

Should cultured meat be refused in the name of animal dignity?

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Abstract Cultured meat, like any new technology, raises inevitable ethical issues. For example, on animal ethics grounds, it may be argued that reformed livestock farming in which animals' lives are worth living constitutes a better alternative than cultured meat, which, along with veganism, implies the extinction of farm animals. Another ethical argument is that, just as we would undermine human dignity by producing and consuming meat that is grown from human cells, eating meat that is grown from nonhuman animal cells would violate animal dignity because it is a way to create an *us* and *them*, which would make veganism the only ethical option. The present study challenges this argument. First, I examine the fundamental issue of whether cultured meat provides such an attack on animal dignity. The second issue is whether, assuming that it is true that cultured meat undermines animal dignity, it would be acceptable to reject cultured meat even though this implies sacrificing nonhuman animals.

Keywords cultured meat · animal meat · global veganism · (*in vitro*) cannibalism · animal dignity · animal rights · staging hypothesis

1 Introduction

Meat consumption is disastrously harmful to nonhuman animals. Thus, one would expect that cultured meat, as a method for saving animals from animal meat, would be greeted with enthusiasm by animal advocates. Somewhat surprisingly, however, some of them oppose the consumption or marketing of cultured meat. They believe that although cultured meat does not kill animals, is nonetheless harmful to animals at least *symbolically*, which can be understood as a violation of their *dignity*. Those who criticize cultured meat as well as many of those who defend it agree on this last point. Consider, for example, the concept of carnism defined as 'the belief system in which eating certain animals is considered ethical and appropriate' (Joy 2010,

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30). Some conclude that cultured meat should be considered a carnist technology since it does not challenge the notion that animals are a source of food, even if ‘[t]here may well be an important role for these technologies in addressing harms from the large-scale rearing of animals for food’ (Laestadius et al. 2018, 306; for a similar view, see Deckers 2016, 97–98). Others, such as Josh Milburn (2016, 256), believe that cultured meat validates an *us* and *them* and functions as a *pathos of distance* between humans and other animals. Thus, a solution is to allow for human cultured meat (Milburn 2016, 257). This paper challenges the assumption that cultured meat is symbolically harmful to animals. I would say that Milburn’s approach to the defense of cultured meat is a downstream strategy, whereas this paper argues for an upstream strategy. This allows us to not condition the ethical acceptance of cultured meat on Milburn’s ‘legalize (*in vitro*) cannibalism’ solution. Thus, my purpose is not to prove the ethical permissibility of human cultured meat to defend animal cultured meat. Whether animal cultured meat is permissible does not depend on whether human cultured meat is permissible. It may be that human cultured meat infringes human dignity, whereas animal cultured meat does not infringe that of animals. Rather, my point is that animal cultured meat does not infringe animal dignity any more than anything else, including veganism.

At first glance, one may believe that these discussions are futile. After all, why refuse a solution such as cultured meat, which adds to a plant-based diet solution on a global scale (global veganism)? It is important to save animals from animal meat. If cultured meat infringes animal dignity, it will still be possible to replace it with veganism in the future. Thus, all in all, two alternatives to animal meat are better than one, aren’t they? In the second section, I show why a negative response to this question can be seriously considered and, therefore, why it is necessary to respond to the critics of cultured meat. The third section discusses why it does not matter whether cultured meat or veganism replaces animal meat. In other words, whether cultured meat is an obstacle to veganism is not a problem because, as I said, cultured meat is not symbolically more harmful to nonhuman animals than veganism. Finally, the fourth section notes that even if cultured meat is symbolically more harmful to nonhuman animals than veganism, this does not mean that cultured meat should be rejected.

2 Cultured Meat, Global Veganism and Animal Dignity

The vegetarian cause, if understood in the broad sense of pleading or acting by groups or individuals (Pelluchon 2016, 63) to ensure that this diet generalizes to the largest scale possible, has existed since ancient times. Philosophers such as Pythagoras, Empedocles, Theophrastus, Plutarch and Porphyry argued against meat consumption on ethical grounds. Of course, it never occurred to them that meat could be separated from animals. This concept is believed to have appeared in a famous text by Winston Churchill (1931, 555). Nowadays, there is a conceptual divorce between meat and animals (Hopkins and Dacey 2008, 594).

2.1 Technical and Ethical Divorces

This divorce has two dimensions. The prospect of a *technical* divorce between meat and nonhuman animals may be attainable with cultured meat. This is not yet a reality for two reasons. First, it is still necessary to regularly or occasionally perform biopsies on animals to produce large quantities of meat. However, in the future, science could completely eliminate

the current need for *in vivo* animal cells by creating an immortalized cell line. During a Reddit AMA ('ask me anything') on the Reddit website (where guests answer questions from the public in a discussion forum format), a representative from the nonprofit organization, New Harvest, which promotes cultured meat, said, 'A immortal, infinite growing and optimized cell line is what I think is the ultimate goal' (see Swartz 2017). In addition, this is not a concern for milk, egg whites, leather, and gelatin because they do not require initial animal starter cells for growth (Shapiro 2018, 183–218). Those who believe that biopsies are unacceptable should continue to read this text with reference to these products. The second reason why technical divorce is not absolute is that the cells are grown in a fetal bovine serum. Are these barriers to technical divorce also barriers to an *ethical* divorce between meat and nonhuman animals?

Not necessarily, for as long as none of their interests or fundamental rights is affected, it is appropriate to use live animals (Schaefer and Savulescu 2014, 194; Milburn 2016, 254, 256). We can suppose that the samples could be taken from dead animals (Schaefer and Savulescu 2014, 194). It would then be possible, for example, to harvest cells from animals that died of natural causes in animal shelters. However, if live animals are used, the operation must be painless and non-disabling. The animals should not be killed and should be ensured a happy life in which they receive care. It should be noted here that veganism does not prevent harm to animals in the current system of mass production. To produce plant-based food, one must grow crops, and animals may be accidentally killed, for example, by being crushed by a combine harvester or poisoned by pesticides. In some cases, such as organic farming, animal blood or bones are used as fertilizer. In industrial agriculture, chemicals, such as pesticides, are constantly developed and tested on animals (see Whithaus and Blecker 2016, 69). If there is only one death due to all of the vegan steaks on the planet, veganism will be more harmful than cultured meat, which kills *no animals*. This should help some to relativize their hasty claims about the harmlessness of veganism compared to cultured meat. Perhaps it will be objected that industrial agriculture could develop technical devices to prevent animals from being accidentally killed by harvesters. However, I will not assume it, simply because it is not on their agenda—nobody cares. One might also object that the industrialists of cultured meat could integrate plant extracts in the process, for example spices. It is possible—although not necessary—but it would be in any case in much smaller proportions, since the proportion of plant extracts would be much smaller in cultured meat than in vegan steaks.

For cultured meat to avoid killing animals or making them suffer, however, it is necessary to get rid of the fetal bovine serum. We have reason to be optimistic about it. There is research in progress to remove the fetal bovine serum from the process (Hocquette 2016, 170). Fetal bovine serum is being phased out by all companies for both financial and ethical reasons (Shapiro 2018, 141). Admittedly, developing this technique requires starting material that infringes animal rights. However, developing a technique in an unethical manner does not preclude its use when it is no longer unethical (Milburn 2016, 255). As stated by Gary Francione (2000, 181), 'we should join together collectively and demand an end to animal exploitation, but we are not obligated to accept animal exploitation or forego any benefits that it may provide.' For example, there is currently a consensus that products that are not tested on nonhuman animals are ethically acceptable even though their ingredients have been tested on nonhuman animals by or for another company in the past. Below, I examine the hypothesis that marketed cultured meat meets both conditions, specifically, respect for the fundamental rights of animals from which the cells are taken and the absence of fetal bovine serum in the process of cell multiplication. In other words, this paper defends cultured meat when it satisfies

the abovementioned condition of an absence of physical harm to nonhuman animals. I do not discuss the ethical permissibility of cultured meat when these conditions are not met, because it is likely that they will be. Thus, such a discussion would probably be useless.

Beyond the aspects of physical harm, there is, as I mentioned, a growing question of whether cultured meat constitutes symbolic harm to animals, that is, a violation of their dignity. I discuss a violation resulting from cultured meat, not from biopsies, for three reasons. First, what is true for cultured meat is true for biopsies. Some might point out that insofar as animals do not give consent to biopsies, there is a violation resulting specifically from biopsies and therefore distinct from the violation due to cultured meat. However, it is not in contrast to human dignity to take cells from the human body, even without consent. Otherwise, police could not take DNA samples from individuals in custody without everyone seeing an attack on human dignity. Some may see it this way, but in general this is not the case. If you want an absolutely indisputable example, here is one: If it were contrary to human dignity to take cells from the human body, a tissue sample could not be taken from a coma patient for his/her best interest, for the sole reason that he or she cannot give consent because he or she is mentally disabled. Fortunately, tissue and fluid samples can be taken from mentally disabled people for cancer diagnosis and analysis. One could also take tissues from a badly burnt mentally disabled person to make human skin from stem cells for a skin graft. However, one could not use skin from the patient's cells to make purses. Thus, human dignity is not affected by the tissue sampling without consent but by its use. This is the concern with cultured meat, which could use animal cells in a manner that conflicts with animal dignity. My second reason is that the need for *in vivo* cells may eventually be eliminated. Therefore, a discussion on this point is also useless. If this sounds like a permissible vision of cultured meat (and this is my third reason), it is important to remember that veganism is physically harmful to some animals. As such, this suggests that it is harmful to their dignity. This will be true as long as there are no *in vitro* vegan steaks, which does not seem to be in the news. Thus, there is little difference between cultured meat and veganism for the dignity of a minority of the involved animals—for biopsies in cultured meat, and pesticides and so on for veganism. Therefore, this discussion must focus on whether cultured meat is in conflict with animal dignity regardless of the question of biopsies.

However, what is dignity? There are many ways of understanding this notion. Here, I do not focus on dignity as moral excellence but solely on dignity both as an axiological dimension (a value) that results in a superiority that is attributed to a being or a category of beings on a hierarchy (on this aspect of values, see Frondizi 1971, 10–11) and as a normative dimension that results from this axiological dimension.

2.2 Why Dignity?

The question of whether animals have dignity is controversial. Animals can have dignity (Nussbaum 2006; Nussbaum 2009). One may also believe that the notion of dignity only suits human, and not nonhuman, animals (Zuolo 2016), or that animal dignity that is established in a Kantian way should be replaced with an interest-based account of animal rights (Cochrane 2012). Others believe that it is also not suitable for human animals because human dignity is a flawed concept that is grounded in metaphysics that were discredited by Darwinism. Thus, the very idea of human dignity should be replaced by a morality that is based on the individual rather than the species (Rachels 1990). Set aside human-animal relations, dignity is in itself a doubtful concept. It can be rejected in bioethics as indeterminate, reactionary, redundant,

arbitrary, and unhelpful in delineating moral obligations, etc. (Cochrane 2010). Thus, many flaws have been emphasized. One of them is important to this subject at this level of discussion. We wonder whether animal dignity can be violated by cultured meat. But does this question make sense if the notion of dignity is redundant with moral rights? Should we not simply ask whether cultured meat violates animal rights? A convincing answer was provided by Federico Zuolo (2016, 1120):

‘More generally, we may say that dignity has a double role: it explains why certain properties (rationality, capacity for agency, personal traits) have a special value and it demands an appropriate moral response. Call the first role the *axiological function* of dignity, and the second role the *prescriptive function*.’

Whether moral rights must have a justification or what justification they are supposed to have is not important. What seems clear is that *when* rights are based on axiology, then dignity is not redundant with rights. When people say they have dignity, they mean 1) that they have value. This means that they are superior in the axiological hierarchy of beings, regardless of the criterion for this hierarchy: moral agency, rationality, consciousness, sentience, life and so on. And they mean, 2) that *because of* this dignity, others are bound to a certain behavior toward them, i.e., that they have rights (or at least that they are the beneficiaries of some moral conduct when the moral response is not due under a right). Thus, the hierarchy is also normative. Therefore, dignity is not redundant with the concept of rights because one does not refer to a value solely as the foundation of rights; a value matters in itself when one speaks of dignity. In addition, dignity is not redundant with the concept of value because the value in question is specific in that it requires rights. One could object here that rights must have an axiological content, that is, rights are necessarily valued. For example, one could posit that ‘[h]aving rights enables us to “stand up like men,” to look others in the eye, and to feel in some fundamental way the equal of anyone,’ in such a way that ‘what is called “human dignity” may simply be the recognizable capacity to assert claims’ (Feinberg 1970: 252) which supposes to have rights. One may say that if the normative concept of rights has also an axiological content, then the notion of dignity, which associates axiology with norm, is redundant with rights. That moral rights have an axiological content does not imply, however, that dignity is redundant with rights. In a concept of dignity wherein rights are based on axiology, the question is not whether rights have an axiological content but whether the rights holder has one. Even though rights have an axiological content, dignity can be differentiated from rights in that dignity includes the axiological content of the rights holder, which is the reason that he or she has rights.

To say that dignity is not a redundant concept is not to say it is relevant. The idea of a hierarchy of beings that pertains to dignity is a questionable metaphysical claim. Moreover, it is against the equality that characterizes what history views as moral progress (Sapontzis 1987, 107). However, this paper does not discuss this issue for two reasons. First, people will not cease to believe, at least in the short term, that dignity makes sense only because philosophers deny the relevance of this concept. For example, human rights instruments often refer to the notion of dignity. Thus, there is interest in accounting for dignity in the debate on cultured meat. Second, the notion of dignity that is understood as an axiological and normative hierarchy is explicitly or implicitly present in debates on cultured meat. The axiological dimension is an important point in the debate on the issue of cultured meat, which is criticized for inferiorizing other animals and placing them below humans in the *scala naturae*. As Josh Milburn (2016, 256) states,

‘The idea is that in choosing to eat NHA [nonhuman animals] flesh, even if we do so in a way that is consistent with their interests in not being made to suffer and not being killed, we affirm a kind of *pathos of distance* between “us” and “them”; a kind of ranked hierarchy with humans above and NHAs below. Donaldson and Kymlicka [...] express this concern in terms of *dignity*, and this, too, can tie to the idea of a ranked hierarchy: Those of a higher status possess (some level of) dignity while those of a lower status do not [...]’.

Therefore, the axiological dimension is important in itself, regardless of its impact on the normative dimension in the context of dignity. But it is equally clear that the normative dimension also has a significant role in this debate and that this normative dimension is considered within the framework of the concept of dignity. One may fear that if animals are axiologically belittled, they will have no or less rights.

That is enough evidence for me to account for the concept of dignity rather than rejecting it purely and simply on the grounds that it is not relevant. Such an outright rejection would be a relevant way to respond to the criticisms of cultured meat that are motivated by the fear that it would infringe animal dignity. If there is no human or nonhuman dignity—if the idea of an axiologico-normative hierarchy is to be rejected—cultured meat cannot infringe it. However, this is not the strategy that is used here. Thus, even though the idea of dignity as a hierarchy may be a flawed concept, I give it the benefit of the doubt. The question will be whether, assuming that dignity is relevant and that nonhuman animals have dignity, cultured meat infringes animal dignity.

2.3 The Veganism/Cultured Meat Dichotomy vs. the Veganism/Animal Meat Dichotomy

How does dignity relate to both veganism and cultured meat? Some can imagine a dichotomy between the choice of veganism, which non-physically and non-symbolically harms nonhuman animals, and cultured meat, which non-physically but symbolically harms nonhuman animals. It is against this ‘veganism/cultured meat dichotomy’ that the present contribution provides arguments. Below, I show that cultured meat does not symbolically harm nonhuman animals (any more than anything else, including veganism), that is, there is no infringement of animal dignity and, thus, no dichotomy. However, if one accepts that there is a veganism/cultured meat dichotomy, is it justified to reject cultured meat due to an assumed infringement of animal dignity? At first, it appears that if cultured meat is an infringement of animal dignity and if we have a choice between cultured meat and veganism, then we should prefer the second rather than the first. However, this is a partial presentation given that we do not consider that veganism, as an alternative to animal meat, may have its own weaknesses, specifically that it may be *unattainable*. To address this possibility, we need to consider alternatives other than the veganism/cultured meat alternative. Insofar as both veganism and cultured meat are alternatives to animal meat, there are three alternatives: the veganism/cultured meat alternative, the veganism/animal meat alternative and the cultured meat/animal meat alternative. Below, I do not address the cultured meat/animal meat alternative. I assume that most agree that cultured meat is preferable to animal meat when the fetal bovine serum is removed from the process and there is no effect on animals’ interests or fundamental rights. Rather, what is at issue is the respective weaknesses of the veganism/cultured meat and veganism/animal meat alternatives.

2.4 Cultured Meat as an Obstacle to Global Veganism

To reject the veganism/cultured meat dichotomy (i.e., the idea that veganism and cultured meat oppose each other with respect to animal dignity) is to seek to have at one's disposal the veganism/cultured meat alternative (i.e., in concrete terms, a choice between veganism and cultured meat). As I said earlier, two alternatives to animal meat are better than one, especially as there is no veganism/cultured meat dichotomy. Therefore, why refuse the veganism/cultured meat alternative?

If we believe that veganism is opposed to both cultured meat and animal meat in terms of symbolic harm, then veganism is only conflicted with animal meat in terms of physical harm. One could conclude that cultured meat is an ethically acceptable possibility. However, let us suppose that this is not the case. Even if we believed that, ethically, cultured meat is not acceptable, the veganism/cultured meat alternative would remain pragmatically acceptable because it does not prevent subsequently choosing veganism—at least, any more than the veganism/animal meat alternative. In other words, if cultured meat replaces animal meat, it will be possible to abolish cultured meat due to its' infringement on animal dignity, just as we aim to do with animal meat—minus the physical damage. Thus, the only possible objection is as follows: the veganism/cultured meat alternative is an obstacle to veganism that is *more important* than the veganism/animal meat alternative. Specifically, it is possible when one assumes that people's motivation to become vegan, which is supposed to make it possible to eliminate symbolic harm, is weaker for the veganism/cultured meat alternative than for the veganism/animal meat alternative. Now, it appears plausible that this motivation is weaker; in other words, it would be easier to switch from animal meat to veganism than from cultured meat to veganism. This is the point of cultured meat: a promise 'to allow consumers to become moral agents without the slightest hint of personal inconvenience' (Pearce 2013). Thus, it is necessary to eliminate the obstacles to veganism that are posed by cultured meat.

Therefore, this reasoning begins from the principle that a generalized conversion to veganism is inescapable. If we can remove both the physical and symbolic harms to nonhuman animals in the long term, we should refuse the veganism/cultured meat alternative and prefer veganism/animal meat alternative, because it would favor global veganism. However, as I said, there is a question as to whether the veganism/animal meat alternative has weaknesses, specifically in that it may be unattainable. Some believe that the project of global veganism may have already failed (Hopkins and Dacey 2008, 581; Milburn 2016, 250). Certainly, the promoters of vegetarianism and veganism can challenge this assertion as shortsighted and in contrast to their feelings of advancements in vegetarianism and veganism. Can a feeling be proof? Let us consider these words from a famous writer:

'[V]egetarianism. That movement has during the last ten years advanced more and more rapidly. More and more books and periodicals upon this subject appear every year; one meets more and more people who have given up meat; and abroad, especially in Germany, England, and America, the number of vegetarian hotels and restaurants increases year by year'.

This statement appears very familiar—except that the author of these lines is Leo Tolstoy (Tolstoy 1900, 61). At a minimum, the twentieth century largely belied those optimistic expectations as the following century may deny the expectations of those who, today, base

their hopes on the ability of mankind to change eating habits for purely ethical reasons. Admittedly, the number of vegetarians or vegans increases in some western countries. For example, according to GlobalData (2017), US consumers who claim to be vegan were 1% in 2014 and are now 6%. However, it is unclear whether this trend will continue enough for animal meat to recede significantly, or even if this increase will not be followed later by a decline. Indeed, there is concern that many vegetarians or vegans do not keep their diet all their life. According to a study published by Humane Research Council (Asher and Green 2014), 84% of US vegetarians/vegans abandon their diet. For advances in vegetarianism at a global level, there were no encouraging findings from a study that measured the current number of vegetarians and vegans. In the medium term, one should expect a ‘dramatic drop in the number of vegetarians,’ which is currently 22%. Although it is true that more of the rich will become more vegetarian, the poor, who currently constitute 95% of vegetarians, will switch from vegetarianism (which they have needed to practice) to meat consumption when they achieve a higher standard of living (Leahy et al. 2010, 4–5). Meat consumption is expected to double by 2050, according to the FAO (2017). In these conditions, the argument that the veganism/cultured meat alternative is a more important obstacle to veganism than the veganism/animal meat alternative is failing—as global veganism is not attainable—and we should prefer the veganism/cultured meat alternative to the veganism/animal meat alternative.

However, we cannot reject the possibility that veganism is attainable. Maybe our moral skills will allow us to end slaughterhouses (Regan 2004, 197). Maybe the struggle for veganism will eventually succeed as the struggle against human slavery did (Lepeltier 2013, 161–169). Or, suppose that a growing global population in the 2050s increases the price per square meter of agricultural land and, thus, the price of animal meat. This could be a constraint that strongly encourages phasing out animal meat and increases the likelihood of abolition (Chauvet 2017, 86–88). There is awareness of this constraint, for example, in some consumers who declare that they are willing to adopt cultured meat if it is less expensive than animal meat (Verbeke et al. 2015a, 53; 2015b). The increase in the price of animal meat could benefit both cultured meat and global veganism. Admittedly, cultured meat should be ‘likely to enter the marketplace competing with other high-end meats rather than with subsidized chicken flesh produced in intensive farming systems’ (Cole and Morgan 2013, 214). However, it can be assumed that, like any technology that is applied to mass consumption (for example, computers), it will eventually be within everyone’s reach. In this case, cultured meat, if it is less expensive than animal meat, would be an economic alternative that is comparable to veganism. Consequently, there would be a threat because consumers would have no reason to adopt veganism. Must we conclude that cultured meat will be rejected on the aforementioned basis, according to which animal meat is the means toward veganism? It appears that way, but under at least two conditions. The most fundamental one is that it must be true that cultured meat infringes animal dignity. If not, then there is no ethical reason to prefer veganism over cultured meat. But that’s not all. If we posit that it is easier to be a cultured meat eater than a vegan (the reason why cultured meat is an obstacle to veganism), then the switch to global veganism will take longer than the switch to cultured meat—and the number of animal victims will be much greater. Thus, if the first condition is met, then the other condition is that the suffering and death of nonhuman animals is an acceptable cost for the objective of preserving their dignity.

3 Does Cultured Meat Infringe Animal Dignity?

A violation of interests can be interpreted as a violation of dignity. In contrast to an interest-based account of rights, which should exclude any reference to dignity according to Alasdair Cochrane (2010), dignity also allows for the possibility of a violation of dignity that does *not* rest on the violation of interests. This results in three assumptions, of which the former two are related to violating animal interests, unlike the third: first, animal dignity is violated because animals are ethically edible and may have an interest in not being seen as such; second, animal dignity is violated because they are physically edible and could have an interest in not being seen as such; and, finally, dignity would be violated due to cultured meat even if there were no violations in animal interests.

Before moving on, it is important to clarify the concept of animal interests and the different ways they can be violated. First, I discuss interests as defined by Joel Feinberg: a '[...]“good” of its own, the achievement of which can be its due' (Feinberg 1974, 50). As Tom Regan states in a manner consistent with Feinberg, a condition of a being that has a preference-interest 'is that it must be the sort of being which can have a good. Animals, it seems, can meet this condition. So we could not argue that there is something untoward involved in speaking of animals as having interests because they cannot have a good or state of well-being' (Regan 1976, 254). This idea is closely aligned with *The Case for Animal Rights*: 'those things that an individual is *interested in*, those things he likes, desires, wants or, in a word, prefers having, or, contrariwise, those things he dislikes, wants to avoid or, in a word, prefers not having' (Regan 1983, 87; for a similar view, see, for example, Donaldson and Kymlicka 2011, 36). Some have argued that animals have no interests because the concept of interest 'has a prescriptive-evaluative overtone' (McCloskey 1965, 126). This analysis is highly questionable (Regan 1976, 255–257; Tanner 2007), but we do not attend to these subtleties. Our reasoning is valid even if we consider that animals only have 'welfare-interests' (see Tanner 2007, 36–7). Concerning cultured meat, the only question is whether it can, in one way or another, be harmful to nonhuman animals in the sense of being subjectively and negatively impacted by something. This means that this negative impact is felt by the impacted animal. This negative impact (i.e., the harm) can be indirect and physical or direct and symbolical. It cannot be direct and physical because my analysis has ruled out the possibility that the production of cultured meat includes animal suffering or killing. It is or might be indirect and physical when animals are or might be eaten as animal meat due to cultured meat. For example, people can see animals as food or belittle them because of cultured meat and, as a result, eat them. In this case, what is harmful to animals is not cultured meat but what it causes: animal meat consumption which involves animal suffering or killing. The negative impact/harm is direct and symbolical if animals suffer from seeing that people view them as food. This symbolic harm is an *offense* as defined by Feinberg because to offend is 'to cause another to experience a mental state of a universally disliked kind (e.g., disgust, shame)' (Feinberg 1985, 2). Finally, we can also refer to symbolic harm as a negative impact that does not violate animal interests. In this case, the question is whether cultured meat is harmful to nonhuman animals in the sense of being objectively (i.e., without feeling it as such) and negatively impacted by something. If so, there is direct symbolical harm. Here, even if animals do not suffer from seeing that people view them as food, it is clear that cultured meat will have degraded some type of animal *status*. Under these conditions, it can figuratively be stated that cultured meat symbolically and directly harms the status of animals.

Now, let us examine the three assumptions.

3.1 An infringement of a dignity related to animals' interest in not being viewed as ethically edible

For the opponents of cultured meat, animal dignity is undermined through the consumption of cultured meat when animals are considered *edible*, even though they are no longer eaten. This suggests that the proponents of cultured meat have no choice but to answer yes to the question, 'Are animals edible?' as soon as they consider that cultured meat can be eaten, i.e., is edible. This reasoning is summarized below:

- (1) Animals are made (inter alia) of flesh,
- (2) Cultured meat is animal flesh,
- (3) Cultured meat is edible,
- (4) Then, the flesh of animals is edible,
- (5) Thus, animals are edible.

Although this reasoning is true in some cases, it is false in others. This initially refers to the double meaning that can be attributed to the 'edible' predicate. First, there is a *de facto* question. Nonhuman animals are *physically* edible. Thus, we can write,

- (1) Animals are made (inter alia) of flesh,
- (2) Cultured meat is animal flesh,
- (3) Cultured meat is physically edible,
- (4) Then, the flesh of animals is physically edible,
- (5) Thus, animals are physically edible.

There is no doubt that most animals, including humans, are edible. There is a perfect equality on this point, which will only disappear if it is no longer evident that humans are also edible. Among other things, this would erase the word cannibalism from the dictionary or cover up reports of murder followed by ingestion by the killer of his victim.

Then, there is a *de jure* question. Nonhuman animals are *ethically* edible. The question is whether we can write without contradicting the reasoning below:

- (1) Animals are made (inter alia) of flesh,
- (2) Cultured meat is animal flesh,
- (3) Cultured meat is ethically edible,
- (4) Then, the flesh of animals is ethically edible,
- (5) Thus, animals are ethically edible.

The answer is yes in some cases, and no in others. Again, this is because the same term, 'ethically,' refers to several different things. Indeed, there are several ethical reasons for not viewing animals as edible, but not all imply that animals have rights or dignity. For example, if cultured meat reduces environmental impacts (Tuomisto and Roy 2012, 615–619), it is possible to adopt ethically cultured meat without recognizing animal rights or dignity. The above reasoning is then valid: one can say it is right that animals are ethically edible based on animal ethics because they have neither rights nor dignity, even if, at the same time, animals are not ethically edible from an environmental ethics perspective. In this situation, animals are ethically edible

as long as they do not endanger the environmental balance. If they are ethically edible and, therefore, have no dignity, one adds, it is because we view them as food, and that is partially due to cultured meat. Thus, based on ethical motives, such as ecology, cultured meat could have a negative physical and indirect impact on animals. For example, one could eat animal meat from time to time, go hunting or shooting, or go to a bullfight.

However, this reasoning is not valid when the ethical concerns are for respect for animals, specifically, not infringing upon their fundamental rights. It is contradictory to say, on the one hand, that because animals are not ethically edible and are worthy of respect, it is necessary to eat cultured meat, and, on the other hand, that eating cultured meat means that animals are ethically edible on the grounds of animal ethics. If the reasoning that is summarized above is modified to incorporate the fact that cultured meat is adopted on the grounds of animal rights, so that (4) is as below:

(4) However, the flesh of animals is not ethically edible from an animal rights perspective,

then we cannot add without contradiction,

(5) Thus, animals are ethically edible from an animal rights perspective.

Therefore, animal dignity requires cultured meat to be adopted on animal rights grounds. However, if cultured meat was not adopted at the beginning for these reasons, it does not mean that cultured meat consumption could not be framed in that way later. Indeed, suppose that cultured meat would appear better than animal meat for reasons other than animal rights. If we have no reason to kill animals to eat meat, it is plausible that we would have less interest or motivation to maintain the view that animals have no dignity. Thus, our descendants may interpret cultured meat as a means of respecting animal rights even when this interpretation was not present at the beginning.

As such, the question does not arise. Saving animals is a clearly stated goal of some promoters of cultured meat. On October 23, 2017, *Inc.*, one of the most widely read business magazines, had cultured meat on its front page. It headlined: ‘World Without Slaughter,’ with this quote from Uma Valeti, who is co-founder of Memphis Meat, a Silicon Valley startup that produces cultured meat: ‘We have the potential to save billions of human lives and trillions of animal lives.’ Similarly, on January 2, 2018, the CEO of SuperMeat, an Israeli startup that is developing cultured chicken meat, stated: ‘The potential benefits for public health and animal welfare are considerable’ (O’Hear 2018). Amongst consumers, one of the primary benefits of cultured meat is its beneficial impact on animals (Laestadius and Caldwell 2015, 2464; Verbeke et al. 2015a, 54; Wilks and Phillips 2017, 1–14; Rolland et al., *in draft*) with the exception of some category of educated consumers (Hocquette et al. 2015, 273–284). Thus, for the claim that ‘cultured meat as a part of the continuing discourse of meat-eating serves only to add prestige, and market value, to the product it replicates’ (Miller 2012, 54), we retort that, as an alternative, cultured meat is a disparagement of animal meat and will be seen as such, just as an e-cigarette do not add prestige or value to tobacco cigarette but is viewed as an alternative to something *bad*. Just as we think about the cancer that is caused by tobacco cigarettes when smoking an e-cigarette, we will think about the animal cruelty of animal meat when eating an *in vitro* burger. Thus, animals cannot symbolically be harmed by animal meat due to cultured meat when it is grounded on animal rights.

Here, it can be objected that even if the fundamental rights of animals are respected—specifically the rights to life and not suffering—there is still a lack of respect when eating something that *resembles* them. As it is wrong to say that animals are *ethically* edible when cultured meat is grounded on animal rights, one must imagine that cultured meat infringes a specific interest of nonhuman animals that is related to being *physically* edible. In the same way, later in the text, we address the question of whether animal dignity can be violated by cultured meat even if there is no violation of animal interest. Therefore, in everything that follows the question is whether cultured meat infringes animal dignity even when the fundamental rights of animals are respected.

3.2 An infringement of a dignity related to animals' interest in not being viewed as physically edible

What can be an interest in not being viewed as physically edible? To answer this question, I begin with the case of humans facing *human* cultured meat. Then, we examine whether this situation can be transposed to that of animals.

Why does the fact that human cultured meat resembles us violate our interests? Even though we know that human cultured meat does not mean that it is ethically permissible to eat humans, it can be painful to see someone eating something that looks like us. However, why is it painful to be seen as physically edible when it is obvious that it is what we *are*, as I mentioned above? We do not suffer (generally) from reading the definition of cannibalism in the dictionary, so why would we suffer from seeing someone eat human cultured meat? What offends us is most probably less the idea that we *can* be eaten than the idea that we *could* be eaten. Imagine that someone is having fun aiming a fake gun at your head. You know that you are safe, yet this can hurt your feelings if the person became aggressive, as if he or she really wanted to kill you. Similarly, even if we know that we are safe with human cultured meat based on human rights, because this means that we are not ethically edible, the prospect of becoming so shocks us. In other words, what offends us is that human cultured meat makes us see what our situation would be if we *were* ethically edible. The fact that it is *as if* someone were allowed to eat us may seem disturbing or even frightening. Think of someone looking at you straight in the eyes while eating human cultured meat with a sadistic smile on his face. Similar to the false gun, it may hurt your feelings. This may not be the only type of fear that cultured meat can trigger. For example, we may suffer from the fear of trivializing the idea of human meat. You never know; one day it could give people the perverse idea of eating us, for real! Cultured meat could probably trigger other painful feelings, such as the humiliation that we would feel if others were viewing us as meat.

Despite the fear or humiliation that people may feel about human cultured meat, we cannot transpose their situation to that of animals. Only humans can suffer from this offense. Just as animals will not suffer if we aim a gun at them if they do not know what a gun is, animals cannot suffer from viewing us eating cultured meat because they do not know that this is something that resembles them. Importantly, to say that animals do not suffer from our perception of their physical edibility is valid in the foregoing assumption, namely, their ethical edibility, but only to a certain extent. Animals do not suffer from being viewed as physically edible, and they do not suffer from being considered ethically edible. However, as I said, if cultured meat consumption that is not grounded on animal rights leads us to view animals as ethically edible, then it allows us to eat *animal* meat. If we do, then they indirectly suffer from our perception of their ethical edibility.

In contrast, the physical harm due to animal meat cannot result from being considered as physically edible because of cultured meat, as long as this does not imply being viewed as ethically edible. It might be objected that there is a risk that animals will one day be viewed as ethically edible because they were previously viewed as physically edible. Therefore, animal dignity *might* be violated if animals are considered as physically edible. This is true, but again, this risk will exist as long as we know that animals *are* physically edible. Millennia of animal consumption are there to remind us about that, and we would not say that history violates animal dignity. More relevantly, one might fear that if animals do not have the same rights as humans—even if their fundamental rights are respected—it means that they are granted less value, given that the norm is based on axiology in the concept of dignity. However, this fear is unfounded. If animals have no interest in not being viewed as physically edible, and if people think that way when they eat cultured meat, then they do not feel that they are harming animals because no animal interests are violated. Thus, when it is about an infringement of dignity that is related to an interest in not being seen as physically edible, prohibition can *only* relate to human cultured meat—not nonhuman cultured meat—without undermining nonhuman animal dignity. There is no *us* and *them* between humans and nonhumans simply because animals are denied the right not to be viewed as physically edible any more than there is an *us* and *them* between men and women because men are denied the right to abort. Both have equal dignity despite the fact that not everyone has the same rights. If that were not the case, we would think that men do not have the same dignity as women because they do not have the same rights, regardless of whether they have the same interests. Thus, any skeptic about cultured meat must agree that different rights do not imply differences of dignity when there are different interests. Therefore, the skeptic must agree that if animals have different interests than humans, they may have different rights without any difference in dignity. At this stage, the only way to perceive that animals have a right to not be viewed as physically edible is to assume that this right is not related to their interests.

3.3 An infringement of a dignity that is not related to any animal interest

Here, the idea is that animal *status* may suffer symbolic and direct harm. That such harm is contrary to animal dignity means that animals have a (not interest-based) right not to be viewed as inferior. It is clear that degrading the status of animals can be harmful to them, as has been shown. If animals are inferior due to cultured meat, they can be viewed as ethically edible when cultured meat is not adopted for their own benefit. Any practice that ridicules animals, even if it is not physically or psychologically harmful, could lead to animal abuse, such as hunting, bullfighting, animal testing, and so on. However, this risk is not present when cultured meat is adopted for animals' own interest. Thus, if the status of animals were violated by cultured meat, it would not result in permission to violate the fundamental rights of animals, such as the right to life or to not be abused, when cultured meat is adopted on this basis. If this is the case, then the violation of animal status without violating any animal interests is a mere matter of human perception. Does it matter, from the perspective of animals? They do not care about how we view them, just as you do not care if I think I am Napoleon or the King of the Universe. When it is physically harmless and not an offense to others, narcissism is only a problem for the one who looks in the mirror. Therefore, it seems that an infringement of dignity that is not related to any animal interest is not a concern.

Let us see, nevertheless, if, due to cultured meat, there is a violation of animal dignity without violating animal interests. I will address this problem by examining how there can be a

violation of dignity without violating any interests to verify as a second step whether cultured meat is necessarily to be interpreted as a violation of animal dignity. As such, I wonder whether cultured meat could *generally* conflict with animal dignity. I will examine the scope of this nuance that is introduced by the term ‘generally’ in the debate on cultured meat and animal dignity.

How to understand a violation of a right and a dignity that is related to this right that occurs without violating any interest? In absolute terms, anything can be interpreted as a violation of dignity, just as anything can be interpreted as respect for dignity. Even murder can be seen as something that honors one’s dignity, such as when it occurs as a part of a ritual sacrifice. However, aside from these marginal cases, some things are generally viewed as in contrast to or consistent with dignity. In general, murder is an affront to dignity. Does cultured meat infringe animal dignity as generally as murder?

In the present discussion, one of the most plausible ways of understanding an infringement of dignity that is not related to any animal interest is the following: dignity without interest results from an *extension* of a situation in which dignity is related to interests. For example, to quote Elizabeth Anderson, who commented on Martha Nussbaum (Anderson 2004, 282), respect for the dignity of a profoundly demented Alzheimer’s patient requires, among other things, his/her hair to be combed even if he/she is unable to recognize himself/herself and, therefore, has no interest in being presentable. Conversely, ‘We would rightly be outraged at some fool who turned a dog into a figure of ridicule by spray-painting graffiti on its fur. We could even say that this treatment violates the dog’s right to dignified treatment.’ (Anderson 2004, 282). The patient who has no interest in having his/her hair combed is treated as a paradigmatic human who suffers from looking untidy, i.e., *as if* he/she had this interest. Similarly, the dog is treated as a paradigmatic human even when he has no interest in not being tagged, perhaps, for example, because he does not realize that there is a tag on his fur or, if he realizes it, because he does not care (a speculative hypothesis; we can easily imagine that the dog considers this harmful, for example, because the odor upsets him). Now, if this extension occurs in *all* cases in which it is possible to occur (i.e., if this is a *general* extension), then we have no reason to refuse to consider that cultured meat infringes animal dignity. Why should we make an exception? The patient who has Alzheimer’s has the right to be combed when he/she has no interest in being combed by extending to his/her situation that of the human who would suffer from looking untidy. The dog has a right not to be tagged despite his lack of interest through an extension of the situation of the human who would suffer from being tagged. Thus, animals have the right not to be viewed as physically edible even when they have no interest in not being seen as such by extending the situation of the human who would suffer from being viewed as physically edible. The right not to be viewed as physically edible implies rejecting cultured meat that violates this right and its associated dignity.

However, if an extension is not widespread—when it is not a *general* but a *sporadic* extension—then we would not make an exception by not extending the right not to be viewed as physically edible to situations in which there is no interest in not being seen as physically edible. Does extension occur in all cases in which it is possible? It does not seem so. Let us examine the case of euthanasia for a human who has and will have no interest throughout his entire life. Some would view this as violating his dignity (see Sulmasy 2008, 328). They may believe that human life is sacred—hence, for them, euthanasia is murder. Others may not agree, because they believe that a human in a permanent vegetative or a minimally conscious state has no interest in living. For them, this human may be killed without infringing upon

human dignity, which suggests that they would not initiate an extension. What is the scope of this distinction between general and sporadic extensions? If one could say, 'Slavery, as everyone knows, violates human dignity,' one could not say, 'Euthanasia, as everyone knows, violates human dignity'. One could only say that some people think so, which is not the same. In other words, it cannot be said that euthanasia *is* a violation of human dignity. Why? Quite simply, because—here we see the importance of the nuance that is introduced by the term 'generally'—euthanasia does not *generally* infringe human dignity. Thus, we would not say that euthanasia violates human dignity simply because some interpret it as so. Under these conditions, the current question is whether cultured meat should be related to the case of the patient with Alzheimer's disease or the tagged dog (as a general extension) or to the minimally conscious human who is likely to be euthanized (as a sporadic extension). The reason for extending a situation in which interests are violated to another in which no interests are violated most probably results from the contingency of mentalities. It would be futile to seek a rational criterion. However, we would not need it if we had a similar situation that could allow us to determine whether it would be extended. Fortunately, we have this situation with fake meats.

The fake meat analogy. The situation of fake meat is analogous to cultured meat for the only relevant element in the present discussion: to make one believe that animals are physically edible (remember, it is a question of extending the human interest as not being seen as physically edible to nonhuman animals, since animals are not ethically edible when cultured meat is adopted on animal rights grounds). Indeed, fake meats, although plant-based, exactly imitate the cooked dead animal's body: its taste, texture, physical appearance, smell, and, sometimes, name. The differences between cultured and fake meats, specifically the fact that the former consist of animal cells, are, consequently, secondary. However, most of the time, fake meat does not result in vegetarians or vegans feeling that they are infringing upon animal dignity. Their belief that there is no damage inflicted on animals suggests that they do not extend the human interest in not being viewed as physically edible to animals. Now, we return to the question: does cultured meat infringe animal dignity? Most vegetarians or vegans do not believe that they infringe animal dignity or harm animals' status by eating fake meats. However, some may feel that way. Thus, should we not conclude that fake meats violate animal dignity and, therefore, by analogy, that cultured meat does as well? The answer is no. All we can say is that there are several interpretations. In other words, there is not a general but a sporadic extension. Thus, just as we would not say that euthanasia violates human dignity because some interpret it as so, we would not say that fake meat violates animal dignity because some interpret it as so. The same applies to cultured meat, which is analogous to fake meat. Just as we would not say that fake meat violates animal dignity because some interpret it as so, we do not have to say that cultured meat violates animal dignity simply because some interpret it in that manner.

Despite the fake meat example, some may claim that eating cultured meat implies viewing animals as food and, therefore, as inferior. Maybe vegans who eat fake meats are hierarchists without knowing it! This claim sounds unwarranted. 'If humans and nonhuman animals had the same dignity, the cultured meat opponent would insist, we would eat both human and nonhuman cultured meat. Why not eat human cultured meat, if eating someone's cultured flesh is not in conflict with their dignity? If you refuse to eat someone's flesh or cultured flesh, you consider him worthy. If you eat it, you consider him unworthy. That's all.' If this were true, one could imagine how worthy we would find roaches that we usually do not eat, at least in several countries. One may refuse to eat a being without considering it worthy. The slaveholders

viewed black people as inferior, just as Nazis did with Jews, yet they did not eat them. This is because they had a repugnance for eating human flesh. There may be a disgust or taboo for human meat—whether *in vivo* or *in vitro*—that is not moral but is simply physical or cultural. This repugnance does not imply axiological judgment that consists of viewing someone as inferior in the chain of beings. Many animals also do not eat others of their kind, and we would not say it is because they believe in the chain of beings. In the human species, there are dietary prohibitions. For example, Jews prohibit consuming animals that are impure, whose hooves are not split, like camels or horses, or, for aquatic animals, those without scales and fins, such as crustaceans. We would not say that Jews, as a rule, believe that these animals are hierarchically inferior to others. Thus, it is possible not to want to eat human cultured meat simply due to cultural habits, not because the human species is viewed as superior. This is why a vegan who believes that humans are not superior to other animals—or that animals are more valuable than humans—may refuse to eat human cultured meat while agreeing to eat fake meats and may agree to eat cultured eggs, cheese or meat. Therefore, there is no need to view animals as inferior because we eat their *in vitro* flesh and not that of humans. Is it any wonder that we want to continue to eat something simply because it is good and we are used to it and without implying anything else? What a vegan—or a nonvegan—sees when eating fake meat is not an animal; it is the impersonal product that he used to consume, called ‘meat’.

Removing the extravagant objection that vegans who eat fake meat view animals as inferior, we maintain our conclusion that cultured meat should not generally infringe animal dignity. Certainly, the cultured meat opponent will admit that this is a correct conclusion provided that we use the example of fake meat. However, we can also reject the fake meat analogy in favor of another. Therefore, the following analogy is an objection.

The animal meat analogy. If cultured meat is similar to fake meat, it is also, and above all, close to animal meat. If cultured meat is only meat, then what applies to animal meat applies to cultured meat. Thus, if the analogy of animal meat is related to cultured meat, there is reason to believe that animals are as belittled by cultured meat as they are by animal meat. However, we can question the relevance of this reasoning. It is not because cultured meat is meat that what applies to animal meat applies to cultured meat. Take the example of human tissues. They can be either *in vivo* or *in vitro*. You cannot use *in vivo* human tissue to perform invasive testing without violating human rights. However, reconstituted human epidermis from stem cells is used as an alternative for animal testing. This would not be possible if what applies to *in vivo* human tissues applied to *in vitro* human tissues. Thus, what applies to animal meat does not necessarily apply to cultured meat.

If it is not necessary that cultured meat, unlike animal meat, be incompatible with animal dignity, is there reason to believe that it is compatible with animal dignity? Yes, there is. In the same way that invasive tests on humans are generally not compatible with human dignity, killing animals for meat is not compatible with animal dignity. It can be easily explained why what applies to animal meat does not apply to cultured meat for dignity, which refers to the above discussion on ethical edibility. Indeed, it is natural to belittle animals when we eat animal meat because we must kill them (or inflict other ill treatment). If animals were not viewed as inferior, one would have to deliver an injustice, at least when there is a causal link between values and norms. Therefore, it is natural to partially or totally deprive animals of dignity for animal meat. In contrast, cultured meat does not kill animals. Hence, in this case there is no need to belittle them, which is why cultured meat is compatible with animal dignity.

An opponent of cultured meat might object: ‘You say that we belittle animals to eat them. However, maybe we eat animals to belittle them.’ Indeed, it has been hypothesized that animal

meat is a method of belittling animals because it stages human superiority and domination over other animals (e.g., in France alone, Olivier 1993, 14; Bonnardel 1995; Burgat 2014, 482; Rouget 2014, 49–58; Bonnardel 2014, 5–6; Burgat 2017, 25; and for a discussion on what can be called the ‘staging hypothesis’, see Chauvet 2017, 91–99). That one can think in this way is a fact since some have even written it. That is what Philip Austin (Austin 1885, 32), a nineteenth-century British philosopher, states:

‘Animals should be treated with perfect indifference; they should not be petted, they should not be ill-treated. It should always be remembered that they are our slaves, not our equals, and for this reason it is well to keep up such practices as hunting and fishing, driving and riding, merely to demonstrate in a practical way man’s dominion over the brutes.’

To what extent can this provocative essay be typical of the way that people thought in those days? In recent times, there is some evidence that right-wing adherents who feel threatened by vegetarianism or believe in human superiority over animals eat more meat (Dhont and Hodson 2014). People who believe that humans should dominate animals that are used for food are more likely to have killed an animal for food (Monteiro et al. 2017). However, research has not demonstrated that the belief in human superiority over other animals is the reason *why* people eat meat, let alone that people eat animals *to* express this superiority; for now, we just have evidence of the relationships between these variables. But if we assume that eating animal meat is a method to show that animals are, nevertheless, inferior, we can also assume that this is what would occur with cultured meat, at least in the minds of some people. Even if cultured meat eaters do not eat animals, it is *as if* animals were eaten. Thus, if animal meat violates animal dignity, so does cultured meat. Assuredly, this would be a strange way of reasoning. It is doubtful whether anyone who wants to dominate animals by eating animal meat would express his domination through cultured meat, whose production does not involve any domination over animals. In any case, Philip Austin would not have been satisfied. Let us suppose that it goes this way and that cultured meat may be viewed as a method both for expressing human superiority over other animals and for eating meat without killing animals or making them suffer. Would cultured meat be in conflict with animal dignity? Yes, of course, if (implausibly) most people interpreted their cultured meat consumption this way. Even if that were the case, however, nothing forces us to believe that people would not be able to lose their hierarchist ideology while consuming cultured meat, just as they could lose this ideology by becoming vegan. Just as one can switch from animal meat or cultured meat to veganism by abandoning hierarchism, one can switch from animal meat to cultured meat by abandoning hierarchism. As we have seen, cultured meat can be viewed as not infringing animal dignity and thus consistent with it, just like fake meat. We can easily imagine a fully egalitarian world, in which one consumes fake or cultured meat without viewing animals as inferiors. Thus, even if cultured meat was a method for belittling animals, that would not mean that it must continue to be so. Here, two objections can still be made: veganism could be, on the one hand, a more *definitive* and, on the other hand, an *easier* way of breaking with hierarchism than cultured meat.

Is veganism a more definitive way of breaking with hierarchism than cultured meat? The cultured meat opponent would say, ‘Okay, cultured meat eaters could get rid of a hierarchist ideology. But they could also return to it later. If they could get back to having a hierarchical vision, it is because cultured meat can be interpreted in both directions—hierarchist and nonhierarchist. In contrast, veganism cannot be interpreted as a method for belittling

animals—veganism is a one-way ticket to nonhierarchy. Thus, veganism is preferable to cultured meat, which alone can belittle animals and, therefore, is likely to infringe animal dignity again. It would be better therefore if cultured meat was not an available alternative.’ Really? We can also imagine a vegan world in which people express human superiority by being vegan, even if they do not want to kill animals or make them suffer. For example, they might believe that it is a way to tear ourselves away from our ‘animal nature,’ which is considered inferior. This is a reproach that some address with vegetarians (e.g., Lestel 2016, xx-xxi). (I suppose that they could address the same reproach for cultured meat eaters, or even human cultured meat eaters, which also allows us to escape from predation that characterizes an animal world from which we would become free). Does this reasoning seem far-fetched? Refer then to what I said above, specifically that on a global scale, the vast majority of those who do not eat meat have no choice. Are they rid of a hierarchist ideology? No, of course not; if they were, you would know about it. That is why they are expected to eat animal meat when they attain a higher standard of living. Similarly, if the future populations of the developed countries switch to veganism merely because of the price of meat or environmental problems, it will not necessarily indicate that they will be more respectful of animal dignity. They may well no longer eat animal meat and continue to think and assert that animals are inferior to humans. The opponent would answer, ‘It’s because they would be not vegan as a result of a nonhierarchist choice!’ Indeed, just as one who eats cultured meat to belittle animals does not make a nonhierarchist choice! In this respect, there is no difference between the two situations. The opponent does not see this because he confuses two very distinct levels: ideology and practice. The ideological conviction of one who wants to belittle animals is independent of his practice; animal meat, cultured meat or veganism, one who wants to view animals as inferiors can always interpret his practice as an expression of his superiority. Indeed, this interpretation is possible in these cases. If veganism can be linked to hierarchy now, it could be linked again in the future after having been linked with nonhierarchy. Consequently, the risk of returning to a hierarchist interpretation is no more specific to cultured meat than to veganism.

Is veganism an easier way of breaking with hierarchy than cultured meat? ‘Even if you’re right, the opponent would finally concede. However, is it not clear that we can lead people to nonhierarchy with veganism more easily than with cultured meat? We can imagine that a vegan could more easily become a nonhierarchist than a cultured meat eater, even though at first his reasons for becoming vegan were not nonhierarchist reasons. After all, vegans have broken all links with food of animal origin. On the contrary, cultured meat eaters could be more likely to keep a hierarchist reflex insofar as they eat animal flesh that previously involved hierarchy when it was derived from animals that were killed for meat. So a vegan hierarchist would be more easily led to nonhierarchy than a cultured meat eater hierarchist.’ Nothing supports this assertion. If some cultured meat eaters were hierarchists, then there is no reason to believe that it would be more difficult for them to switch to nonhierarchy than if they were hierarchist vegans. Otherwise, cultured meat should cause a hierarchist belief. Now, it can only be, in the worst case, a method for asserting this belief. The hierarchist interpretation of cultured meat is a consequence of a hierarchist ideology. It is not because cultured meat would imply animal indignity that some cultured meat eaters would view animals as inferiors. It is because they would view animals as inferiors that cultured meat would imply animal indignity. Now, this is not the means that determines the end, but it is the opposite. Thus, cultured meat does not make it more difficult to switch to nonhierarchy than veganism. ‘Admittedly, the cultured meat opponent would say, but if it is not more difficult to be nonhierarchist when we eat cultured meat than when we are vegan, then we might as well be vegan.’ I would agree, if it was

as easy to be vegan as being a cultured meat eater. However, if it is more difficult to be vegan, all we would achieve by switching to nonhierarchism through veganism is the same result that we would have through cultured meat, but with more death.

It is time to conclude this section. I examined an infringement of dignity that is related to animals' interest in not being viewed as ethically or physically edible and an infringement of a dignity that is not related to any animal interests. After examining these three cases, it appears that the first condition is not fulfilled. Cultured meat does not infringe animal dignity—not any more than veganism does. Therefore, it is false that cultured meat must be rejected in favor of veganism in the name of animal dignity. Some, perhaps, will not be convinced by this demonstration. Even if they believe that cultured meat infringes animal dignity, it is not clear whether cultured meat can still be rejected when this includes the sacrifice of animals, which is discussed below.

4 Is it Acceptable to Sacrifice Nonhuman Animals to Preserve their Dignity?

The number of terrestrial animals that are killed for food is currently 60 billion (World Watch Institute 2013, according to Johnston 2017, 143), and this number will double consistent with meat consumption. Proponents of veganism may believe that cultured meat will not replace animal meat faster than global veganism. However, rejecting cultured meat in favor of global veganism may accompany the belief that cultured meat could replace animal meat faster than veganism. One may want to reject cultured meat simply because of the belief that it will reinforce the carnist paradigms. This reflects being willing to sacrifice animals to preserve their dignity. In this case, this means that an immense number of animals must be sacrificed each year—animals who would be saved by choosing cultured meat. It is within this framework that our discussion will occur. In this framework, I will oppose our usual way of thinking to deontological and consequentialist reasonings that, without being false in themselves, cannot be retained without some oddity if they do not conform to our usual way of thinking. I assume that having double standards by applying reasonings to animals that we do not or would not apply to ourselves is a good reason to reject them.

4.1 Our Usual Way of Thinking and an Orthodox Kantian View on Sacrificing Animals in the Name of their Dignity

As noted by Patrick Hopkins (2015, 268), those who oppose cultured meat to prevent people from viewing animals as food 'use deontological rhetoric to justify their positions.' To inflict suffering and death on animals—moreover, in absolutely massive proportions—to protect their dignity may appear odd to anyone who does not share an orthodox Kantian vision (apart from a Kantian granting dignity to animals). Of course, this Kantian would not accept being accused of sacrificing animals by rejecting cultured meat. He would say that veganism is the only moral option and that it is up to us to be vegan rather than to eat cultured or animal meat. Thus, those who refuse to switch to veganism, not those who refuse cultured meat, are solely responsible for animal death. Let us suppose that he can convince us that there is a moral duty not to act in such a way that suggests that animals are edible, even if this entails animal suffering and death. If this duty appears truly convincing in the situation that we are discussing, we should apply it to ourselves in a comparable situation. Thus, let us suppose that Qzars, who are extraterrestrials whose level of technological advancement is as far from ours as ours can be from other animals, but whose mentality is hardly

different, land on Earth. After eliminating our ability to resist (they have installed an explosive that kills us as soon as we resist them in our brains), they make the following speech:

‘We Qzars are immeasurably more worthy and valuable than you humans and we plan to express this excellence by eating you, for nothing more eloquently shows the indignity of a being than its ingestion by whoever is superior in the chain of beings. Most of us, however, make it a principle to avoid causing suffering or sadness to inferior beings, so we would rather grow your flesh in our labs than butcher you in our slaughterhouses. (In fact, not killing you all but enough to feed us within the limits of the survival of your species, since without this limitation our human-based diet could not be sustainable, and we want it to be). Thus, we could be satisfied with a painless biopsy that will be practiced on some of you. But a few of us, who call themselves your advocates, not only believe that we are no more worthy than you but also that eating your cultured flesh is just as unacceptable as eating you after killing you with regard to the dignity they grant to you (wrongly, of course). As we know that you also consider yourselves eminently worthy (a pretense that we intend to belittle by swallowing you), we ask you to tell us the solution that seems preferable to you: being regularly killed and eaten (and waiting until the day that your advocates can convince us that we should not eat your flesh, whether *in vivo* or *in vitro*) or that we Qzars eat your flesh grown in our labs. With your answer to this question, we will choose the most desirable solution for you and, therefore, the one that will cause you the least trouble, in accordance with the ethics that most of us Qzars share.’

There appears to be little doubt that we would gladly disagree with our Qzarsian ‘advocates.’ No doubt, we would show much less keenness for justifying animal meat with human animals than we can show by justifying animal meat with nonhuman animals. If a human claimed otherwise in a science fiction movie based on this thought experiment and tried to convince the Qzars that eating *in vitro* human meat is equivalent to eating *in vivo* human meat,, he would not have the role of the hero but that of a deranged zealot. This is because we value our lives more than the Qzars’ perception of the chain of beings and its manifestation in the harmless form of meat that is grown from our cells on the other side of the galaxy. Therefore, if we give more weight to our own perception of the chain of beings and its manifestation in a harmless form to nonhuman animals than to their lives, we act in a manner that is not consistent with our usual way of thinking. It is this way of thinking that makes us, similar to Benjamin Constant, refuse, for example, that the duty to tell the truth requires you to not tell lies to the murderers who ask you whether your friend that they are chasing took shelter in your house. Of course, an orthodox Kantian may claim otherwise, as did Kant himself (1993 [1797], 63–67; 1980 [1797], 80), but it is not the ethics that we apply to humans (that is why someone lying to Nazis who chase Jews is a hero, and not a criminal), and there is no reason to reserve this dubious honor for nonhuman animals.

I am not saying that the deontologist vegan’s position is conceptually false. It could be demonstrated, but this is not my point. What I want to show are the implications of a so-called duty to refuse cultured meat on the grounds that infringing upon animal dignity is morally wrong, even if it results in exterminating animals, for the sole reason that animal meat eaters, not the deontologist vegan, are solely responsible for the extermination of animals for animal meat. This deontologist vegan should also have to say that he agrees to refuse human cultured meat on the grounds that infringing upon human dignity is morally wrong, even if it results in the extermination of humans by extraterrestrials, for the sole reason that human meat eaters,

not him, are solely responsible for the extermination of humans for human meat. To use a more realistic example, he should approve of the friend of the Jew who tells the Nazis where he is hiding on the grounds that lying is morally wrong, even if it results in the murder of this Jew, for the sole reason that Nazis, not him, are solely responsible for the extermination of Jews for the preservation of the 'Aryan race.' If he cannot say that and maintains his assertion that cultured meat should be rejected in the name of animal dignity, we can say that he has double standards, which can only be reasonably explained as not taking the interests of animals as seriously as those of humans. If we do not want to have double standards and if we want to take animal interests seriously, we must adopt a consequentialist attitude for animal interests, as we do for human interests in comparable or similar situations—or find a solution in favour of cultured meat in a deontological framework.

4.2 Our Usual Way of Thinking and a Consequentialist View of Sacrificing Animals in the Name of their Dignity

Some might say that, in the very name of consequentialism, you should refuse cultured meat. Indeed, viewing meat as desirable and animals as edible introduces a risk that one day the consumption of meat returns because of our decision to select cultured meat rather than global veganism. For example, imagine a collapse of civilization and, consequently, of technology, especially that for cultured meat. The survivors, who have never discarded meat-based habits due to this technology, would probably restart animal farming for meat. In the long term, the number of animal victims would probably be much larger than that which corresponds to the length of time that separates us from global veganism today. However, if a vegan world collapses, the survivors would probably not raise cattle because they are not accustomed to the idea of eating meat. Therefore, it is preferable to sacrifice animals by avoiding cultured meat and promoting veganism. Thus, this perspective equalizes actual and potential victims. It states that accepting such a risk for potential nonhuman animals and not accepting it for human animals by refusing *in vitro* cannibalism (because consuming this meat can lead to eating *in vivo* humans) is tantamount to introducing an unequal consideration that may be a potential infringement of rights and, thus, dignity.

At the very least, it is problematic to seek to preserve *purely* hypothetical victims by sacrificing animals with certainty or quasi-certainty (animal slavery could disappear in an instant, at the same time as our planet, for example, if the Earth is annihilated by gamma-ray bursts that are released at the end of the life of a massive star or by colliding with a parallel universe if we actually live in a brane multiverse). By definition, any action is about the future and, therefore, is based on assumptions. However, some are more likely than others, and the least likely—those that I describe as 'purely hypothetical'—are generally dismissed, and the actions that are performed on their basis are ethically unacceptable. For example, the leader of a country—say, Germany—who would try to invade a stable, democratic country with which it has peaceful relations—such as France—on the sole ground that it has atomic weapons and might use them in the distant future, could easily, once no longer in power, be dismissed and prosecuted if not directly placed in a psychiatric hospital. Another example is that if there is almost certainty in an attack, imprisoning terrorists is viewed as justified, but people are not put in jail due to vague assumptions. For example, the mere incitement of terrorism may be condemned, but not on the basis that its author might sooner or later commit an act of terrorism. Even a person who, after serving time for murder, shows a clear propensity for violence may be imprisoned for committing violent acts but not simply to prevent the risk of committing another

murder. Uttering death threats will not result in 20 years in jail even if there is a chance that you will act sooner or later. It is useless to provide more examples. Because we do not harm humans to spare purely hypothetical victims, we have no reason to reject cultured meat and, consequently, to sacrifice nonhuman animals only to save purely hypothetical victims from restarting meat consumption after a civilization collapse or any other hypothesis of this kind.

5 Concluding Remarks

This paper has attempted to demonstrate that animal dignity—if one considers this notion relevant—is not violated by consuming cultured meat. In fact, there is no possibility for creating an *us* and *them* by eating cultured meat when this consumption is grounded in animal rights. You will always find someone to interpret cultured meat as a method for belittling animals, but it is an insufficient reason for believing that cultured meat infringes animal dignity. Even if one believes that animal dignity is violated with cultured meat simply because some interpret it as so, this does not mean that this alternative to animal meat should be rejected because it requires that the symbolic harm is placed before the physical harm, which is not our usual way of thinking. These issues are interesting, but is it possible that this reasoning has a practical impact?

Currently, a part of the vegetarian cause rejects cultured meat in the name of animal dignity, and one might wonder whether their opposition to cultured meat is due to the impossibility of disengaging themselves from their opposition to meat. Meat eaters who cannot imagine eating meat other than from an *in vivo* animal would share with these ‘emotional vegetarians’ (Hopkins 2015, 268) the inability to accept the divorce of meat and animals. There would be little opportunity to convince them. Some believe that this is useless because the vegetarian population is demographically negligible (Hopkins 2015, 265). However, as some say, the normative content of meat ‘is becoming equally as important as any nutritional content’ (Dilworth and McGregor 2015, 88). If this is true (as it seems to be), the negative opinions of vegetarians or vegans could impact the marketing of cultured meat. Indeed, even if the proportion of people who are willing to replace animal meat with cultured meat in their daily diet significantly increases when they read more information about cultured meat (Rolland et al., [in draft](#)), consumers tend to express negative opinions about cultured meat. They deem it strange, frightening, unnatural, dangerous for health, and with social or societal risks (Verbeke et al. 2015a). As I said earlier, one of the primary benefits of cultured meat for consumers is its beneficial impact on animal welfare. If vegetarians or vegans deem cultured meat useless or harmful for nonhuman animals, this may encourage meat consumers to also believe that the benefits of cultured meat are negligible in this regard. If one of the few (albeit very important) reasons to favor cultured meat is downgraded, it may be feared that this would affect the marketing of cultured meat.

However, even in this case, there might be a possibility that their criticisms would not dissuade all meat eaters from switching to cultured meat but may encourage some of them to do so. Ironically, if some animal meat eaters want, through consumption, to express superiority over nonhuman animals by placing themselves at the top of a chain of beings, then the rhetoric that is disseminated by these vegetarians or vegans could allow these animal meat eaters, if convinced by this criticism, to continue to believe in their superiority through cultured meat.

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