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Is Veganism Not Good Enough? Industrial Plant Agriculture and Unnecessary Harm

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Abstract

Some philosophers have sought to reject industrial animal agriculture by appealing to what we may call the *Principle of Unnecessary Harm* – the principle according to which it is wrong to cause, or support practices that cause, extensive, unnecessary harm to animals. Since factory farming causes extensive, unnecessary harm, so the argument goes, it is morally impermissible. But, as some philosophers have argued, certain forms of industrial plant agriculture may also cause extensive harm to animals as a result of harvesting, pesticides, and land clearing. Furthermore, this harm may be unnecessary, since we could eat plants from less harmful sources such as backyard or vertical farms. If so, then simply being vegan (or having a diet consisting of plants and non-factory-farmed animal products) is not good enough, since one may also have an obligation to abstain from certain plant foods if the production of such foods also causes unnecessary harm to animals. In this paper, I assess the plausibility of this argument. First, I consider several arguments as to why industrial plant agriculture may not cause extensive harm to animals. I show that these arguments face significant difficulties, and argue that more empirical support is needed to dispute the claim that industrial plant agriculture causes extensive harm to animals. I then argue, however, that even if it does cause extensive harm to animals, this harm is plausibly necessary. For this reason, I argue, the practice as-a-whole is not morally problematic according to the *Principle of Unnecessary Harm*. I finish by addressing the concern that even if the *practice as-a-whole* does not cause extensive, unnecessary harm to animals, certain *individuals* may have an obligation to abstain from purchasing industrially produced plant foods.

Keywords Industrial plant agriculture · Factory farming · Unnecessary harm · Veganism · New omnivorism · Field animal deaths

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1 Introduction

There are some philosophers who deny that animals have rights, or that there is something inherently wrong about using animals for human purposes (Cohen 1986; Oderberg 2000, 97–143; Scruton 2000). But many of these philosophers do not think that it is permissible to do anything we like with animals. Most of them would likely accept the following principle: *it is wrong to cause extensive, unnecessary harm to animals* (DeGrazia 2009, 150). Clearly, kicking a cat on a whim causes unnecessary harm, and is morally problematic for this reason. Even those who deny that animals deserve any serious moral consideration would likely accept this.

These people would also likely agree that it is wrong to *support* practices that cause extensive, unnecessary harm to animals. To borrow an example from David DeGrazia, we would clearly think it is impermissible to pay someone else to kick a cat for our own entertainment (DeGrazia 1996, 259–260). Likewise, we would think it is impermissible to support a whole institution of cat kicking (if such a thing ever existed). We think it is wrong because we would be supporting a practice that causes extensive, unnecessary harm to animals.

If we combine the two principles above, we get the

Principle of Unnecessary Harm: it is wrong to cause, or support practices that cause, extensive, unnecessary harm to animals (Bruckner 2016, 31).

While this principle seems relatively uncontroversial, it has major implications for how we treat animals. DeGrazia (2009), Abbate (2020, 557–558), and Dieterle (2008), have argued that this principle entails that it would be wrong to purchase and consume meat from factory farms. It is beyond any reasonable doubt that factory farming causes extensive harm to animals, both in terms of the number of animals affected, and the intensity of the harm involved. Many of the animals on factory farms live their lives in cramped, barren environments, experiencing an immense amount of suffering before they are killed at a young age (CIWF n.d.). Furthermore, as proponents of this argument claim, the harm caused by factory farming is unnecessary. We don't need to eat factory farmed meat in order to meet our nutritional needs because we can meet these needs from eating plants (or non-factory farmed animal products). The same could be said with regards to our gustatory desires.¹ Since extensive harm is caused in the process of producing factory farmed animal products, and this harm is unnecessary, it seems impermissible to engage in, or support, factory farming.

The focus of this paper is not to assess the plausibility of this argument, but to address a potential problem that arises from the acceptance of this argument. If the *Principle of Unnecessary Harm* is correct, then it could function to reject not only factory farming, but certain kinds of plant agriculture as well. Consider the following argument: It is clear that many animals, including mammals, birds, and aquatic animals, are killed in industrial plant agriculture.² Small mammals are run over by combine harvesters and vehicles transporting crops, fish are killed by fertilizer runoff, and all kinds of animals are killed by pesticides

¹ Some philosophers, however, have argued that people's interest in the taste of eating meat is not merely trivial. See e.g. Lomasky (2013) and Kazez (2018).

² As Donald Bruckner mentions: "Everyone seems to agree that extensive harm is done to animals in the production of vegetables" (Bruckner 2016, 36).

(either directly or indirectly). Furthermore, this harm is unnecessary, since we could instead get our plant food from less harmful sources.³ There are, for instance, moderately sized farms which may not use nearly as much pesticide or heavy machinery as large-scale industrial farms. Even less impactful are backyard, organic farms, where the harm to wild animals is likely to be minimal. There is also unlikely to be much harm to animals on “vertical farms”, where crops are grown in vertically stacked layers indoors.⁴ If people can get their plant foods from less harmful sources, then the harm caused by industrial plant agriculture seems unnecessary. Therefore, industrial plant agriculture causes unnecessary harm, and so would be wrong according to the same argument outlined above against factory farming. This argument can be formulated as follows:

(P1) Industrial plant agriculture causes extensive harm to animals.

(P2) This harm is unnecessary.

(C1) Industrial plant agriculture causes extensive, unnecessary harm to animals.

(P3) It is wrong to cause, or support practices that cause, extensive, unnecessary harm to animals.

(P4) Purchasing and consuming industrially produced plant foods supports industrial plant agriculture.

Therefore, (C2) Purchasing and consuming industrially produced plant foods is wrong.⁵

If this argument is sound, then we reach a surprising conclusion – it is wrong to engage in, or support, industrial plant agriculture. If that is the case, then many people, including many of those who abstain from eating factory farmed meat for ethical reasons, may be doing something wrong when they eat industrially produced plant foods. Simply being vegan, or consuming a diet containing just plants and non-factory-farmed animal products, may not be good enough according to the *Principle of Unnecessary Harm*.

³As far as I can tell, this connection between unnecessary harm and industrial plant agriculture has been made twice in the literature. Firstly, by Bruckner, who argues that the harm caused by plant agriculture is unnecessary because we could instead get our protein from animal products that do not result in greater harm, e.g. roadkill (Bruckner 2016, 35). For a good reply to Bruckner’s arguments, see Abbate (2019). Secondly, by Christopher Bobier, who argues that the harm caused by industrially farming vegetables is unnecessary because we can take vitamin supplements instead (Bobier 2020). Bobier’s argument is plausible, but only applies to vegetables which are not necessary for meeting our caloric needs. We cannot survive just on vitamins, and so some calories will be needed. Given that our population is likely too large to survive primarily on wild animals, like Bobier says some Inuit do, we will need to resort to eating some plants, such as grains. This paper assesses whether the industrial farming of these essential plants causes extensive, unnecessary harm.

⁴Of course, vertical farming may qualify as a form of industrial plant agriculture. For my purposes, I would like to distinguish vertical farming from my category of industrial plant agriculture. As such, whenever I mention “industrial plant agriculture” I will be referring only to farming that uses methods that are “traditionally” involved in industrial plant agriculture, such as relying on heavy machinery and pesticide use.

⁵This formulation mirrors Bruckner’s formulation of the argument which seeks to reject factory farming by appealing to the *Principle of Unnecessary Harm* (Bruckner 2016, 30–32).

Does the *Principle of Unnecessary Harm* entail that it is wrong to purchase and consume industrially produced plant foods, as the argument above states? I will argue that it doesn't. This is because, I argue, the practice of industrial plant agriculture does not cause extensive, unnecessary harm to animals. My argument proceeds as follows. Firstly, I briefly consider several arguments as to why industrial plant agriculture may not cause extensive harm to animals.⁶ I argue that these arguments face a number of limitations, and that more empirical support is needed to reject (P1). I then argue that even if industrial plant agriculture does cause extensive harm to animals, it is not the case that this harm is unnecessary. To do this, I argue that the harm caused by industrial plant agriculture qualifies as being “morally necessary”. I argue that it is morally necessary because it may be the only means of either 1) providing *enough* food for large numbers of people, or 2) providing *cheap* food for large numbers of people, and that these ends plausibly justify the harm done to animals in industrial plant agriculture. After this, I will address the concern that while the practice as-a-whole may not cause extensive, unnecessary harm to animals, one's individual purchases of industrially produced plant foods may. I will argue that even if one's individual purchase of industrially produced plant foods risks causing harm to field animals, we have some reasons to think that it is nevertheless permissible, even if one could easily afford plant foods from less harmful sources.

2 Does Industrial Plant Agriculture Cause Extensive Harm to Animals?

The number of wild animals killed in plant agriculture is potentially enormous. Bob Fisher and Andy Lamey give one rough estimation of 7.3 billion animals killed every year in the US by plant agriculture (Fischer and Lamey 2018, 413–414). Fischer and Lamey note however that this estimate is “clearly too high”, citing problems with generalizing the limited available evidence, and calculation errors (2018, 414–418). They give, however, a lower bound estimate of approximately 63.75 million field animals deaths per year (2018, 423) – not an insignificant figure.

However, even if the numbers above are correct, several arguments could be (or have been) put forward to argue that the harm caused by industrial plant agriculture is not extensive. Firstly, it could be argued that the wild animals killed in industrial plant agriculture may not be (significantly) harmed by death. According to a popular view on the badness of death, death causes harm insofar as it deprives a being of the good things in life (Nagel 1970). This account, which is known as the deprivation account of the badness of death, holds that death would cause less harm to a being that had one week left to live compared to a being that had 10 more years left to live. It would cause less harm because death for one being would only deprive that being of one week of life, whereas death for the other would deprive them of 10 more years of life. Now, if many of the wild animals killed in industrial plant production would have died soon anyway, then they may not be significantly harmed by their slightly earlier death. As it turns out, there is some evidence to suggest that many of the animals killed during harvest would have died soon anyway (Tew and Macdonald

⁶ In this paper, I will bracket concerns relating to the harm industrial plant agriculture causes to humans, e.g. through pollution, soil erosion, and so on. In doing so, I acknowledge that humans are themselves animals.

1993, 280–282). In which case, death for these beings may not cause a huge amount of harm according to the deprivation account.⁷

However, this argument faces a number of difficulties. Firstly, it may be difficult to generalize the available evidence to other farms that may have different crops and animal populations. Secondly, the limited evidence available only tells us about animals killed as a result of harvesting – we don’t know what percentage of wild animals killed by industrial plant agriculture died as a result of harvesting compared to other processes, e.g. pesticide use. Thirdly, even if *many* animals killed near harvest would have died soon anyway, this does not mean that *the vast majority* of animals killed would have died soon anyway. It may be the case that many animals killed around this time still have a (relatively) long life to go. In which case, the harm done to those animals alone may be extensive. For these reasons, more empirical evidence is needed in order to support the argument that industrial plant agriculture does not cause extensive harm to animals because the animals would have died soon anyway.

Another argument as to why industrial plant agriculture may not cause extensive harm to animals has been put forward by Abbate, who argues that the practice may not cause an all-things-considered harm to wild animals because the wild animals killed would not have existed if it weren’t for the practice (2019, 176–177).⁸ That is, planting these crops provides enough food and shelter to bring these animals into existence, and this is good for these animals because it is good for them to exist. In which case, even if the animals are harmed by getting killed in the process, the process as-a-whole is not harmful because they wouldn’t have existed otherwise.

This argument, however, faces two problems. The first is that this argument only works if the animals that are brought into existence have positive lives. The practice of growing and harvesting crops may bring into existence animals that wouldn’t have existed otherwise, but there is no guarantee that all of these lives will be positive. It has been argued that many wild animal lives are on-the-whole negative, often involving large amounts of suffering as a result of predation, starvation, and disease (Ng 1995, 270–272).⁹ If that is the case, then industrial plant production may in fact cause an all-things-considered harm because it creates animals with lives not worth living. If Abbate’s argument is to work, it will need to be shown that the animals brought into existence by industrial plant agriculture have positive lives.

Secondly, to argue that a wild field animal is not all-things-considered harmed by the practice seems to imply that the benefits of existence outweigh the harm done by killing. But, as some philosophers have argued, it is questionable whether existence itself can be a benefit (Salt 1914). Usually, when we say that some action benefits a being, what we mean is that that action makes one comparatively better off than if the action were not performed.

⁷ Similar arguments have been made to suggest that humanely raised farm animals (Solis 2021) and wild animals killed by house cats (Abbate 2021) may not be significantly harmed by death.

⁸ This argument mirrors the “logic of the larder” argument used to justify animal agriculture (Salt 1914; Zangwill 2021). The argument, briefly, is that animal agriculture is actually good for the animals involved because they wouldn’t have existed if it weren’t for the practice. One noticeable difference, which Abbate correctly mentions, is that animal agriculture involves intentionally bringing animals into existence in order to be intentionally killed later, while industrial plant agriculture involves unintentionally bringing animals into existence that are then (often) unintentionally killed later (Abbate 2019, 177–178).

⁹ Ng’s argument is in reference to wild animals, but I see no reason why the same assessments about animal wellbeing couldn’t be made about undomesticated field animals.

But it is difficult to see how we can claim that a being's existence is better than their non-existence. Thus, the idea that industrial plant agriculture benefits wild animals because it brings them into existence is doubtful. For this reason, it may be difficult to argue that the practice does not cause an all-things-considered harm on these grounds.

Abbate could argue that when she says existence is “good” for animals, she could simply be using “good” in a non-comparative way. It is plausible to claim that existence is “bad” for a being if that being experiences nothing but suffering, and we can make this claim without needing to argue that existence is “worse” for this being. Similarly, we can claim that existence is “good” for an animal if they have a good life, and we can do this without needing to argue that existence is “better” for this animal. But if Abbate accepts that existence does not confer a benefit, then it is difficult to see how her appeal to the goodness of existence can help her claim that industrial plant agriculture does not cause an all-things-considered harm to animals. Harm, like benefit, is often used in a comparative sense – I harm a being if I make that being worse off. But if we admit that bringing a being into existence does not benefit, or harm, that being, then in order to assess whether some practice causes an all-things-considered harm to the being, we would need to look at what benefits and harms it has for a being *once that being exists*. Thus, whether or not existence is *good* (in a non-comparative sense) for a being makes no difference to our assessment as to whether or not the practice causes an all-things-considered *harm* to that being. Abbate could claim that the practice is not all-things-considered *bad* for the animals it kills, but this is different from our line of enquiry here, which is whether or not industrial plant agriculture causes extensive *harm* to animals.

The preceding discussion shows that it is difficult to dispute the claim that industrial plant agriculture causes extensive harm to animals. If one wants to argue that extensive harm is not caused because the animals would have died soon anyway, then it needs to be shown that most of the animals killed in industrial plant agriculture would have died soon anyway, and that they were not harmed (significantly) by death. If one wants to argue that extensive harm is not caused because the practice is all-things-considered beneficial for the animals it kills, then it needs to be shown that field animal lives are, on average, worth living, and that the overall benefits of industrial plant agriculture to wild animals outweigh the harm it inflicts on them. Addressing these limitations are certainly possible, but until then, the claim that industrial plant agriculture does not cause extensive harm to animals remains unsubstantiated. I will now argue, however, that even if extensive harm is done to animals in industrial plant agriculture, a strong case can be made for thinking that this harm is not unnecessary.

3 Is the Harm Caused by Industrial Plant Agriculture Unnecessary?

It is important to note that the use of the words “necessary” and “unnecessary” here have a particular meaning. Most of us believe that kicking a cat for fun is not “necessary”. But it could be described as necessary in some sense, in that it may be necessary for me to kick a cat in order to satisfy my craving for kicking a cat. This, however, seems to be a misuse of the word “necessary” in ethical discourse. Usually, when we appeal to necessity in ethical discourse, we are concerned with what is *morally necessary* (Abbate 2020, 557). Abbate claims that some harm X qualifies as being morally necessary provided two conditions are met:

(1) The harm X must be caused in the name of an end Y that is worth the cost of the harm X.

(2) We cannot achieve end Y unless we perform some activity that produces harm X.

(Abbate 2020, 557)¹⁰

As it stands, this formulation is in need of qualification. Firstly, there are some harms which we take to be necessary, even if those who cause the harm may not be doing so in the name of an end that is worth the cost of the harm. For instance, a prison guard may cause harm to a violent prisoner by locking them up. We may think this is necessary if it is done in the name of preventing a greater amount of harm to people outside prison. But the prison guard may simply be locking up the prisoner for the end of not getting reprimanded by the warden at the end of the day. If the harm being caused here is done in the name of not getting reprimanded by the warden, then this end may not be worth the cost of the harm, and so the harm would fail to qualify as being morally necessary according to the above formulation. Yet, we typically believe that this harm *is* morally necessary.

To address this concern, we can adjust condition (1) to the following:

(1) There is some end Y for which the harm X might be done which would be worth the cost of the harm X.

On this formulation, the harm caused by the prison guard would meet condition (1), as one of the ends of locking up the prisoner (preventing greater harm to others) is worth the cost of the harm caused to the prisoner.

It might be objected however that this formulation of moral necessity is implausible as it is extremely permissive. Suppose that, being the sadistic person I am, I need to kick cats in order to make myself as happy as possible. If kicking cats is done simply for the end of satisfying my craving to kick cats, then we would likely agree that the harm I cause is unnecessary. But what if one of the ends of me kicking cats was to “make all people as happy as possible”? I may argue that, in order to meet this end, I need to do what would make me as happy as possible, and that I can only do this if I kick cats. I can then argue that this end of making all people as happy as possible is surely worth the comparatively trivial amount of harm I inflict on cats. In which case, the harm I cause would be morally necessary on this qualification. But this is clearly absurd.

To address this concern, I suggest the following: when assessing whether some end is worth the cost of some harm needed to bring that end about, we need to consider this *in the context of what other ends could be brought about* by not causing this harm. For instance, take the case of kicking the cat. It may be that, in order to make everyone as happy as possible, I would need to kick cats. But what ends could be obtained without inflicting this harm? Even if kicking cats is necessary for making everyone as happy as possible, it may not be necessary for making everybody except me as happy as possible. That is, the end of making everybody except me as happy as possible could be obtained without kicking cats. In which case, the only difference that kicking cats would make would be to make me slightly happier. And this difference is surely not worth the harm inflicted on cats.

¹⁰ A similar formulation can be found in Kazez (2018, 665).

I propose, then, that some harm qualifies as being morally necessary provided the following two conditions are met:

- (1) There is some end Y for which the harm X might be done which would be worth the cost of the harm X.
- (2) We cannot achieve end Y unless we perform some activity that produces harm X.

One advantage of this conception of moral necessity is that those who accept different normative theories can accept it, because they can interpret “worth the cost of the harm X” in whatever way they wish. A maximizing total utilitarian may find that the end is worth the harm just so long as the end maximizes overall well-being, while a strict deontologist may find that the end is never worth the cost if the cost involves violating strict principles (e.g. never tell lies, even to save someone else). What they can all agree on, however, is that kicking a cat for fun clearly fails to satisfy condition (1), as there is no end (Y) of kicking a cat for fun that is worth the cost of the harm (X) to the cat. This is uncontroversial, even amongst those who deny that animals have rights or deserve much moral consideration.

In order for us to determine, then, whether the harm caused by industrial plant agriculture is necessary, we need to determine whether it qualifies as being *morally necessary*. In other words, if it can be shown that the harm caused by industrial plant agriculture satisfies the two conditions above, then we can reject the premise that the harm caused by industrial plant agriculture is unnecessary. I will argue that even if the harm caused by industrial plant agriculture is extensive, it can plausibly satisfy the two conditions, and as such, does not qualify as an unnecessary harm.

Take X to be *the harm caused by industrial plant agriculture*. We can assume for now that this harm is extensive. If it can be shown that the harm caused by industrial plant agriculture is necessary, even if the harm is extensive, then it can be shown that less harm would also be necessary. Now, there are many possible ends of industrial plant agriculture. In order to show that the harm it causes is morally necessary, we need to identify some end that is worth the cost of the harm caused, and which cannot be achieved unless we perform some activity that produces that harm. Y is not going to be “providing nutritious food to people”, because other, less harmful forms of plant agriculture can do this (and so the harm caused by industrial plant agriculture would fail to satisfy condition (2)). A more plausible answer could be found in the thought that perhaps industrial plant agriculture is the only way we can provide *enough* food to feed large numbers of people. This may be the case if we lack the resources or space to produce enough food through less harmful means, e.g. with vertical farms. If that is the case, then Y = *providing enough food to feed large numbers of people*. Presuming that condition (2) is satisfied, we then need to ask whether condition (1) is met. In other words, is the end (providing enough food to feed large numbers of people) worth the harm caused by industrial plant agriculture?

If industrial plant agriculture is in fact the only means of providing enough food to feed people, then some people will inevitably face nutrient deficiencies or starve without it. In which case, industrial plant agriculture may be the only form of agriculture that is capable of preventing huge amounts of suffering and premature death. If the end of providing enough food to feed people prevents a significant number of people from suffering and death, then I think most people would agree that this provides a very strong reason for thinking that this end of industrial plant agriculture is worth the harm done to wild animals in the process.

Even strict animal rights theorists can accept this, given that they are willing to accept that in situations where we need to eat meat in order to meet our nutritional needs, it would be permissible to do so (Cochrane 2012, 57; Regan 2004, 337).¹¹

However, industrial plant agriculture may not in fact be needed to provide enough food to feed everyone. It is possible that enough food could be produced through less harmful plant alternatives. While it may not be possible to feed everyone with vertical farms and backyard farms, it certainly seems plausible that everyone can be fed via moderately sized farms which don't use as many pesticides or heavy machinery. One concern here is that such farms may be unable to produce the same amount of food as industrial farms (e.g. because pesticide use tends to increase crop yields (Popp et al. 2013)). But what needs to be borne in mind here is that a large amount of food produced from crop agriculture currently goes towards feeding animals on factory farms.¹² As such, if these farms were replaced by less harmful forms of agriculture, and were used to feed people instead of livestock, then there would likely be enough food for everyone. In which case, condition (2) would not be met if we take the end of industrial plant agriculture to be providing enough food to people, since this end could be obtained via other, less harmful means.

But there is another possible end that only industrial plant agriculture can achieve. While it may not be the only means of providing *enough* food to people, it may be the only means of providing *cheap* food to many people. If that is the case, then we have to ask: is the end of providing cheap food to many people worth the harm done to animals in the process of industrial plant agriculture?

For some people, having access to cheap plant foods is going to be hugely beneficial. Large populations from even modern industrialised societies may not be able to afford plant foods from sources that cause less harm. If they had to consume plants from these alternative, less harmful, sources, their level of wellbeing may significantly decrease as a result of financial pressure. In the US in 2022, 11.5% of the population (37.9 million) lived in relative poverty (Shrider and Creamer 2023, 1). Such people may be unable to afford socially desirable goods and engagement in social activities (Chen 2015), and have an increased risk of mental health problems (Elliott 2016, 4). Without access to cheap plant foods, more people may find themselves in relative poverty, and those already in it would suffer more. Providing cheap plant foods to many people therefore has extremely high value. While it may only be a cheaper grocery bill for some, for others it can significantly affect their quality of life. Given this, it is very plausible that the end of providing cheap food to many people is worth the harm done to animals in industrial plant production.

I expect this position to be plausible not only to the majority of people who think that humans deserve greater moral consideration than animals, but also to animal rights theorists who think that animals generally have a right not to be killed. Animal rights theorists such as Tom Regan and Alasdair Cochrane have accepted that it is permissible to consume meat if doing so is necessary for maintaining one's health (Cochrane 2012, 57; Regan 2004, 337). If they are willing to grant that it is permissible to kill animals when doing so is necessary for maintaining one's health, then I see no reason why the same couldn't be said with regard to killing animals when it is necessary for maintaining a decent quality of life. After all, our inclination to justify killing animals in order to maintain our health derives partly from the

¹¹ Gary Francione (2021) is one exception, but argues that doing so is morally excusable.

¹² In the US, for instance, 67% of total calorie production is used for animal feed (Cassidy et al. 2013). It is estimated that around 99% of farm animals in the US live in factory farms (Anthis 2024).

consideration that diminishing health can lead to a diminishing quality of life. If animal rights theorists think it is permissible to kill animals if needed to maintain a decent quality of life via better health outcomes, then they should also think it is permissible to kill animals if needed to maintain a similarly decent quality of life via better financial outcomes. In other words, if maintaining a decent quality of life is worth the harm done to animals in killing them, then this should hold whether the animals are killed for purposes of health or for purposes of financial security. For this reason, even an animal rights theorist should accept the moral necessity of industrial plant agriculture.¹³

An analogy can be put forward here. Consider a factory which produces cheap cars. Let's say that these cars run on diesel, and that the emissions from these cars kill around 10 people every year. Despite the harm they cause, they also significantly increase the wellbeing of tens of thousands of people who would struggle without them. Many of these people cannot afford more environmentally friendly cars, and may live in an area where not having a vehicle significantly impacts one's access to jobs, nutritional foods, and education. Even if banning these cheap cars saved lives from reducing emissions, the harm done to the thousands who significantly benefit from the cars may not be worth it. The same could be said with regards to industrial plant agriculture.

Something to note here is that we shouldn't be comparing the harm caused by industrial plant agriculture to a base level of 0 harm. Rather, we should be comparing it to the harm caused by less harmful sources. No doubt, some animals will still be killed in the process of producing plant foods, even if significant efforts are made to prevent additional harm to animals. Food grown in a vertical farm and sold locally will still need to be transported some distance, and this may involve running over some animals. Once we make such a comparison, we may have more reason to think that the harm caused by industrial plant agriculture is not so significant. Similarly, we shouldn't compare the harm caused by these diesel cars – 10 deaths a year – to a baseline of 0. Rather, we should be comparing the harm to the harm caused by more environmentally friendly sources, e.g. electric cars. The harm caused by such cars is not likely to be 0 (assuming that producing them causes some harmful emissions),¹⁴ and so the harm caused by diesel cars may seem less significant for this reason.

I have so far argued that if industrial plant agriculture is the only means of providing cheap food to people, then this end is plausibly worth the harm done given the significant benefits it could have for humans. It may be objected, however, that industrial plant agriculture is not in fact necessary for providing cheap food to people. This is because the cost of plant foods from less harmful sources could significantly decrease. This could happen, for instance, as a result of great technological breakthroughs in vertical farming. Alternatively, the costs could be heavily subsidized by the government. Of course, this will be expensive for the government, but they could fund these subsidies via a mass re-distribution of resources. If such technological breakthroughs or government subsidies are possible, then industrial plant agriculture is not in fact the only means of providing cheap food to people.

¹³ One could try to argue that many of the animals killed in industrial plant agriculture are not killed intentionally, and for this reason, the practice is nowhere near as bad as intentionally killing animals (Abbate 2019, 177–178). However, many of the animals killed in industrial plant agriculture *are* killed intentionally (e.g. those targeted with pesticides), and so this argument can only take us so far.

¹⁴ Electric cars can also lead to more human deaths because they are heavier and so can cause more damage in collisions (Proskow 2023), and because they are more likely to hit pedestrians because they are more difficult to hear (Edwards et al. 2024).

I am inclined to agree that in theory, industrial plant agriculture may not be the only means of providing cheap food to many people if this end could be achieved via some huge technological or political changes. But the same could be said about many institutions we currently think are necessary. It could be argued that having prisons is not necessary because, it has been claimed, crime would be eliminated or greatly reduced under communism (Cowling 2008, 215). But if communism is unlikely to come about anytime soon, what should we say about prisons in the meantime? Even if it were the case that prisons were not ultimately necessary for reducing crime, they may be necessary *in the political near-term*. Similarly, industrial plant agriculture may not strictly be the only means of providing cheap food to people (if this could also be done via great technological or political change), but it may be the only means of doing this in the technological and political near-term. In which case, we'd have to ask whether this end (providing cheap food to people *in the technological and political near-term*) is worth the harm done to animals in the process. Again, I believe a very plausible case can be made for thinking that this end is worth the harm done to animals for the reasons already cited: it would significantly increase the well-being of those who would suffer greatly without access to cheap plant foods. If the cost of less harmful sources of plant foods significantly decreases as a result of huge technological or political changes, then industrial plant agriculture would no longer be necessary for providing cheap foods to many people. But, in the technological and political near-term, industrial plant agriculture seems to be the only means of doing exactly this.

We have, then, several possible ends of industrial plant agriculture: it may be the only means of providing enough food to people, it may be the only means of providing cheap food to people, or it may be the only means of providing cheap food to people in the technological and political near-term. I have argued that all of these ends are plausibly worth the harm done to wild animals, given the significant benefits each end has for humans. For this reason, I believe the harm caused by industrial plant agriculture qualifies, at least in our current society, as being morally necessary. As such, I believe we have good reason to reject the premise that the harm caused by industrial plant agriculture is unnecessary.

Before moving on, one objection to my argument needs to be addressed. I have argued that the harm caused by industrial plant agriculture is plausibly necessary given that it may be the only means of obtaining certain ends (providing enough food, or enough cheap food, for people), and that these ends are plausibly worth the harm caused by the practice. The objection is this: why can we not use the same argument to justify the harm caused by factory farming? After all, we could argue that factory farming is necessary for people to acquire inexpensive nutrition in the form of cheap meat. If, as I have argued, the end of providing cheap nutrition is worth the cost of the harm done to animals in industrial plant agriculture, then it seems like I could employ the same argument to justify factory farming.

The best response to this objection is to point out that the harm caused by factory farming does not qualify as being morally necessary because it fails to meet condition (2) – that is, the condition that we cannot achieve end Y unless we perform some activity that produces harm X. If we take the end of factory farming to be providing enough (cheap) food to people, then this end could be done by another activity – industrial plant agriculture. As such, condition (2) is not met, and so the harm caused by factory farming does not count as being morally necessary.

It may be objected that this means that the harm caused by industrial plant agriculture would also fail to satisfy condition (2), and so fail to qualify as being morally necessary.

This is because if factory farming can also achieve the end of providing enough (cheap) food to people, then industrial plant agriculture is not the only activity that can produce this end. But what is important to bear in mind here is that factory farming may only be able to achieve these ends *because of industrial plant agriculture*. Suppose we take the end of factory farming to be providing cheap food to people. To make cheap animal products, factory farmed animals need to be fed cheap plant foods. But if industrial plant agriculture is the only way we can produce cheap plant foods, then we cannot have cheap animal products without industrial plant agriculture. For this reason, the harm caused by industrial plant agriculture satisfies condition (2), since we couldn't achieve the end of providing cheap food to people, either via cheap plant foods or *cheap animal products*, without engaging in industrial plant agriculture. In contrast, the additional harm caused by factory farming fails to meet condition (2), since we can achieve our end of providing cheap food to people without causing this additional harm. For this reason, my argument as to why the harm caused by industrial plant agriculture is morally necessary does not entail that the harm caused by factory farming is also morally necessary.

To recapitulate, I have been assessing the following argument against industrial plant agriculture:

(P1) Industrial plant agriculture causes extensive harm to animals.

(P2) This harm is unnecessary.

(C1) Industrial plant agriculture causes extensive, unnecessary harm to animals.

(P3) It is wrong to cause, or support practices that cause, extensive, unnecessary harm to animals.

(P4) Purchasing and consuming industrially produced plant foods supports industrial plant agriculture.

Therefore, (C2) Purchasing and consuming industrially produced plant foods is wrong.

I have argued that even if industrial plant agriculture causes extensive harm to animals, this harm is plausibly necessary.¹⁵ For this reason, we should reject (P2), and subsequently reject the conclusion that the practice of industrial plant agriculture causes extensive, unnecessary harm to animals (C1). Because of this, even if (P3) and (P4) are true, (C2) does not follow. This is because purchasing and consuming industrially produced plant foods does not involve supporting a practice that causes extensive, unnecessary harm to animals.

¹⁵ Due to space constraints, I have chosen to ignore the harms inflicted on humans and the environment by industrial plant agriculture. It is possible that, on a wider reading of the *Principle of Unnecessary Harm* which considers more than simply the harm done to wild animals, the harm caused by industrial plant agriculture may not qualify as being morally necessary, and as such would be impermissible.

4 Individual Purchases and Unnecessary Harm

My arguments entail that we should reject the premise that the practice of industrial plant agriculture causes extensive, unnecessary harm to animals. Individual purchases of industrially produced plant foods, then, do not support a practice that causes extensive, unnecessary harm to animals. But recall that the *Principle of Unnecessary Harm* (P3) states not only that it is wrong to *support* practices that cause extensive, unnecessary harm to animals, but that it is wrong, quite simply, to *individually cause* extensive, unnecessary harm to animals. It may be the case that while the practice of industrial plant agriculture does not cause extensive, unnecessary harm to animals, *one's individual purchases* of industrially produced plant foods do cause extensive, unnecessary harm to animals. In which case, one's individual purchases of industrially produced plant foods would be wrong according to the *Principle of Unnecessary Harm*.

This point can best be illustrated by alluding to the car factory example above. I have argued that even if the factory causes harm, we shouldn't conclude that the harm it causes is unnecessary. This is because there may be many people for whom having access to cheap cars significantly increases their wellbeing. But it is not the case that everyone significantly benefits from having access to cheap cars. What about rich people who can easily afford more environmentally friendly alternatives? While it may not be inherently wrong to buy a car which has high emissions, it would be wrong for certain people to buy this car. It would be wrong because the harm caused by their particular purchase is not morally necessary – they do not need a cheap car to significantly increase their wellbeing. Similarly, there may be many rich people who can afford plant foods from less harmful sources. While it may not be inherently wrong to support industrial plant agriculture, it may be wrong for certain people to purchase industrially produced plant foods, because the harm caused by such a purchase (if there is any) is not morally necessary given their relative affluence.

If it really is the case that one's individual purchases cause extensive, unnecessary to animals, then one's individual purchases would indeed be wrong according to the *Principle of Unnecessary Harm*. But this is only a conditional statement. We currently lack evidence to conclude that any individual's purchase of industrially produced plant foods causes extensive harm to animals for the reasons I gave above – the animals involved may not be significantly harmed by death, and they may not be harmed by industrial plant agriculture all-things-considered. But one thing is clear: wealthy people's individual purchases *risk* causing unnecessary harm to animals. In which case, maybe it would be wrong for a rich individual to consume industrially produced plant foods if they can consume plant foods from less risky alternative sources. This seems to mirror our intuitions about the car case: we don't know whether one's individual use of a highly polluting car would in fact lead to the ill health of others, but it certainly carries a risk of doing so. In which case, if one has the ability to use a car which is significantly less risky to use, then one may be obligated to do so if they can easily afford the safer car. Should we say the same about one who has the ability to purchase plant foods from less harmful sources?

There are two main reasons why the relatively affluent may not have an obligation to abstain from eating industrially produced plant foods. Firstly, we need to take into consideration the size of the risk involved. A principle which prohibited us from doing anything that risked causing unnecessary harm to animals would be overly restrictive, given that many seemingly permissible actions carry at least some risk. For instance, driving always

carries a risk of causing unnecessary harm, even if I do my best to drive safely. Yet we still find it permissible to do. A principle which prohibits risking harm to animals can only be made plausible if the risk involved is high enough. If individually consuming industrially produced plant foods carries with it a high risk of causing unnecessary harm, then maybe one would have a strong reason to abstain from it. But it may be difficult to conclude that individually consuming industrially produced plant foods carries a high enough risk of causing unnecessary harm given the lack of available evidence. This is one reason why we may be hesitant to conclude that the relatively affluent have an obligation to abstain from industrially produced plant foods.

Secondly, even if purchasing cheap plant foods were not necessary for improving the wellbeing of the relatively affluent, it may be necessary for improving the wellbeing of others. This could happen in two ways. Firstly, mass consumption of industrially produced plant foods by both high and low-income individuals may be necessary for keeping prices low due to economies of scale. In which case, even if such individual purchases do not significantly benefit the relatively well-off, they may significantly benefit the relatively worse-off by keeping prices low. Secondly, consider the opportunity costs of purchasing more expensive plant foods. If one spends more money on plant foods, one has less money to use for other potentially beneficial things. For instance, perhaps one could use the money they save from consuming industrially produced plant foods by donating it to a charity which seeks to eliminate factory farming. If such options are available to the relatively affluent, then it may be necessary for them to purchase cheap plant foods in order to give as much money as possible to a charity which will ultimately result in less suffering overall.

This provides several reasons why we should doubt the idea that it is morally problematic for the relatively affluent to purchase industrially produced plant foods because it risks causing unnecessary harm. However, these reasons are not conclusive. We may find, through further empirical work, that individual purchases of industrially produced plant foods really do have a high risk of causing extensive harm to animals, and that one's individual purchases are not actually necessary for improving the wellbeing of others. If so, then the relatively affluent may be doing something wrong when they purchase industrially produced plant food, and should instead opt for plant foods from less harmful sources.¹⁶ More empirical work is needed in order for us to reach this conclusion, however.

¹⁶ It could be argued that even if it would be wrong for a relatively affluent individual to purchase industrially produced plant foods, there may be good reasons not to promote such a strict diet amongst the wider public. Veganism is often put forward as a morally acceptable alternative to eating factory farmed animal products. But if we promote the idea that industrially produced plant foods are morally problematic, then we may discredit veganism as being not "good enough" since it does not prohibit industrially produced plant foods. But this could lead to less people moving away from an extremely harmful diet consisting partly of factory farmed animals. To see this, consider the choice I may face as someone who regularly eats factory farmed animals. I can either (a) continue what I'm doing, (b) adopt veganism, or (c) adopt an even stricter diet which prohibits me from consuming industrially produced plant foods. If I hear that veganism is morally problematic, and that the only permissible choice is a diet which prohibits industrially produced plant foods, I may just come to reject the idea of changing my diet as being absurdly demanding. If, on the other hand, veganism was promoted as being a morally permissible diet, then I may be more inclined to adopt it. Thus, promoting a diet which *includes* industrially produced plant foods (in this case, veganism), could lead to less harm overall as it may cause more people to move away from industrial animal agriculture.

5 Conclusion

A plausible argument against factory farming holds that it is wrong because it causes extensive, unnecessary harm to animals. One worry with this argument is that it could be used to reject industrial plant agriculture on the same grounds. I have argued, however, that we should dismiss this worry. While it may be the case that industrial plant agriculture causes extensive harm to animals, I have argued that this harm is (at least for now) plausibly necessary. It is necessary because the potential ends of industrial plant agriculture (providing enough food to people or providing cheap food to people) are both plausibly worth the harm done given the significant benefits to humans. Finally, I have argued that even in cases where an individual can easily afford plant foods from sources that have a minimal risk of causing harm, they may be under no obligation to abstain from industrially produced plant foods.

It is important to note that even if we do conclude that the harm caused by industrial plant agriculture is, in general, necessary, this doesn't entail that we should do nothing to minimize this harm. We could, for instance, put up nets and barriers to prevent animals from entering these farms. This may not be a feasible option for most industrial farms, since the increased costs may make it impossible for us to provide enough (cheap) food for people. But there are likely to be some cases where the costs are minimal, and as such would not impact a farm's ability to provide enough (cheap) food for people. In such cases, we may be obligated to make these small changes, since doing so could prevent a large amount of unnecessary harm. However, even if we do conclude that some harm on some industrial farms is unnecessary, this does not negate my overall argument that the overall practice of industrial plant agriculture, and the harm that typically results, is (generally speaking) necessary.

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