible_insects_and_seaweed_are_the_perfect_sustainable_foods_.html.

³ <http://www.huffingtonpost.com/news/entomophagy/>.

⁴ <http://www.theguardian.com/environment/world-on-a-plate/2014/may/20/food-insects-entomophagy-fao-bugs-food-security>.

⁵ http://www.ted.com/talks/marcel_dicke_why_not_eat_insects?language=en.

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But should they be? The strict vegan isn't convinced.⁶ His view goes something like this:

Admittedly, we don't have clear evidence for insect sentience.⁷ (For a now-slightly-dated overview, but one full of helpful references, see DeGrazia 1996. For more recent discussions, see Carruthers 2007, 2011; Huebner 2011) However, there is suggestive evidence concerning some species, such as the honey bee, and there are a few factors that make it unlikely that we'd detect consciousness in insects even if it's there. First, you can't measure consciousness directly. We can only look for whatever gives rise to it, which may be different in very different forms of life. Second, we should recognize that a "favor the simpler hypothesis" policy amounts to a bias in favor of behaviorist explanations, which is to say that deck is stacked against attributing mentality to insects. (For more on these two points, see Bradshaw 1998.) Third, research on attributing mentality to farm animals suggests that those attributions are influenced by an impulse to reduce cognitive dissonance related to how we treat those beings (Loughnan et al. 2010). And as Jeff Sebo (ms) notes, our sympathies can be influenced by factors that are irrelevant to whether a being is sentient, such as whether it has four or six legs. So, it wouldn't be surprising if our judgments of insect sentience are also affected by such factors. Most importantly, though, it would be a tragedy if we were wrong about insect sentience. If they *are* conscious, then to kill them for food would be to cause significant unnecessary harm. Given these considerations, we shouldn't eat insects: the risk of significant unnecessary harm is too great relative to the good that might come from entomophagy.

Let's call this *the strict vegan's argument*. Obviously enough, it doesn't merely apply to insects. You could make similar points about other simple invertebrates: some mollusks (such as oysters), jellyfish, various crustaceans (shrimp, crabs, lobsters), etc. So if successful, the strict vegan's argument has significant implications for dietary ethics.

There are a few ways you might object to the strict vegan's argument. You might argue that the odds of insect sentience are low enough that only an implausible version of the precautionary principle would get the desired conclusion. However, vegans often appeal to "least harm" principles, so if there is a harm-free alternative, then even very low odds of sentience will still be morally relevant. Alternately, you might insist that even *if* insects are sentient, we wouldn't harm them by killing them—perhaps because they have no future-directed desires, and it would be easy to kill them painlessly. But vegans are unlikely to agree that death doesn't harm a sentient being, since lots of mammals probably don't have future-directed desires,

⁶ Not all vegans will take this line. David DeGrazia, for example, argues for *de facto* veganism, and yet says that "[h]ighly virtuous people may wish to give [invertebrates] the benefit of the doubt and abstain from eating them. My view does not condemn eating these animals" (DeGrazia 1996, p. 289). However, there are others—like Gary Francione—who are committed to giving insects the benefit of the doubt. See, e.g., what he says here: <http://www.abolitionistapproach.com/sentience/>. In my experience, vegans differ over whether it's permissible to eat bugs, but virtually all opt not to eat them themselves.

⁷ I use the terms "sentient" and "conscious" as synonyms, but as far as I can see, nothing substantive turns on that.

and they could be killed painlessly too. Few vegans would be comfortable saying that we could eat chickens if we could just improve our slaughter practices. Finally, you might appeal to the causal impotence problem: you shouldn't raise and slaughter your own insects, but there's no reason not to buy them commercially; after all, you aren't harming the ones you're eating (assuming they're already dead), and no future insect will be spared by your decision not to purchase the ones currently on the shelf. Plainly, though, vegans ought to adopt an ethic that let them navigate the causal impotence problem, at least insofar as they take themselves to have demanding dietary obligations while living in a large market economy.

Is there any objection that might persuade the strict vegan to eat insects—or, at least, any argument that ought to persuade him? I think so. It begins with the harms involved in plant agriculture.

The Argument

Davis (2003) argues that the least harm principle—which he takes from Regan (1983)—commits us to supplementing a plant-based diet with the flesh of large herbivores. His reasoning is simple. Plant production is now a mechanized affair, and both planting and harvesting involve heavy machinery that kills the animals that happen to be in the field—mice, voles, rabbits, songbirds, toads, etc. When you compare the great number of animals harmed by plant agriculture to the relatively small number of animals harmed by slaughtering pasture-raised cattle, it looks like we ought to have a little beef with our kale and quinoa. Relative to a strict plant-based diet, the one that includes meat is the one that, if universally adopted, would produce the least harm.⁸

As it happens, though, Davis's argument fails. Matheny (2003) shows that Davis underestimates the harm involved in raising cattle, and Lamey (2007) makes a good case that Davis overestimates the number of animals harmed in plant agriculture.

Still, no one contests that *some* animals are harmed in plant production. And this point is enough to throw a wrench in precautionary arguments, of which the strict vegan argument is an example. As vegans have long appreciated, our choice is not between a host of diets that are complicit in harm and an alternative—strict veganism—that's harm-free. Vegans hope to minimize the harm associated with their food choices, but sensible ones are under no illusion that they've eliminated it entirely. However, precautionary arguments seem to assume that there is a harm-free alternative. So, either vegans need to run a precautionary argument that doesn't make that assumption, or they need to stop relying on precautionary arguments.

To see the problem, consider two diets: the strict vegan diet and the “plants and bugs” diet—a diet that's mostly plant-based, but includes some insects. The strict vegan says that we should prefer the strict vegan diet because insects might be sentient, and we shouldn't risk harming beings that might be sentient. So far, so good. But in the light of Davis's work, we should point out that the strict vegan's diet harms beings *that we know to be sentient*—namely, those critters that get

⁸ Davis writes for a North American audience. For a similar argument in an Australian context, see Archer (2011).

crushed by combines (among other fates). Granted, offsetting some of our plant consumption with insects would probably involve killing far more insects than it would save field mice. But if our choice is between, on the one hand, harming beings that we know to be sentient and, on the other, harming beings that we *don't* know to be sentient, we should go with the latter option.

We can represent the choice as a trolley problem. On the main track, there is a person who will be killed by an out-of-control trolley. You can divert the trolley—which appears to be empty—onto a side track. Unfortunately, the side track leads to a bridge that was never finished, and if the trolley goes that way, it will hurtle into a canyon. What should you do? Well, you could be wrong about whether the trolley is empty. But since it seems to be, you ought to divert it onto the side track. Again, when the choice is between saving something *clearly* morally valuable (the one person) and saving something that *might* be morally valuable (the trolley—which is serving as a proxy for the possible passengers), the scales tip in favor of saving the one we know to matter.

The strict vegan might balk at this. Perhaps he's not sure that the apparently-empty trolley is a good analogue for insects, since he's not prepared to concede that insects don't seem to be sentient. To be clear, his worry is *not* that insects *seem* to be sentient. If that were the worry, then we'd no longer be discussing a precautionary argument—we'd be discussing a run-of-the-mill argument from the moral value of conscious experiences. Instead, the claim is that insects neither seem nor seem not to be sentient. It's supposed to be an open question.

If that's his reaction, let's tweak the scenario. Again, there is a person on the main track who will be killed by an out-of-control trolley. You can divert the trolley onto a side track. Unfortunately, the side track leads to a bridge that was never finished, and if the trolley goes that way, it will hurtle into a canyon. But this time, you just don't know whether anyone's on the trolley; you can't tell one way or another. (Suppose you know that empty trolleys have been uncoupled accidentally in the past, careening wildly down the tracks as a result. Hence, it really is an open question to you whether an out-of-control trolley has passengers.) What should you do?

Well, there could be someone on the trolley—or several. However, there might not be anyone on board at all. Plainly, the consequences of diverting the trolley could be massively worse than not diverting it, and I suspect that intuitions will diverge as a result. And if intuitions diverge, we probably don't have an argument that will move the strict vegan.

However, we should revisit the worry that led us here. The strict vegan wasn't willing to concede that insects don't seem to be sentient, and we should question the epistemic standards that led him to that position. If there is a harm-free diet available to you, it might be fair to set a high bar for evidence concerning insect sentience, taking it as an open question absent decisive considerations. But once you know that a strict vegan diet is complicit in harming some animals that are clearly conscious, you shouldn't set the bar so high, since doing so may lead you to discount harms to clearly conscious beings.

Let's alter the scenario one more time. The change is that the out-of-control trolley is now without a roof. You can see that the seats aren't occupied. In such

circumstances, it would be wrong to hold out and say that, since there still could be people hiding *under* the seats, you should let the trolley kill the one. What you know about the person on the track affects the epistemic standards that you should employ. If there's a harm-free option, then you don't need to trust your eyes. But if there isn't, you should.

Two Moves on Behalf of the Strict Vegan

At this point, there are two moves that the strict vegan might make. The first is to employ a stronger precautionary principle. The one to which we've been appealing seems to be something like:

Weak Precautionary Principle. In cases where we're uncertain whether a particular individual is sentient, and treating that individual as sentient wouldn't prevent us from fulfilling our obligations to any being that clearly *is* sentient, we ought to treat that individual as though it's sentient.

Perhaps the strict vegan will want to drop the second clause:

Strong Precautionary Principle. In cases where we're uncertain whether a particular individual is sentient, we ought to treat that individual as though it's sentient.

However, the Strong Precautionary Principle is implausible. It entails that, unless you're absolutely certain that pansychism is false—according to which everything is conscious, including tables and chairs—you ought to treat everything as though it's conscious. Surely we don't have such obligations.

The strict vegan might try to find a middling principle, such as:

Middling Precautionary Principle. In cases where the probability that a particular individual is sentient is over x , we ought to treat that individual as though it's sentient.

Sebo (ms) offers an interesting objection to the Middling Precautionary Principle. Suppose, for example, that you set the relevant probability at .5. Then, you don't need to distinguish, morally, between beings at .49 and .01. But that seems wrong: given much greater odds of conscious, you deserve more moral consideration.⁹

The strict vegan might be able to respond to this objection by denying that we can accurately quantify the odds of sentience. Instead, he could insist, we're going to be stuck using very rough estimates—say, *definitely conscious*, *probably conscious*, *perhaps conscious*, and *definitely not conscious*. The strict vegan might maintain that we're in the first category; minnows are in the second; insects in the third; tables, fourth. And once our choice is between these rough categories, it seems more plausible that we may apply different moral standards to beings that fall into different ones.

⁹ Sebo uses different numbers, but this formulation makes the point clearer.

That said, there's no hope for a principle according to which we ought to treat *perhaps conscious* beings as we ought to treat *definitely conscious* ones. Such a principle would imply that in the choice between an infant and a bee, it's a moral toss-up. So we need to combine the probabilistic dimension of the Middling Precautionary Principle, tempered by the observation that we can't accurately quantify the odds of sentience, with the qualification that characterized the Weak Precautionary Principle:

The “Rough Estimates” Precautionary Principle. (1) In cases where a particular individual is *probably conscious*, and treating that individual as conscious wouldn't prevent us from fulfilling our obligations to any being that is *definitely conscious*, we ought to treat that individual as though it's *definitely conscious*; (2) in cases where a particular individual is *perhaps conscious*, and treating that individual as conscious wouldn't prevent us from fulfilling our obligations to any being that is *definitely* or *probably conscious*, we ought to treat it as *definitely conscious*.

This principle avoids the problem that sunk that Middling Precautionary Principle. By rejecting fine-grained probabilities of consciousness, it prevents refinements of the .49 versus .01 counterexample. And by adding the clause about needing to first fulfill our obligations to beings that are more likely to be conscious, it blocks any implication that babies and bees are on a moral par.

The “Rough Estimates” Precautionary Principle seems fairly plausible. Unfortunately, it's of no use to the strict vegan, since it implies that our obligations to *definitely* and *probably* conscious beings trump our obligations to *perhaps conscious* beings. The animals harmed by plant agriculture are in one of former two categories; insects are, at best, in the latter. Again, it looks like the strict vegan ought to eat bugs.

Maybe the strict vegan's mistake is that he keeps running arguments based on precautionary principles. Maybe he'd be better off running an argument that's based on an expected utility calculation. Such an argument might go as follows:

Admittedly, we don't have clear evidence for insect sentience. However, entomophagy would involve killing an extraordinarily large number of insects. So, given even very low odds, the expected utility of eating insects might be negative. For example, let's estimate that 1000 clearly-sentient animals will die per acre as a result of standard agricultural practices. According to the most recent USDA numbers, the average soybean field yields about 2868 pounds of soybeans.¹⁰ A mealworm weighs about 100 milligrams, so it would take 13,009,000 mealworms to make up for that agricultural loss. So, even if we take the probability of mealworm sentience to be very low—say, 1 %—the expected utility calculation comes out in favor of soybeans, since we'd be comparing the loss of 1000 morally-relevant lives to the loss of 130,090 such lives. The upshot? We ought to maintain a strict vegan diet.

¹⁰ See <http://www.usda.gov/nass/PUBS/TODAYRPT/cropan15.pdf>.

However, there are a few objections we might level at this argument. The first is that the assumption about harm isn't obviously right, as Meyers (2013) observes:

Even if insects were capable of pain, the conditions that they would be raised in are conditions that would not cause them to suffer. Unlike cattle, pigs, or chickens—and unlike even crabs, lobsters, or shrimp—most insects actually prefer to live in crowded, hot, and filthy conditions.

So, unless we were to kill them in a way that hurts them, or unless death itself is bad for them, it's hardly clear that the expected utility calculation will work out as the strict vegan suggests.

Second, this argument seems to have the unwanted implication that sunk the Strong Precautionary Principle. It looks like this line of reasoning will commit us to having moral obligations to tables and chairs, given the (admittedly very low) chance that pansychism is true.

Third, the expected utility calculation overlooks an important part of plant agriculture: pesticides. Estimates vary, but even the most conservative ones indicate that there are well over 100 million insects per acre, and others put the number over 400 million per acre (see, e.g., Sabrosky 1952 and Pearse 1946, respectively). Moreover, many of those insects are going to be affected by pesticides. But let's just suppose that there are only 100 million insects per acre, and either (a) pesticides aren't particularly effective or (b) the strict vegan only wants to hold on to the possibility that some portion of those beings are sentient. We might be left with, say, 20 % of the original number. Still, that's 20 million insects that plant production harms. So, the comparison is *not* between the loss of 1000 morally-relevant lives to the loss of 130,090 such lives. Instead, it's between the loss of 201,000 lives (1000 + 1 % of 20,000,000) and 130,090. Eating insects wins.

The strict vegan might object that we'll end up feeding plants to insects, which will entail harming one set of insects to raise others. This would probably skew the numbers back in favor of eating a strict vegan diet. However, we needn't feed insects *new* plants. One of the wonderful things about insects is that, as natural recyclers, they can live primarily on food waste. We might increase the efficiency of the food system by giving these creatures a more prominent place in it.¹¹

Conclusion

If we harm animals in plant production, then it becomes much harder to run precautionary arguments against eating insects, whether based on a precautionary principle or on considerations about expected utility. We aren't in the position of comparing harmful and harm-free diets, but of comparing diets that harm different beings, some of which are clearly sentient, but others about which there are varying levels of uncertainty. It seems to me that this fact tells in favor of eating insects.

¹¹ The strict vegan might also object that intentionally harming insects is worse than having harm be a unintended, though foreseen, consequence of plant production—a move based on the doctrine of double effect. The main problem with this objection is that it relies on the doctrine of double effect.

Does it also tell in favor of eating other invertebrates, such as lobsters? In short: it depends. Suppose the strict vegan is committed to the “Rough Estimates” Precautionary Principle. Then, he probably should eat lobsters, at least if he puts them in the *perhaps sentient* category. After all, given the “Rough Estimates” Precautionary Principle, his obligations to *probably sentient* beings—such as rabbits and field mice—trump his obligations to *perhaps sentient* beings. However, suppose he runs an argument based on an expected utility principle. Then, everything hinges on the probability we assign to insect sentience, the probability we assign to lobster sentience, and the numbers of animals harmed given the two dietary options. I won’t speculate here about what those numbers should be, but I will note that the strict vegan has no argument *against* eating lobsters until he provides those numbers (again, assuming that he puts in them in the *perhaps sentient* category).

In any case, based on principles that the strict vegan endorses, it seems that he ought to eat insects. I know one strict vegan who has taken these arguments to heart. He has since become “veganish”—a term he coined to describe someone who supplements an otherwise plant-based diet with crickets, mealworms, and the like. Perhaps other strict vegans should do the same.

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