

This version of the article has been accepted for publication in *The Journal of Value Inquiry* after peer review but is not the Version of Record and does not reflect post-acceptance improvements or any corrections. The Version of Record is available online at: <https://doi.org/10.1007/s10790-023-09945-6> .

Please cite published version

The Badness of Death for Sociable Cattle

Daniel Story

California Polytechnic State University

San Luis Obispo, CA

May 25, 2023

Abstract: I argue that death can be (and sometimes is) bad for cattle because it destroys relationships that are valuable for cattle for their own sake. The argument relies on an analogy between valuable human relationships and relationships cattle form with conspecifics. I suggest that the reasons we have for thinking that certain rich and meaningful human relationships are valuable for their own sake should also lead us to think that certain cattle relationships are valuable for their own sake. And just as death is bad for us when it destroys our valuable relationships, so death is bad for cattle when it destroys their valuable relationships. This argument is important because it pinpoints something that is bad about death for cattle that is overlooked by popular accounts of the badness of death for non-human animals that focus exclusively on the impact of death on lifetime well-being levels. Thus, the argument reveals an overlooked moral cost of some of our farming practices.

Keywords: Animal ethics; Animal welfare; Cattle; Badness of death

Section I: Introduction

Is death bad for the cattle we kill? This is a pressing question. Humans kill hundreds of millions of cattle every year [1]. Routinely killing huge numbers of sentient and relatively sophisticated creatures generates a weighty *prima facie* moral objection. And whether this killing is ultimately justifiable depends, among other things, on whether and in what ways death is a harm, setback, or bad thing for the cattle we kill.

This is also a tricky question. We have ideas about what makes death bad for us, but it is often difficult to tell whether these considerations apply to animals like cattle. Death is bad for us because it frustrates many of our expectations, desires, and plans for the future. Death destroys the rich and meaningful relations that bind us to one another and the things we care about. It deprives us of future goods, just as it interrupts the structure of our lives. It is unwanted, often desperately so. To determine whether death touches cattle in these ways, we need to know what their lives are like from the inside. But cattle cannot talk. And their behavior paints an incomplete picture.

This question is tricky for another reason, too. For the things I just said about the badness of human death are controversial. Some philosophers think death is not bad for us at all, whereas others think it is bad for some or all of the reasons I mentioned, and perhaps other reasons, too. Thus, the question presents serious empirical and philosophical difficulties.

Fortunately, progress is possible. If we can identify a condition that plausibly makes death bad for a human being and show that cattle likely can meet or be in that condition, then we will be in a position to conclude that there is probably something that can be bad about death for cattle. I adopt this analogical strategy here. First, I argue that death is bad for a human who dies

if it destroys that human's rich and meaningful relationships. Then I argue that cattle can have relevantly similar relationships, so death can be similarly bad for them.

This will not settle the question of whether and in what ways death is bad for cattle, as there are other relevant considerations. Many philosophers who think death can be bad for animals like cattle accept a well-being deprivation account, one prominent version of which says that "death is bad for an individual if and only if it makes the individual's lifetime well-being lower than it otherwise would have been" [2 p. 51]. I think that we should reject the 'only if' part of this biconditional because the destruction of certain relationships is non-comparatively bad for cattle. Still, the extent to which death makes an individual's lifetime well-being lower than it would have otherwise been is surely relevant to our guiding question. So, the answer to that question will be multifaceted.

A note about this paper's focus. Some will think it odd that I have decided to focus specifically on cattle when so much of what I say seemingly transfers to many other animals. I have done this because I think an argument of this sort should be grounded in a relatively fine-grained understanding of an animal's form of life, and by focusing on only one type of animal, I am able to ground my argument in such an understanding. Although I will not argue for this here, I believe that my argument can be extended to many animals besides cattle. And for this reason, I believe that my argument complements and to some extent vindicates other recent work exploring the ethical significance of the social capacities of non-human animals.¹

¹ Some representative works in this vein include Nussbaum's argument that social animals are entitled to, among other things, opportunities to form social relationships [3, pp. 325-407]; Monsó's, Benz-Schwarzburg's and Bremhorst's discussion of the moral capabilities of animals [4]; Delon's examination of the ways in which captivity undermines the physical and social conditions constitutive of a good and meaningful life [5]; and Fitzpatrick's and Andrews's exploration of the significance of culture for animal well-being, both in and outside of captivity [6].

Here is the plan. In Section II, I argue that death is bad for humans when and because it destroys rich and meaningful relationships. In Section III, I argue that cattle likely have relationships that are relevantly similar to these human relationships, and thus death can be bad for them, too, when and because it destroys their relationships. In Section IV, I discuss the implications of this conclusion for our guiding question: is death bad for the cattle we kill?

Section II: Death and the Destruction of Rich and Meaningful Human Relationships

Many human relationships have at most rudimentary instrumental value. My landlord and I get along well enough. We make small talk and feel generic goodwill towards one another. But ours is first and foremost a market relation, which is valuable primarily insofar as it supports a desired transaction. Our relationship adds little to our lives beyond this.

Relationships like this contrast with rich and meaningful relationships characterized by love, intimacy, and sharing. Paradigms include familial relationships, romantic relationships, and friendships. My friend and I not only get along, make chitchat, and feel goodwill towards one another. We also care deeply for one another as particular people. We delight in one another. We have common tastes, interests, and values. We discuss the details of our lives, just as we regularly share experiences and activities. And as our friendship progresses, we develop a shared history, which reinforces our commonalities and links the narratives of our lives.²

Rich and meaningful relationships are some of the most diversely valuable parts of human life. They are consistent sources of satisfying pleasures and needed assistance. But there is more to their value than that. Rich and meaningful relationships can enhance self-understanding and self-esteem by enabling us to see ourselves in and through others.³ They tend

² I am here and elsewhere in this section indebted to Bennett Helm [7].

³ Ideas of this kind can be found in Aristotle [8]. Contemporary writers who have discussed the benefits of friendship on self-understanding or self-esteem include John Cooper [9] and David Annis [10].

to generate, increase, and sustain engagement in worthwhile activities⁴ while creating opportunities for us to act virtuously⁵ and positively influencing our personal development.⁶ On top of all this, for creatures like us these relationships are part and parcel of what makes life worth living. They are valuable for us for their own sake. Or, as I will say, they have *final value for us*.

This last claim is going to play a central role in my argument, so I want to dwell on it. Why think that some relationships have final value for us? This question should be understood to concern the value of these relationships for creatures with our specific functional organization or characteristic form of life. We can certainly imagine rational beings for whom relationships would not have final value. For example, the novel *Solaris* chronicles the ineffectual attempts of human scientists to communicate with the solitary inhabitant of an exoplanet: a living ocean with a vast intelligence and incomprehensible agency. The ocean, it seems, has the capacity to communicate but is largely indifferent to the scientists' overtures. In the end, the novel's protagonists come to appreciate that the ocean is "devoid of plurality," sharing nothing of that very human yearning for connectedness that drives the scientists' attempts at contact.⁷ It sees other rational beings as trivial curiosities or playthings; relationships do not have final value for it.

Human beings are different. We are social animals, wired for connection. Rich and meaningful relationships engage a whole range of human capacities, such as the capacities for mindreading and shared agency. They harmonize with our interests, like our interests in affection

⁴ This is another idea associated with Aristotle [8], discussed by Cooper [9].

⁵ See Aristotle [8, 1169a18] and Schoeman [11, p. 271].

⁶ See Rorty [12] and Cocking and Kennett [13]. All the valuable aspects of relationships mentioned here are related, as these authors note.

⁷ See Lem [14], especially pp. 154 ff.

and stimulating conversation (and of course our interests in the valuable things mentioned two paragraphs ago). And they add variation to our lives by, for example, exposing us to new ideas and creating new opportunities for us. Because they do these things, because our makeup and characteristic form of life enable us to incorporate relationships into our lives joyfully and without reservation, they have final value for us. This is going to sound paradoxical if you think that something can be valuable for its own sake only if it is intrinsically or unconditionally valuable. But you should not think this. Just because the value for us of certain relationships depends on how these relationships relate to our defining characteristics and characteristic form of life does not mean that they are valuable (or that we value them) only *for the sake of* those relations.⁸

An analogy may be helpful here. Many people enjoy wilderness backpacking and find the activity to be valuable for its own sake. City dwellers sometimes find this bewildering. But there are things we could say about how backpacking engages human capacities, dispositions, and predilections to make the pursuit of backpacking for its own sake intelligible. For instance, we could talk about the peaceful quiet of the woods, the challenge of using maps and natural landmarks to navigate, or overcoming physical obstacles by scrambling, climbing, and leaping. An obtuse interlocutor might protest that other, more convenient activities have these features too: playing open-world video games may be just as navigationally challenging and peaceful, for example. But this misses the point. In describing how backpacking engages us as human beings,

⁸ Here and elsewhere in this paper I implicitly draw upon something resembling an Aristotelian value theory, according to which what is valuable for a creature is at least partly determined by its functional organization or characteristic form of life. I have tried to avoid explicitly invoking the details of any particular value theory in order to make my argument as intuitive and ecumenical as possible, but it should be noted that much of what I say about value is inspired by the work of Christine Korsgaard. For discussion of the distinction I draw between intrinsic/extrinsic value on the one hand and final/instrumental value on the other, see Korsgaard [15]. For a schematic discussion of the way in which a creature's functional organization determines what is valuable for it, see Korsgaard [16], [17].

we are not (in this context) suggesting that backpacking is valuable merely for the sake of other things; rather, we are trying to explain why backpacking could have final value for creatures endowed with our capacities, dispositions, and predilections, and by extension why someone might choose to pursue it for its own sake. Notice that we could not similarly render intelligible the choice to, say, spend lots of time assiduously collecting and categorizing pocket lint.⁹ What this illustrates is that whether something is valuable for its own sake sometimes depends on how that thing relates to us.¹⁰ This is certainly true of relationships.

So, rich and meaningful relationships have final value for us because, among other things, they engage our distinctive social capacities, harmonize with our interests, and add variation and pleasure to our lives. This is relevant to the badness of death because, generally speaking, it is bad for an individual for things that have final value for them to be destroyed. And death involves the destruction of a human being's rich and meaningful relationships. Therefore, death is in this way bad for human beings.¹¹

Now, the idea that it is generally speaking bad for an individual for things that have final value for them to be destroyed is important to my argument. I will call this "the key premise." I think the key premise is both pre-theoretically plausible and familiar. The key premise, or something close to it, seems to be reflected in our evaluative attitudes, specifically in what Samuel Scheffler calls the "*conservative* dimension in our attitudes towards what we value," by which he means our tendency to want the things we value to be sustained or preserved. As Scheffler points out, this tendency seems to be part of the reason why the prospect of death is

⁹ I owe this example to Dan Korman.

¹⁰ It also shows that something that is to us valuable for its own sake may only have extrinsic value.

¹¹ Death also involves the destruction of the dier, and this raises an ancient philosophical puzzle about how anything can be bad for someone who does not exist (see [18]). I do not have the space to wade into this problem except to say that I think it is dissolved once we accept the correct metaphysical view of time, see Silverstein [19].

distressing: we can anticipate that death will destroy (or at least render us incapable of acting so as to preserve) the things we value [20 p. 22]. Although I cannot here defend the key premise completely, a few clarifications, qualifications, and objections concerning the key premise and its role in my argument are in order.

First, the claim that the key premise is supposed to support is that *one thing* bad about death is that it destroys rich and meaningful relationships. Death is sometimes bad or good for the dier in other ways. For example, death can be good for a dier because it ends unremitting agony. But even in this situation, the claim is that there is something bad about death for the dier if and because it destroys the dier's rich and meaningful relationships.

Second, it is important to emphasize that the key premise is being used to establish that it is bad in and of itself for valuable relationships to be destroyed. Death is often also bad because it destroys (or deprives the dier of) good things that are related to valuable relationships, such as the pleasures of friendship and the chance to participate in worthwhile activities with intimates. But the key premise suggests that if rich and meaningful relationships are valuable for their own sake, then their destruction is itself bad.

Third, the key premise needs to be qualified because it admits of exceptions. For one, sometimes the continued existence of a good thing is inconsistent with that thing's continuing to have value. Sometimes it is better for a good thing to be destroyed [21 pp. 144-148]. Think about an artfully crafted wedding cake. Perhaps the cake, qua symbol of loving union, has final value for the marriers. Even so, it is not bad for anyone when the cake is systematically destroyed (i.e., eaten) by hungry wedding guests at the reception. Another example is the ignorant bliss of childhood. The gradual erosion of childhood bliss in adolescence is no tragedy, since bliss is only appropriate in youth. Moreover, even when the continued existence of a good thing is

consistent with its continuing to have value, sometimes the destruction of a good thing is not bad when it is destroyed for a good reason, like to make room for other good things [21 p. 149 ff.]. For instance, the destruction of a beloved local museum may not be bad if a new and improved local museum is to replace it. Hence, our general claim should be understood to admit of exceptions like these (and perhaps other kinds as well).

This qualification suggests an objection. Perhaps the destruction of relationships by death is one of these exceptions. After all, rich and meaningful relationships often end during life. People change in the course of relationships and drift apart. They switch jobs, move away, meet new people, and lose touch. This is not always bad. So why think the destruction of relationships by death is bad?

My own view is that typically it is *pro tanto* bad for relationships to end because of changes in external circumstances, like when someone moves away. There is not necessarily anything bad about drifting apart, though, and trying to preserve a relationship under these conditions is often a mistake.¹² Nevertheless, there is a big difference between drifting apart due to gradual personality changes and the sudden, final, senseless destruction of relationships by death. Personality changes naturally occur over the course of life, and the character of any given relationship is partly determined by what stages of life the intimates are in when the relationship begins. Because of this, some relationships have a shelf life, after which the relationship can be said to have run its course. For instance, most of my childhood friendships ended in adulthood because they were predicated upon childish qualities and interests. These sorts of limitations are not tragic. They are built into the nature of the relationships themselves. On the other hand, the limitations imposed by death are not like this. A relationship that ends in death has not run its

¹² For intriguing discussion of this issue, see Rorty [12], especially pp. 78-79.

course, as determined by the nature of the relationship. It does not end because the intimates have gradually developed less compatible personalities, dispositions, or predilections. Nor does it end to make room for other good things. It ends suddenly, finally, and for no reason other than that one of the intimates has been snuffed out. It is bad for something as valuable as a rich and meaningful relationship to end like this, even if there are conditions under which it would not have been bad at all for the relationship to end. Thus, the destruction of relationships by death is not an exception to the key premise.

Before we move on, let us consider a second objection, which I will call the 'comparativism objection.' The comparativism objection says that the destruction of something valuable is bad only if that valuable something would have continued to exist had it not been destroyed in the way that it was. And since the key premise makes no reference to counterfactual comparisons, it is inadequate. For example, suppose that Addie happens to die on the morning of the day that, unbeknownst to her, Addie's boss intends to end her fulfilling career by firing her. Addie's death technically ends her career. But, the objection goes, it is a stretch to say that Addie's death is bad for Addie *because it ends her career*. After all, Addie's career was going to end anyway; Addie's death does not make Addie worse off with respect to her career than she would have otherwise been.¹³

The comparativism objection aligns with well-being deprivation accounts of the badness of death that make reference to counterfactual conditions and with counterfactual accounts of harm, which say that someone is harmed if and only if they are made worse off than they would have otherwise been. The comparativism objection also shares many of the problems associated

¹³ Thanks to an anonymous reviewer for pressing me to address this objection.

with these views. For our purposes, the most important of these is the preemption problem.¹⁴ Basically, the preemption problem refers to the difficulties that such accounts face in trying to account for the badness or harmfulness of events that both produce undesirable effects and preempt other events that would have produced similar or worse effects. For example, suppose that two troublemakers, Taggert and Fred, each independently intend to destroy John's precious vase. Taggert sneaks into John's house at 10 p.m. and destroys the vase. Fred sneaks into John's house at 11 p.m., discovers that the vase has already been destroyed, and leaves without causing any damage. Fred would have destroyed the vase if Taggert had not, so Taggert's action has not really made John any worse off than he would have otherwise been. Consequently, the comparativism objection suggests that Taggert's action was not bad for (or harmful to) John at all. Intuitively, this is very much the wrong result. Taggert destroyed John's precious vase. Even if the destruction was inevitable, it was bad for him.¹⁵

In my view, the preemption problem gives us sufficient reason to reject the comparativism objection. Tying this back to the issue at hand, I think we should say that it is bad for someone when their valuable relationships are destroyed, and the fact, if it is a fact, that this destruction was inevitable cannot neutralize this badness. For example, this is why I cannot render the impending death of one of my friends any less bad by sincerely pledging to sever our relationship if they somehow make a miraculous recovery.¹⁶

¹⁴ The preemption problem has been much discussed, in connection with both death and harm more generally (for representative examples of the former, see McMahan [22, pp. 42-49], Feldman [23, pp. 224-225], McMahan [24, pp. 12-127]; of the latter, see Feinberg [25, pp. 150-153]; Hanser [26, pp. 434-437]). Note that the preemption problem is sometimes called the 'overdetermination problem.'

¹⁵ The Addie example is also an example of preemption. I suspect that it fails to generate intuitions against the comparativism objection (if indeed it does) because Addie's death is bad for many reasons unrelated to Addie's career, whereas the preemption cases that tend to generate the strongest intuitions against the comparativism objection are cases where the comparativism condition forces us to say that the preempting event is not bad at all when intuitively it is.

¹⁶ Note that I do *not* reject the idea that there is a sense in which death is bad for the dier because death deprives the dier of their relationships. After all, a dier is deprived of their relationships by virtue of the fact that those relationships are destroyed by death. Rather, I reject the more specific idea that this destruction (which constitutes

More could be said in response to the comparativism objection and in favor of the key premise, but this would take us too far afield. I am going to assume going forward that the key premise is plausible, while acknowledging that the appeal of my argument is limited by the appeal of the key premise. Personally, I do not think this is a great limitation. The claims that generally speaking it is bad for an individual for something that has final value for them to be destroyed and that rich and meaningful relationships are valuable for their own sake are both straightforward and plausible. I conclude that death is bad for humans if and because it destroys their rich and meaningful relationships.

What does this have to do with cattle? In the next section, I argue that many of the same conditions that make certain relationships valuable for humans for their own sake also apply to cattle, suggesting that relationships can be valuable for cattle for their own sake. If so, then death is bad for cattle if and because it destroys their relationships. And this is relevant to our guiding question: is death bad for the cattle we kill?

Section III: Cattle Sociality and Valuable Relationships

In this section, I appeal to the natural capacities, dispositions, and predilections of cattle in order to argue that cattle relationships can be valuable for their own sake—can have final value—for cattle. I believe this argument can be successful only if it is based on a somewhat fine-grained, empirically informed picture of cattle and their characteristic form of life, which I will present now.

Cattle are domesticated members of the Bovidae family, which includes antelope, bison, buffalo, and sheep [27]. Like other members of the Bovidae family, cattle are gregarious and

(or at least results in) a deprivation) is not bad when it is inevitable, because I think the destruction (which constitutes (or at least results in) a deprivation) is bad in itself.

socially active. Cattle can communicate along a range of different modalities, recognize particular conspecifics, form lasting agonistic and amicable relationships, and compose complex, mutually beneficial social networks.

Let us begin by discussing the communicational capacities that underlie cattle sociality. Cattle are able to communicate with one another via visual signals, vocalization, pheromones, and tactile interaction. Relative to humans, cattle have poor visual acuity. Visual communication is mostly achieved through bodily movement and position rather than facial expression or other subtler signals (the flehmen response being a notable exception). Some of the most important visual signals relate to aggression and reproductive readiness. For example, physical displacement of a subordinate from a preferred location is sometimes initiated by a threat display, such as pawing the ground or swinging the head. Subordinates often respond with a corresponding submission display, such as lowering the head or turning away. Visual communication of this sort can serve to reinforce dominance-submission hierarchies (to be discussed below), thus playing an important role in the social lives of cattle. Cattle also communicate requests and facilitate amicable interactions through visual communication. For example, cattle often solicit grooming from conspecifics by positioning their head near a conspecific's mouth [28 p. 115, pp. 122-123; 29 pp. 49-52, pp. 87-91; 30]

Vocal communication occurs along a continuum of different acoustic signals. These signals are not fully understood, but evidence suggests that vocalizations can carry information about a vocalizer's age, sexual receptivity, distress, needs, interest, and general arousal. Cattle differ in their propensity to vocalize, have distinctive vocalizations, and are able to recognize familiar conspecifics by their calls alone. Calves seem to be especially good at recognizing the

calls of their dams. The full extent of this recognitional ability is not known, but it certainly extends beyond familial relations. [28 pp. 115-116, 31, 29 pp. 52-54, p. 32]

Olfactory communication plays an especially important role in the social lives of cattle. It provides a covert means of communication, which is important for prey animals. Pheromones are secreted by glands located in different places on the body, especially the perineal region, and are perceived via nerves in the oronasal cavity. Like vocalization, olfaction contributes to the individual recognition of conspecifics. Olfactory signals are used to facilitate reproductive activities, mark territory, signal the presence of predators, and communicate states such as stress and fear [28 pp. 116-117, 29 pp. 55-57, p. 91]

These communicational capacities underlie a complex social organization. Feral cows and calves tend to divide themselves into discrete, closed herds that are stable over time.¹⁷ Adult bulls interact with these herds (especially when cows are in estrus) but tend to be more solitary, sometimes living alone or in small groups with other adult bulls. Feral cattle spend most of their time in close physical proximity to other members of their herd, sometimes temporarily fissioning into smaller subgroups in response to perceived ecological factors, such as fluctuations in food distribution or predation risk [33, 34]. Common daily activities performed in herds include nursing, walking, grazing, scanning the environment, autogrooming, allogrooming, ruminating, and resting [35]. Herds benefit individual cattle in numerous ways, for example by promoting safety and providing mating opportunities. Social contact in herds, including but not limited to maternal care, is especially important in the developmental and learning process [36].

Cattle groups are characterized by fairly stable dominance hierarchies. These hierarchies form spontaneously and are not solely a response to scarcity, overpopulation, or artificial

¹⁷ Multiple discrete, closed herds will not form within a population of cattle if that population is not large enough or if there is not enough space. Many feral cattle populations studied are small and only support a single herd.

stressors [37]. They are influenced by factors like cattle weight, sex, physical ability, and social proficiency. Hierarchies can impact the feeding habits, milk production, reproductive behavior, and spatial distributions of cattle in herds [29 pp. 104-112]. Dominance-submission relations between individuals are evidenced by behaviors such as displacement, where a dominant individual physically displaces a subordinate individual by butting or threatening, and avoidance, where a subordinate individual moves away from a dominant individual without prompting [38, 39]. In natural settings, dangerous fights appear to be rare, especially when dominance-submission relationships are clearcut. Most agonistic interactions are mediated entirely by social cues and involve no direct physical contact [40].

In addition to dominance-submission relationships, cattle form long-term amicable attachments to conspecifics, which can last for many years.¹⁸ Amicable attachments are indicated by stable preferences (sometimes but not always mutual) for performing activities directed at or together with particular conspecifics, such as preferences for licking, grazing, mating, or resting with particular individuals, as well as distress at separation. Familial relations and maternal care sometimes underlie amicable attachments. For instance, evidence suggests that, given the opportunity, dams preferentially lick and graze with their offspring well after their offspring reach sexual maturity and also that siblings preferentially associate with one another, especially in adolescence. But amicable attachments are not limited to relatives. Calves often form attachments to unrelated agetates lasting for years, if not a lifetime. Unrelated adult cattle sometimes forge new attachments as well [41, 42, 43]. Among calves, amicable attachments

¹⁸ It should be noted that the importance of amicable relationships varies across different cattle populations and contexts; see [39 p. 214]. Sometimes dominance-submission relationships are hard to distinguish from amicable relationships. This sort of ambiguity is familiar to human beings.

regularly manifest in play behavior [44], and it would seem that amicable attachments are a source of pleasure and satisfaction to cattle of all ages, pointing to another benefit of social life.

The picture presented is of an organism with robust communicational capacities that tends to form relationships characterized by hierarchy, affection, and care in complex and stable social groups. The social life of this organism supports its basic needs (for development, learning, safety, reproduction, and so forth) and seems to be a source of pleasure and satisfaction. Assuming we have reason to believe that *anything* has final value for cattle—that there is anything which in itself contributes to making a cattle's life worth living—then we should believe, I think, that cattle relationships have final value for cattle. The reasons supporting this are analogous to the reasons that explain why rich and meaningful relationships have final value for humans. Cattle relationships are central to their characteristic form of life. Their relationships engage their distinctive social capacities, harmonize with their interests, and add variation to their lives. As before, the claim is not that these relationships are instrumentally valuable (although this is true). Rather, the fact that these relationships fit into cattle lives as they do explains why they are valuable for their own sake. If this is correct, and if, as the key premise says, it is bad for an individual for something that has final value for that individual to be destroyed, then death is bad for cattle insofar as it destroys these relationships.¹⁹

This argument is not conclusive. Objections can be divided into two categories: those that also call into question whether rich and meaningful relationships have final value for humans and those that do not. The former category is filled with objections of all sorts. For example, objections from hedonism fall into this category. If the only things that ultimately matter are

¹⁹ Martha Nussbaum has advanced a similar argument for the conclusion that painless death can be bad for animals like cattle, but her argument focuses on the “termination of many and varied functioning,” including social functioning, rather than the destruction of valuable relationships *per se* [3 pp. 384-386].

pleasure and pain, then relationships can at most have instrumental value, both for humans and cattle. Objections in this category can be successful only if they are more plausible than the claim that rich and meaningful relationships have final value for humans. Supposing this axiological claim about human relationships is sound, as I think it is, we can safely set these objections aside.²⁰

Objections in the latter category need to highlight some factor distinguishing cattle (or their social lives) from humans (or their social lives) to show why relationships can have final value for humans but not cattle. For example, one might object that human relationships are more multifaceted than cattle relationships and that only humanly multifaceted relationships can be valuable for their own sake. This kind of line drawing is very common in animal ethics and comes with familiar baggage, which need not be unpacked here. Suffice to say the following. Cattle relationships are undoubtedly very different from human relationships. They are much less rich, meaningful, and multifaceted. An amicable attachment that consisted in little more than a set of mutual preferences to spend time performing basic activities like eating, resting, and licking together could hardly be characterized as having final value for a human being. Yet humans and cattle have different characteristic forms of life. And a creature's characteristic form of life determines what has value for it. Thus, it is misguided to disparage cattle relationships for failing to live up to human standards. What matters is how cattle relationships relate to cattle and cattle life. And I have argued that cattle relationships relate to cattle and cattle life in ways that suggest that these relationships can have final value for cattle.

²⁰ Those who reject this response and insist on a more restrictive theory of well-being (or value) than I am inclined to endorse cannot accept my argument as it stands. However, even someone with a rather restrictive value theory, such as hedonism or a desire theory (see [45]), can acknowledge the ethical relevance of the fact that cattle can form rich relationships with conspecifics since these relationships are very likely going to be associated with goods that are recognized from the perspective of these more restrictive theories. And since death curtails such goods, death can be bad for cattle. Thanks to an anonymous reviewer for pressing me to make this point.

Section IV: Implications for the Guiding Question

Suppose the foregoing argument is cogent. What are the implications for our guiding question: is death bad for the cattle we kill?

The most straightforward implication is that there is at least one thing potentially bad about death for cattle. On its own, this implication is thin but important. Some approaches to animal welfare focus exclusively on the minimization of animal suffering or, more broadly, quality of life, suggesting that, ignoring side effects, painless death is unimportant from a moral point of view [46]. Yet if death itself (and not just, say, the dying process) is potentially bad for cattle, then concern for cattle interests should lead us to attend to cattle death. Some ethicists who deny that death is a welfare issue or who for pragmatic reasons focus on the minimization of suffering acknowledge the possibility that death itself is morally significant [47 p. 126, 48 pp. 17-21]. Others outright deny that death itself can be bad for animals.

Ruth Cigman [49] and Christopher Belshaw [50] each argue that death cannot be bad for animals in any morally relevant sense, because animals do not have the cognitive capacities required to understand, value, or form desires concerning life and death. Specifically, Cigman and Belshaw focus on the capacity to form categorical desires.²¹ They argue that (i) death can be bad for a being (in a morally relevant sense) only if that being can form categorical desires and (ii) most or all non-human animals are incapable of forming categorical desires. The thought behind (i) is that if a thing is incapable of caring about or appreciating the loss of something (like

²¹ A categorical desire is a desire whose content is not conditioned on one's being alive and thus can give one a reason to go on living (or to kill oneself). These contrast with desires whose content is conditioned on one's continued existence and thus cannot give one reason to go on living (or to kill oneself). For example, my desire to visit space is a categorical desire whereas my desire to get my cavity filled is a conditional desire. If I were to discover that I will die tomorrow, the former desire would be a source of disappointment. But the latter desire would not, since the content of the desire is implicitly predicated upon a condition I would know is no longer satisfied, something like: I get my cavity filled (assuming that I will continue to live for a while). See Williams [51].

its life), then that loss is not really a misfortune for it, or at least it is not something we have moral reason to care about (absent side effects). Consider artifacts. In a sense, the rust on my car is bad for my car since it interferes with the car's roadworthiness. But this does not entail that the rust is a misfortune for my car, or that we have moral reason to care about the rust. After all, the car itself is utterly indifferent to its own roadworthiness. If the rust is morally significant, this is only because it affects my interests.

Animals are not cars, of course. They have desires, plans, and concerns. But Cigman and Belshaw believe that at least most animals are for the most part incapable of desires (plans, concerns, etc.) that are directed beyond the immediate future. On their views, animals do not think about the long-term future, or the possibilities therein. They are incapable of understanding themselves as creatures who persist through time, just as they are incapable of understanding that death permanently ends life. And, the argument goes, if you are incapable of understanding death or the future, if you do not even conceptualize yourself or your life as a temporally extended thing, then you are incapable of forming categorical desires, which could give you a reason to go on living (or avoid death). Just as rust is not a misfortune for my car, since the car is incapable of caring about its deterioration, so death is not a misfortune for most animals, since they are incapable of even understanding (much less caring about) their life or its permanent cessation.

If the conclusion from the previous section is correct, then something goes wrong when applying Cigman's and Belshaw's arguments to cattle. One possibility is that certain cattle relationships involve or imply the care that Cigman and Belshaw are hesitant to attribute to animals. For instance, perhaps the desires of cattle to habitually spend time with familiar conspecifics are categorical, or perhaps cattle can felicitously be said to care about their amicable relationships [52 p. 105]. Personally, I find it hard to see why attitudes like this cannot give cattle

reasons to go on living. True, cattle cannot explicitly understand or articulate that these attitudes constitute reasons to go on living. Yet these attitudes presuppose some understanding of what it is to habitually spend time or be in relationships with conspecifics, and death interferes with these things.²² Another possibility is that Cigman and Belshaw are wrong to say that the capacity to form categorical desires is a precondition of death's badness; the destruction of valuable cattle relationships is a morally important misfortune regardless of whether cattle can care about or conceptualize this misfortune. If so, then we will have to appeal to something besides categorical desires to explain why the destruction of cattle relationships is in itself morally important while the rust on my car is not. Sentience would be the most obvious option: we could say that, ignoring side effects, we have *pro tanto* moral reason to care about what is good or bad for a thing if and only if that thing is sentient. Because cattle are sentient and cars or not, this would imply that, ignoring side effects, we have *pro tanto* moral reason to care about the destruction of cattle relationships but not the rust on my car.

Regardless of where we land on categorical desires, there is a more fundamental issue. Cigman and Belshaw believe that most animals for the most part live in the specious present and have minds that are not very well integrated over time. Belshaw invites us to think of animal lives as “a series of more or less discrete moments, episodes or stages [...] in effect, a series of discrete lives” [50 p. 43], as if animal minds are actually conglomerates of long series of distinct, evanescent subjects, each of which occupies only a small fraction of a temporally extended

²² I have a more general worry about attributing *any* non-categorical desires to cattle given Cigman's and Belshaw's assumptions. As I understand it, if a desire is not categorical, then by definition its content is conditioned on one's continued existence, at least implicitly. Note that the difference between categorical and non-categorical desires must be a matter of conditional *content*, since the *existence* of all desires is trivially conditioned on the desirer's continued existence. Yet it seems inconsistent to both affirm that cattle have desires with content containing conditionals concerning their continued life and deny that cattle understand themselves as creatures who persist through time. I am inclined to conclude that the categorical/non-categorical distinction is not as useful as it appears in this context. Then again, it may be that my understanding of this distinction is unorthodox or confused.

biological whole. On his view, animal death does not curtail a subject who otherwise would have extended into the future so much as prevent new subjects in the relevant series from coming into existence. Thus, from a moral point of view, killing an animal is analogous to preventing an animal with similar prospects from coming into being. Belshaw is not alone in thinking that psychological continuity matters in this way. According to Jeff McMahan's well-known time-relative interest account, the extent to which death is a misfortune for a dier is proportional to how psychologically connected the dier would have been to their future life had they not died. The less psychologically connected a dier would have been, the less of a misfortune death is for the dier [24]. Although McMahan's perspective on animal death is not as extreme as Belshaw's, he agrees that "most animals are, throughout their lives, largely psychologically unconnected to themselves in the future" and that "the magnitude of the misfortune they suffer in dying is diminished accordingly" [53 p. 71].

The social lives of cattle speak against the popular idea that cattle are not significantly psychologically integrated over time. The various bonds cattle form with one another, along with the preferences, desires, and dispositions associated with these bonds, comprise distinctive points of view. When a cow wakes up in the morning, her mind is not a *tabula rasa*. Her world is not new. She wakes to a familiar calf who wants, expects, and requests her nurturance. She will be on the lookout for her favorite agemates and older offspring so that she can graze and groom with them, just as they will be on the lookout for her. She knows what to do when the dominant cow saunters over and starts swinging her head. If she is in estrus, she will not be surprised by the bull who comes sniffing in her direction just as he has done in the past. This familiar locus of social relations has gradually accumulated over time to give her life its ongoing character. And

this ongoing character glues her life together into a unified, persistent whole, a self which can be cut short by death [17 pp. 31-35].

So, Cigman, Belshaw, and McMahan seem to be wrong about cattle. Cattle can be psychologically integrated over time, and death can be a misfortune for them. However, just because death *can* be in this respect bad for cattle does not mean that it *is* in this respect (or all-things-considered) bad for the cattle we kill. More needs to be said to connect the discussed implication to our guiding question, not to mention our farming practices. The biggest complication is that the vast majority of cattle do not live in feral settings. Most live in artificial conditions and are controlled by human beings. Thus, we need to examine to what extent cattle form normal or valuable relationships with conspecifics in these settings. If cattle do not form valuable relationships in captivity, then death will not be bad in this way for cattle in captivity.²³

The social experience of cattle in captivity varies in accordance with a number of factors, the most important of which is what the cattle are being used for. Cattle can be used for meat, dairy, leather, manure, draught power, and entertainment. In the United States, cattle are mainly used to produce meat and dairy (leather is collected as a byproduct of these industries). Beef cattle have very different social lives than dairy cattle, and for this reason it is important to examine these industries separately.

The beef industry in the United States is divided into segments: cow-calf, stocker, feedlot, and slaughterhouse segments. Cattle raised for slaughter move through these segments as

²³ A related issue which many ethicists have taken to be important is whether animals such as cattle form valuable relationships with humans in captivity. Many ethicists argue that it is possible for humans and animals like cattle to become friends and that these friendships, or the possibility of these friendships, generate special reasons against eating, mistreating, objectifying, or killing some animals (proponents of views in this vicinity include [54], [55], [56], [57], [58]; cf. Torres [59], who argues that Aristotle is committed to this view, and Carter and Charles [60], who tackle the topic from a sociological perspective). Suffice to say that *if* captive cattle form friendships with humans (and this may not happen very often, see Causey [61]), then the fact that death destroys these friendships is probably another thing that makes death bad for cattle.

they approach slaughter. Cow-calf operations comprise the first segment. These operations produce calves to be sold at weaning (usually between 6 and 10 months of age) to either a stocker operation or a feedlot, depending on the calf's weight. Lighter calves are sent to stocker operations, where they are fed cheap forage until they weigh enough to be sold to a feedlot. Heavier calves skip this segment and are sent directly to a feedlot. Feedlots finish cattle for market, rapidly fattening them until they reach a condition that is optimal for slaughter. Usually this takes between 120-150 days. Finally, cattle are sent from the feedlot to the slaughterhouse. Often cattle change ownership and groups as they transition through these stages, but sometimes producers retain ownership through multiple stages of the process [62 pp. 304-308].

Cow-calf and stocker operations usually employ extensive rather than intensive rearing systems. Extensive systems rear groups of cattle on ranges with relatively little human interference. Consequently, the social life of cattle in cow-calf and stocker operations is similar to that of cattle in feral settings: dams form relationships with their calves, calves with agetates, and dams with one another. These relationships resemble the relationships cattle form in feral settings and likely have final value for cattle. Cattle in the feedlot phase may have different experiences. Many feedlots pack cattle into highly automated intensive rearing systems, and this can be stressful for cattle, potentially inhibiting the formation of valuable relationships. Still, beef cattle typically have several opportunities throughout their life to form meaningful relationships with conspecifics. When death destroys these relationships, this is bad for them.

The dairy industry functions differently. Arguably, dairy cows today generally live more difficult and less natural lives than cattle involved in the beef industry. Cows only produce milk if they have recently calved. A productive dairy cow will calf every 13 months or so, starting in the second year of age. Prior to the middle of the twentieth century, dairy was produced on a

small scale by family farms. These farms employed relatively extensive rearing systems and allowed cows to form relationships with their calves and other conspecifics. Over the last half-century or so, however, the structure of the dairy industry has changed. Today, most dairy is produced in intensive operations with herds of 500 or more cows. These operations generally employ dry-lot systems. In dry-lot systems, cows are densely housed in confinement facilities, like barns and sheds with concrete floors, where they are fed and watered by automated systems. Cows are generally grouped by how much milk they produce. As a cow's milk production fluctuates, she may be shuffled amongst different groups. Calves are separated from their dams soon after calving (often within a period of hours) to avoid wasting economically valuable milk [62 pp. 331-343].

Probably, dairy cows have fewer opportunities to form valuable relationships with conspecifics than feral and beef cattle. Dairy cows do not form normal maternal relationships, since they are usually separated from their calves shortly after birth. Moreover, crowded living conditions coupled with the social instability that comes with grouping cows by productivity probably inhibits social life. Things are especially grim for dairy cows housed in tie-stall barns, but these concerns apply to cows housed in free-stall barns and other less restrictive systems, too.²⁴ If this is right and dairy cows do not have as many opportunities to form valuable relationships as cattle in other settings, then all else being equal death is not as bad for them as it is for other cattle. Clearly, though, this is not good news for dairy cows. It merely reflects how dairy cows are deprived of good things by the conditions of their life.²⁵

²⁴ Thanks to an anonymous reviewer for pointing this out.

²⁵ Cf. Kolbe [63], who argues that because of how the meat and dairy industries are structured, consuming dairy is in some ways ethically worse than consuming meat.

The upshot is that captive cattle have some (albeit sometimes rather limited) opportunities to form valuable relationships and that these relationships can be destroyed by death in a way that makes death bad for them. This shows there is generally *something* bad about death for the cattle we kill, and this is relevant to our guiding question. But it does not provide a complete answer to it. On the one hand, there are other things that can be bad about death for cattle. On the other hand, death is sometimes a welcome fate. Thus, we need to situate the destruction of valuable relationships in the broader network of factors that can bear on the (dis)value of death for cattle.

As mentioned above, many ethicists who think that death can be bad for animals hold that death is bad (or harmful) for a dier if and only if death deprives the dier of life that would have been on balance good, whereas death is good for a dier if and only if it deprives the dier of life that would have been on balance bad. Views of this kind are often called 'well-being deprivation accounts' (proponents include Bradley [2] and DeGrazia [64], cf. Bradley [65], Feldman [23], Nagel [66]). Suppose a cow with a terminal illness is euthanized. Had she not been euthanized, she would have survived for three more months. According to these accounts, whether the cow's euthanization is good or bad for her is determined by the prudential value of the three months she would have lived had she not been euthanized. If those three months would have been on balance bad for her, if dying three months later would have reduced her lifetime level of well-being, then her death by euthanization is good for her. However, if those three months would have been on balance good for her, if her life would have been all-things-considered better had she lived those months out, then euthanization is bad for her.

The argument I have developed in this paper suggests that death is sometimes bad for reasons other than that it deprives the dier of good life that the dier would have experienced had

she not died or makes the dier's lifetime well-being level lower than it would otherwise be. Regardless of whether the un-lived three months would have been on balance good for her, the cow's death by euthanasia is *pro tanto* bad for the cow insofar as it destroys her valuable relationships. One might wonder if this badness is commensurable with the value or disvalue associated with the effect death has on lifetime well-being levels. For example, suppose that the cow's euthanasia prevents her from experiencing three terrible months and in this way is good for her. Is this goodness tempered by the fact that death destroys the cow's valuable relationships? You might insist that it is and that we should try to determine whether death is bad for the cow all-things-considered, weighing all the good against all the bad. I am not convinced this is right. I suspect that some things that are bad about death cannot be counterbalanced by other good things or neatly integrated into a tidy all-things-considered judgment. Perhaps the most we can say without distortion is that death is bad in some ways and good in others.²⁶

In any case, the claim that death is bad for cattle when it destroys valuable relationships is only sometimes relevant to moral deliberation. The ill cow's death will be bad for her in this way regardless of whether she dies now or in three months, so this factor can probably be ignored in deliberation about whether to kill her for her own sake. But when we are considering the morality of farming practices that cause cattle to die, the claim is relevant because it tells us something about the moral costs of these practices. Well-being deprivation accounts arguably fail to show that there is *anything* morally costly about killing most captive cattle, since most captive cattle have grim prospects and consequently are not deprived of good life at all by death [68]. Thus, we may need to appeal to considerations unrelated to the effects of death on lifetime

²⁶ My thinking in this paragraph and elsewhere has been heavily influenced by Draper [67]. Draper argues that "a complete account of the evils in death must be pluralistic," p. 396. Cf. Scheffler [20 pp. 21-22].

well-being, including but perhaps not limited to the destruction of valuable relationships, to explain why killing many captive cattle comes with a moral cost.

I have argued that like humans, cattle are capable of forming relationships that have final value for them. Death destroys relationships, and generally speaking it is bad for an individual for something that has final value for them to be destroyed. Therefore, death can be bad for cattle who die because it destroys their relationships, just like your death can be bad for you because it destroys your valuable relationships. Furthermore, I have argued that death probably is bad in this way for many of the cattle we kill, since captive cattle (especially beef cattle) have opportunities to form valuable relationships with conspecifics. This claim is relevant to our guiding question: is death bad for the cattle we kill? However, it does not constitute a complete answer, since there are other considerations that bear on the (dis)value of death for cattle.

I have not made any claims about whether our farming practices, which cause the deaths of hundreds of millions of cattle every year, are morally defensible. I only claim to have identified one moral cost associated with those practices. This cost should not be ignored if we are committed to evaluating these practices with open eyes.

Acknowledgements: The idea for this paper originated out of several conversations I had with Julie Huzzey, an animal scientist at Cal Poly, SLO, who generously taught me about cattle, gave me a tour of Cal Poly's dairy farm, and introduced me to some lovely cows and calves. I thank her for her time and attention. Thanks are also due to my intimates (especially Catelynn Kenner) who over the last few years repeatedly and generously indulged my screeds about cattle. Finally, thanks to three anonymous reviewers who provided me with incisive comments, which greatly strengthened the paper.

Statements and Declarations: The author has no relevant financial or non-financial interests to disclose.

References

- [1] Sanders, Bas. 2008. Global Cow Slaughter Statistics and Charts. Faunalytics.
<https://faunalytics.org/global-cow-slaughter-statistics-and-charts/>. Accessed 16 Feb 2021.
- [2] Bradley, Ben. 2016. Is Death Bad for a Cow? In *The Ethics of Killing Animals*, eds. Tatjana Višak and Robert Garner, 51-64. Oxford: Oxford University Press.
<https://doi.org/10.1093/acprof:oso/9780199396078.003.0004>
- [3] Nussbaum, Martha. 2006. *Frontiers of Justice: Disability, Nationality, Species Membership*. Cambridge: Harvard University Press. <https://doi.org/10.2307/j.ctv1c7zftw>
- [4] Monsó, Susana, Judith Benz-Schwarzburg, and Annika Bremhorst. 2018. Animal Morality: What It Means and Why It Matters. *The Journal of Ethics*, 22: 283-310.
<https://doi.org/10.1007/s10892-018-9275-3>
- [5] Delon, Nicolas. 2018. Animal Agency, Captivity, and Meaning. *The Harvard Review of Philosophy*. 25: 127-146. <https://doi.org/10.5840/harvardreview201892519>
- [6] Fitzpatrick, Simon and Kristin Andrews. 2022. Animal Culture and Animal Welfare. *Philosophy of Science*. 88, 5: 1104-1113. <https://doi.org/10.1017/psa.2022.34>
- [7] Helm, Bennett. 2021. Friendship. Stanford Encyclopedia of Philosophy.
<https://plato.stanford.edu/entries/friendship/>. Accessed 2 March, 2021.
- [8] Aristotle. 2014. *Nicomachean Ethics*. Translated by C. D. C. Reeve. Indianapolis: Hackett Publishing Company.
- [9] Cooper, John. 1977. Friendship and the Good in Aristotle. *The Philosophical Review*. 86, 3: 290-315. <https://doi.org/10.2307/2183784>
- [10] Annis, David. 1987. The Meaning, Value and Duties of Friendship. *American Philosophical Quarterly*. 24, 4: 349-356.

- [11] Schoeman, Ferdinand. 1985. Aristotle on the good of friendship. *Australasian Journal of Philosophy*. 69, 3: 269-282. <https://doi.org/10.1080/00048408512341881>
- [12] Rorty, Amelie Oksenberg. 1986. The Historicity of Psychological Attitudes: Love Is Not Love Which Alters Not When It Alteration Finds. *Midwest Studies in Philosophy*. 10: 399-412. <https://doi.org/10.1111/j.1475-4975.1987.tb00548.x>
- [13] Cocking, Dean and Jeanette Kennett. 1998. Friendship and the Self. *Ethics*. 108, 3: 502-527. <https://doi.org/10.1086/233824>
- [14] Lem, Stanisław. 2014. *Solaris*. Translated by Bill Johnston. Krakow: Pro Auctore Wojciech Zemek.
- [15] Korsgaard, Christine M. 1983. Two Distinctions in Goodness. *The Philosophical Review*. 92, 2: 169-195.
- [16] Korsgaard, Christine M. 2014. On Having a Good. *Philosophy*. 89, 3: 405-429. <https://doi.org/10.1017/S0031819114000102>
- [17] Korsgaard, Christine M. 2018. *Fellow Creatures: Our Obligations to the Other Animals*. Oxford: Oxford University Press. <https://doi.org/10.1093/oso/9780198753858.001.0001>
- [18] Epicurus. *Letter to Menoeceus*. Translated by Robert Drew Hicks. The Internet Classics Archive. <http://classics.mit.edu/Epicurus/menoec.html>. Accessed April 20, 2022.
- [19] Silverstein, Harry S. 1980. The Evil of Death. *The Journal of Philosophy*. 77, 7: 401-424. <https://doi.org/10.2307/2025537>
- [20] Scheffler, Samuel. 2016. *Death and the Afterlife*. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199982509.001.0001>

- [21] Shiffrin, Seana Valentine. 2016. Preserving the valued or preserving valuing? In *Death and the Afterlife*, ed. Niko Kolodny, 143-158. Oxford: Oxford University Press.
<https://doi.org/10.1093/acprof:oso/9780199982509.003.0007>
- [22] McMahan, Jeff. 1988. Death and the Value of Life. *Ethics*. 99, 1: 32-61.
<https://doi.org/10.1086/293034>
- [23] Feldman, Fred. 1991. Some Puzzles about the evil of death. *The Philosophical Review*. 100, 2: 205-227. <https://doi.org/10.2307/2185300>
- [24] McMahan, Jeff. 2002. *The Ethics of Killing: Problems at the Margins of Life*. Oxford: Oxford University Press. <https://doi.org/10.1093/0195079981.001.0001>
- [25] Feinberg, Joel. 1986. Wrongful Life and the Counterfactual Element in Harming. *Social Philosophy & Policy*. 4, 1: 145-178. <https://doi.org/10.1017/S0265052500000467>
- [26] Hanser, Matthew. 2008. The Metaphysics of Harm. *Philosophy and Phenomenological Research*. 77, 2: 421-450. <https://doi.org/10.1111/j.1933-1592.2008.00197.x>
- [27] Wilson, Don E. and DeeAnn M. Reeder. 1993. *Mammals Species of the World: A Taxonomic and Geographic Reference, Second Edition*. Washington: Smithsonian Institution Press.
- [28] Bouissou, Marie-France, Alain Boissy, Pierre Le Neindre, and Isabelle Veissier. 2001. The Social Behaviour of Cattle. In *Social Behaviour in Farm Animals*. Eds. L. J. Keeling and H. W. Gonyou, 113-145. Wallingford: CABI Publishing.
<https://doi.org/10.1079/9780851993973.0113>
- [29] Phillips, Clive J. C. 2002. *Cattle Behaviour and Welfare*. Oxford: Blackwell.
<https://doi.org/10.1002/9780470752418>

- [30] Sato, S., S. Sako, and A. Maeda. 1991. Social licking patterns in cattle (*Bos taurus*): influence of environmental and social factors. *Applied Animal Behaviour Science*. 32, 1: 3-12. [https://doi.org/10.1016/S0168-1591\(05\)80158-3](https://doi.org/10.1016/S0168-1591(05)80158-3)
- [31] Watts, Jon M. and Joseph M. Stookey. 2000. Vocal behaviour in cattle: the animal's commentary on its biological processes and welfare. *Applied Animal Behaviour Science*. 67: 15-33. [https://doi.org/10.1016/S0168-1591\(99\)00108-2](https://doi.org/10.1016/S0168-1591(99)00108-2)
- [32] Green, A. C., I. N. Johnston, and C. E. F. Clark. 2018. Invited review: The evolution of cattle bioacoustics and application for advanced dairy systems. *Animal*. 12, 6: 1250-1259. <https://doi.org/10.1017/S1751731117002646>
- [33] Lazo, Alfonso. 1992. Facteurs déterminants du comportement grégaire de bovins retournés à l'état sauvage. *Revue d'Ecologie*. 47, 1: 51-66.
- [34] Lazo, Alfonso. 1994. Social segregation and the maintenance of social stability in a feral cattle population. *Animal Behaviour*. 48, 5: 1133-1141. <https://doi.org/10.1006/anbe.1994.1346>
- [35] Geven, Milou and Ellen de Graaf. 2014. A herd of Scottish Highland cattle (*Bos taurus*) in a semi-wild setting representing naturalness in behaviour: Extending knowledge beyond production systems. *Van Hall Larenstein*.
- [36] Costa, J. H. C., M. A. G. von Keyserlingk, and D. M. Weary. 2016. Invited review: Effects of group housing of dairy calves on behavior, cognition, performance, and health. *Journal of Dairy Science*. 99, 4: 2453-2467. <https://doi.org/10.3168/jds.2015-10144>
- [37] Clutton-Brock, T. H., P. J. Greenwood, and R. P. Powell. 1976. Ranks and Relationships in Highland Ponies and Highland Cows. *Zeitschrift für Tierpsychologie*. 41, 2: 202-216. <https://doi.org/10.1111/j.1439-0310.1976.tb00477.x>

- [38] Reinhardt, V. and A. Reinhardt. 1975. Dynamics of Social Hierarchy in a Dairy Herd. *Zeitschrift für Tierpsychologie*. 38, 3: 315-323. <https://doi.org/10.1111/j.1439-0310.1975.tb02007.x>
- [39] Hall, Stephen J. G. 1986. Chillingham Cattle: Dominance and Affinities and Access to Supplementary Food. *Ethology*. 71, 3: 201-215. <https://doi.org/10.1111/j.1439-0310.1986.tb00584.x>
- [40] Reinhardt, Catherine, Annie Reinhardt, and Viktor Reinhardt. 1986. Social behaviour and reproductive performance in semi-wild Scottish Highland cattle. *Applied Animal Behaviour Science*. 15, 2: 125-136. [https://doi.org/10.1016/0168-1591\(86\)90058-4](https://doi.org/10.1016/0168-1591(86)90058-4)
- [41] Reinhardt, Viktor and Annie Reinhardt. 1981. Cohesive Relationships in a Cattle Herd (*Bos indicus*). *Behaviour*. 77, 3: 121-150. <https://doi.org/10.1163/156853981X00194>
- [42] Veissier, Isabelle, D. Lamy, and P. Le Neindre. 1990. Social behaviour in domestic beef cattle when yearling calves are left with the cows for the next calving. *Applied Animal Behaviour Science*. 27, 3: 193-200. [https://doi.org/10.1016/0168-1591\(90\)90056-J](https://doi.org/10.1016/0168-1591(90)90056-J)
- [43] Gutmann, Anke Kristina, Marek Spinka, and Christoph Winckler. 2015. Long-term familiarity creates preferred social partners in dairy cows. *Applied Animal Behaviour Science*. 169: 1-8. <https://doi.org/10.1016/j.applanim.2015.05.007>
- [44] Vitale, A. F., M. Tenucci, M. Papini, and S. Lovari. 1986. Social behaviour of the calves of semi-wild Maremma cattle, *Bos primigenius taurus*. *Applied Animal Behaviour Science*. 16, 3: 217-231. [https://doi.org/10.1016/0168-1591\(86\)90115-2](https://doi.org/10.1016/0168-1591(86)90115-2)
- [45] Crisp, Roger. 2021. Well-Being. Stanford Encyclopedia of Philosophy. Stanford Encyclopedia of Philosophy. <https://plato.stanford.edu/entries/well-being/>. Accessed 2 March, 2022.

- [46] Kasperbauer, T. J. and Peter Sandøe. 2016. Killing as a Welfare Issue. In *The Ethics of Killing Animals*, eds. Tatjana Višak and Robert Garner, 17-31. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199396078.003.0002>
- [47] Broom, Donald M. 2011. A History of Animal Welfare Science. *Acta Biotheoretica*. 59: 121-137. <https://doi.org/10.1007/s10441-011-9123-3>
- [48] Singer, Peter. 1975. *Animal Liberation*. New York: HarperCollins Publishing Company.
- [49] Cigman, Ruth. 1981. Death, Misfortune and Species Inequality. *Philosophy & Public Affairs*. 10, 1: 47-64.
- [50] Belshaw, Christopher. 2016. Death, Pain, and Animal Life. In *The Ethics of Killing Animals*, eds. Tatjana Višak and Robert Garner, 32-50. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199396078.003.0003>
- [51] Williams, Bernard. 1973. The Makropulos Case: Reflections on the Tedium of Immortality. In *Problems of the Self: Philosophical Papers 1956-1972*, 82-100. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511621253.008>
- [52] Bower, Matt and Bob Fischer. 2018. Categorical Desires and the Badness of Animal Death. *Journal of Value Inquiry*. 52: 97-111. <https://doi.org/10.1007/s10790-017-9604-y>
- [53] McMahan, Jeff. 2016. The Comparative Badness for Animals of Suffering and Death. In *The Ethics of Killing Animals*, eds. Tatjana Višak and Robert Garner, 65-85. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199396078.003.0005>
- [54] Jordan, Jeff. 2001. Why Friends Shouldn't Let Friends Be Eaten: An Argument for Vegetarianism. *Social Theory and Practice*. 27, 2: 309-322. <https://doi.org/10.5840/soctheorpract200127214>

- [55] Townley, Cynthia. 2011. Animals as Friends. *Between the Species*. 13, 10: 45-59.
<https://doi.org/10.15368/bts.2010v13n10.3>
- [56] Fröding, Barbro and Martin Peterson. 2011. Animal Ethics Based on Friendship. *Journal of Animal Ethics*. 1, 1: 58-69. <https://doi.org/10.5406/janimaethics.1.1.0058>
- [57] Rowlands, Mark. 2011. Friendship and Animals: A Reply to Fröding and Peterson. *Journal of Animal Ethics*. 1, 1: 70-79. <https://doi.org/10.5406/janimaethics.1.1.0070>
- [58] Gheaus, Anca. 2012. The Role of Love in Animal Ethics. *Hypatia*. 27, 3: 583-600.
<https://doi.org/10.1111/j.1527-2001.2012.01284.x>
- [59] Torres, Jorge. 2022. Animal Ethics Based on Friendship: An Aristotelian Perspective. *Journal of Animal Ethics*. 12, 1: 76-88. <https://doi.org/10.5406/21601267.12.1.08>
- [60] Carter, Bob and Nickie Charles. 2013. Animals, Agency and Resistance. *Journal for the Theory of Social Behaviour*. 43, 3: 322-340. <https://doi.org/10.1111/jtsb.12019>
- [61] Causey, Mark. 2019. Animal Ethics Based on Friendship: A Reply. *Journal of Animal Ethics*. 9, 1: 1-5. <https://doi.org/10.5406/janimaethics.9.1.0001>
- [62] Damron, W. Stephen. 2013. *Introduction to Animal Science: Global, Biological, Social, and Industry Perspectives*, 5th Edition. New York: Pearson.
- [63] Kolbe, Karin. 2018. Why Milk Consumption is the Bigger Problem: Ethical Implications and Deaths per Calorie Created of Milk Compared to Meat Production. *Journal of Agricultural and Environmental Ethics*. 31: 467-481. <https://doi.org/10.1007/s10806-018-9740-9>
- [64] DeGrazia, David. 2016. Sentient Nonpersons and the Disvalue of Death. *Bioethics*. 30, 7: 511-519. <https://doi.org/10.1111/bioe.12250>

[65] Bradley, Ben. 2009. *Well-Being and Death*. Oxford: Oxford University Press.

<https://doi.org/10.1093/acprof:oso/9780199557967.001.1>

[66] Nagel, Thomas. 1970. Death. *Noûs*. 4, 1: 73-80. <https://doi.org/10.2307/2214297>

[67] Draper, K. 1999. Disappointment, sadness, and death. *The Philosophical Review*. 108, 3:

387-414. <https://doi.org/10.2307/2998466>

[68] Solis, Coleman. 2021. How Much Does Slaughter Harm Humanely Raised Animals?

Journal of Applied Philosophy. 38, 2: 258-272. <https://doi.org/10.1111/japp.12483>