

WELFARE, HEALTH, AND THE MORAL CONSIDERABILITY OF NONSENTIENT BIOLOGICAL ENTITIES

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Volume 13, Number 1, Winter 2018

URI: <https://id.erudit.org/iderudit/1055124ar>

DOI: <https://doi.org/10.7202/1055124ar>

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Publisher(s)

Centre de recherche en éthique (CRÉ)

ISSN

1718-9977 (digital)

[Explore this journal](#)

Cite this article

DUSSAULT, A. C. (2018). WELFARE, HEALTH, AND THE MORAL CONSIDERABILITY OF NONSENTIENT BIOLOGICAL ENTITIES. *Les ateliers de l'éthique / The Ethics Forum*, 13(1), 184–209. <https://doi.org/10.7202/1055124ar>

Article abstract

This paper discusses a challenge to the claims made by biocentrists and some ecocentrists that some nonsentient biological entities (e.g., organisms, species, ecosystems) qualify as candidates for moral considerability. This challenge derives from Wayne Sumner's (1996) critique of "objective theories of welfare" and, in particular, from his critique of biocentrists' and ecocentrists' biofunction-based accounts of the "good of their own" of nonsentient biological entities. Sumner's critique lends support to animal ethicists' typical skepticism regarding those accounts, by contending that they are more plausibly interpreted as accounts of the perfectionist value than of the welfare of nonsentient biological entities. In response to this critique and its implication that those function-based accounts would fail to qualify nonsentient biological entities as candidates for moral considerability, it is argued that those accounts should be interpreted as ones of the health of biological entities rather than ones of their perfectionist value. It is suggested that their being bearers of health may be sufficient for nonsentient biological entities to qualify as candidates for moral considerability, such that biocentrists and ecocentrists could grant Sumner and animal ethicists' contention that the function-based accounts of the good of their own of nonsentient biological entities are not accounts of their welfare, while not giving up on the project of defending those entities' moral considerability.



WELFARE, HEALTH, AND THE MORAL CONSIDERABILITY OF NONSENTIENT BIOLOGICAL ENTITIES

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ABSTRACT:

This paper discusses a challenge to the claims made by biocentrists and some ecocentrists that some nonsentient biological entities (e.g., organisms, species, ecosystems) qualify as candidates for moral considerability. This challenge derives from Wayne Sumner's (1996) critique of "objective theories of welfare" and, in particular, from his critique of biocentrists' and ecocentrists' biofunction-based accounts of the "good of their own" of nonsentient biological entities. Sumner's critique lends support to animal ethicists' typical skepticism regarding those accounts, by contending that they are more plausibly interpreted as accounts of the perfectionist value than of the welfare of nonsentient biological entities. In response to this critique and its implication that those function-based accounts would fail to qualify nonsentient biological entities as candidates for moral considerability, it is argued that those accounts should be interpreted as ones of the health of biological entities rather than ones of their perfectionist value. It is suggested that their being bearers of health may be sufficient for nonsentient biological entities to qualify as candidates for moral considerability, such that biocentrists and ecocentrists could grant Sumner and animal ethicists' contention that the function-based accounts of the good of their own of nonsentient biological entities are not accounts of their welfare, while not giving up on the project of defending those entities' moral considerability.

RÉSUMÉ :

Cet article discute d'une objection à la thèse défendue par plusieurs biocentristes et écocentristes selon laquelle les entités biologiques non sentientes (ex. : organismes, espèces, écosystèmes) se qualifieraient comme candidates à la considérabilité morale. Cette objection découle de la critique des « théories objectives du bien-être » formulée par Wayne Sumner (1996) et, plus particulièrement, de sa critique des théories du « bien propre » défendues par les biocentristes et les écocentristes, lesquelles définissent ce bien en relation avec les concepts biologiques de fonction et de téléologie. La critique de Sumner offre un certain appui au scepticisme généralement suscité par ces théories chez les auteur-e-s œuvrant dans le domaine de l'éthique animale, en ce qu'elle fait valoir que celles-ci sont plus plausiblement interprétées comme concernant une forme de valeur perfectionniste s'appliquant aux entités biologiques non sentientes que comme concernant leur bien-être. Cet article soutient que la manière la plus prometteuse de répondre à cette critique pour les biocentristes et les écocentristes consiste à faire valoir d'une part, que les théories du bien propre qu'elles et ils défendent doivent être interprétées comme des théories de la santé des entités biologiques plutôt que comme des théories (de leur bien-être ou) de leur valeur perfectionniste, et d'autre part, que la possibilité pour les entités biologiques non sentientes d'être en plus ou moins bonne santé suffit à les rendre candidates à la considérabilité morale.

1. INTRODUCTION

A crucial issue that has divided animal ethicists and many environmental ethicists is that of whether sentience should be regarded as a necessary condition for candidacy for *moral considerability*. Since Kenneth Goodpaster's (1978) foundational paper on moral considerability, this issue is usually conceived as being conceptually tied to that of whether only sentient beings, or also some nonsentient biological entities, are genuinely able to be benefited or harmed by states of affairs. To be morally considerable is to be an entity that counts morally—that is, an entity with respect to which moral agents have *prima facie* ethical obligations. Thus, insofar as it is conceivable to have obligations only to entities that can in some sense benefit or be harmed by one's actions, a minimal requirement for being a candidate for moral considerability seems to be the ability of being benefited or harmed by states of affairs (and the actions of moral agents). This, as many environmental philosophers have remarked, requires those entities to *have a good of their own* in reference to which states of affairs (and the actions of moral agents) can be said to be good or bad *for them*. Thus, animal ethicists typically maintain that only sentient beings have a good of their own (or at least one that has ethical relevance) and that, consequently, all and only sentient beings are genuine candidates for moral considerability. In contrast, many environmental ethicists maintain that sentience is *not* necessary for having a good of one's own, such that candidacy for moral considerability extends beyond sentience. Those environmental ethicists include *biocentrists*, who defend the view that moral considerability should be ascribed to *all* individual organisms (sentient or not) (e.g., Attfield, 1981; Taylor, 1986; Varner, 1998), as well as (some) *ecocentrists*, who advocate extensions of moral considerability to ecological wholes such as species, ecological communities, and ecosystems (e.g., Johnson, 1991, 1992; Fox, 1995, chap. 6).

Those biocentrists and ecocentrists often adopt as their starting point the observation that ordinary language commonly includes statements such as “nutrients are *good for* plants” and “invasive species are *bad for* ecosystems,” which implicitly ascribe a good of their own to nonsentient organisms and ecological wholes (e.g., Goodpaster, 1978, p. 319; Attfield, 1981, p. 38). Those “goodness for” statements, they argue, can be analyzed in terms of the biological notions of function and teleology that apply to organisms and eventually to some ecological wholes, such that what is good or bad for those organisms and wholes can be understood as what favours or impedes the fulfillment of their functional capacities or teleological tendencies.¹ In the view of those biocentrists and ecocentrists, such functional capacities and teleological tendencies endow nonsentient organisms and wholes with a good of their own of an essentially similar kind as the one that applies to sentient beings (for simplicity, I will refer to those accounts of the good of their own of nonsentient biological entities as “biofunction-based” accounts). Thus, they claim, their having functional capacities or teleological tendencies endows individual organisms and wholes with a *welfare* or with *interests*, such that they are just as genuine candidates for moral considerability as sentient beings.

It should be noted that such claims are more commonly made by biocentrists than by ecocentrists. Nevertheless, some ecocentrists have also defended function-based accounts of the good of their own of ecological wholes (Johnson, 1991, 1992; Fox, 1995, chap. 6).² Insofar as the issues I will discuss arise similarly with respect to individual organisms as to wholes, I will discuss them alternatively as applying specifically to nonsentient organisms or more generally to nonsentient biological entities (I will adopt the narrow focus on nonsentient organisms when discussing authors mainly concerned with organisms and the broader focus on nonsentient biological entities elsewhere).³

Claims that nonsentient biological entities have a good of their own and qualify as candidates for moral considerability typically raise skepticism on the part of animal ethicists. In response to such claims, animal ethicists usually insist that the biofunction-based notion of goodness of one's own that applies to those entities is conceptually distinct from the one that underpins sentient beings' moral considerability (e.g., Sapontzis, 1987, p. 116-117; Singer, 1993, p. 276-280). Statements such as "nutrients are *good for* plants" and "being hit by cars is *bad for* cats" do *not* refer to the same notion of goodness of one's own, and only the sentience-based notion referred to by the latter statement has relevance to moral considerability. Therefore, animal ethicists contend, their being bearers of a biofunction-based good of their own does *not* qualify nonsentient biological entities as candidates for moral considerability.

In this paper, I wish to discuss a neglected challenge faced by biofunction-based accounts of the good of their own of nonsentient biological entities. This challenge lends support to animal ethicists' contention that those accounts concern a notion of goodness of one's own that has no relevance to moral considerability.⁴ This challenge derives from Wayne Sumner's (1996) discussion of *welfare* or *prudential value*, notions that he takes to be about an entity's *faring well* or *doing well*. Specifically, the challenge derives from Sumner's criticism of what he calls *objective theories of welfare*—that is, theories of welfare that do not make an entity's welfare logically dependent of its attitudes of favour and disfavour. Sumner applies this criticism to many objective theories, including the biofunction-based accounts advocated by biocentrists and some ecocentrists. He contends that those latter accounts are more properly conceived as accounts of some kind of *perfectionist value* than as genuine accounts of *welfare*. Those accounts, in other words, concern species-specific *excellences* that organisms can achieve rather than their condition of *faring well*. Such a contention casts doubt on the ability of biofunction-based accounts to qualify nonsentient biological entities as candidates for moral considerability, insofar as an entity's candidacy for moral considerability seems to hinge not on its ability to be more or less *excellent*, but on its ability to *fare well* or *badly*. Thus, Sumner's criticism lends support to animal ethicists' claim that the biofunction-based notion of goodness of one's own that applies to nonsentient biological entities is *not* of the appropriate kind for qualifying them as candidates for moral considerability.

I will argue that the appropriate response to this challenge involves granting Sumner's contention that the biofunction-based accounts of the good of their own of nonsentient biological entities are not genuine accounts of their welfare. This also involves granting animal ethicists' claim that sentient beings and nonsentient biological entities are not bearers of the same kind of good of their own. However, I will maintain that granting those claims need not entail conceding that nonsentient biological entities cannot be genuine candidates for moral considerability. I will argue that Sumner's association of the biofunction-based notion of goodness of one's own with ideas of *perfection* or *excellence* is misleading, and that this notion should rather be associated with a naturalistic notion of *health*. I will further argue that it is *prima facie* plausible to think that their being bearers of health qualifies nonsentient biological entities as candidates for moral considerability. Thus, my general claim will be that interpreting the biofunction-based accounts of the good of their own of nonsentient biological entities as accounts of their *health* makes it possible for biocentrists and ecocentrists to grant animal ethicists' contention that the sentience-based and the biofunction-based notions of goodness of one's own are conceptually distinct, but to do so without having to give up on the idea that candidacy for moral considerability extends beyond sentience.

My discussion will be organized as follows. In section 2, I will present the biofunction-based accounts of the good of their own of nonsentient biological entities advocated by biocentrists and some ecocentrists. I will emphasize that advocates of those accounts envision them as accounts of the welfare and interests of nonsentient biological entities. I will also present animal ethicists' usual challenge to those accounts, which I call the *reductio ad artificium*. In section 3, I will present the alternative challenge, which derives from Sumner's (1996) critique of objective theories of welfare, and his claim that Robin Attfield's (1981) and Paul Taylor's (1986) purported biofunction-based accounts of welfare are more properly conceived as accounts of some kind of *perfectionist value*. I will argue that Sumner's criticism also applies to Gary Varner's (1998) more sophisticated version of the biofunction-based account derived from the selected-effect theory of function. In section 4, I will maintain that, in response to Sumner's challenge, biocentrists and ecocentrists should grant the claim that the sentience-based and biofunction-based notions of goodness of one's own are conceptually distinct notions, but that they should argue that the latter notion is more properly interpreted as a notion of health than as a notion of perfection. I will moreover contend that it is *prima facie* plausible to think that their being bearers of health qualifies nonsentient biological entities as candidates for moral considerability. I will give one particular reason why I think that this response to Sumner's challenge should be privileged over alternative responses that would attempt to rebut his and animal ethicists' claim that welfare is an exclusively sentience-based notion.

2. FUNCTIONS, TELEOLOGY, AND BIOLOGICAL INTERESTS

As mentioned in the introduction, biocentrists typically ground their claim that nonsentient organisms are candidates for moral considerability in biofunction-based accounts of welfare (i.e., accounts that define welfare in terms of biological function and teleology). Individual organisms, they argue, have species-specific functional capacities or teleological tendencies, and states of affairs can be good or bad for them according to whether these favour or impede the realization of those capacities or tendencies. Robin Attfield, for instance, contends:

Let the ‘essential’ capacities of an x be capacities in the absence of which from most members of a species that species would not *be* the species of x ’s, and let ‘ x ’ range over terms for living organisms. Then the flourishing of an x entails the development in it of the essential capacities of x ’s. (Attfield, 1981, p. 42; italics in the original)

Along similar lines, Paul Taylor, states:

We conceive of the organism as a teleological center of life, striving to preserve itself and realize its good in its own unique way. To say it is a teleological center of life is to say that its internal functioning as well as its external activities are all goal-oriented, having the constant tendency to maintain the organism’s existence through time and to enable it successfully to perform those biological operations whereby it reproduces its kind and continually adapts to changing environmental events and conditions. It is the coherence and unity of these functions of an organism, all directed toward the realization of its good, that make it one teleological center of activity. (Taylor, 1986, p. 121-122)

Thus, according to Attfield and Taylor, the functional capacities or teleological tendencies of nonsentient organisms endow them with a *welfare*, and by so doing qualify them as candidates for moral considerability. As I mentioned, although, as biocentrists, Attfield and Taylor focus on nonsentient individual *organisms*, some ecocentrists apply similar approaches to ecological wholes (Johnson, 1991, 1992; Fox, 1995, chap. 6).

A more sophisticated version of the biofunction-based account of the welfare of nonsentient organisms is that elaborated by Gary Varner (1998, chap. 3). Varner proposes an account of what he calls the “biological interests” of living organisms, which draws on discussions of function and teleology in the philosophy of biology. Specifically, Varner derives his account from the *selected-effect* theory of function advocated by many philosophers of biology, which defines the functions of biological items as the effects for which those items were preserved under the past operation of natural selection (Wright, 1973; Millikan, 1989; Neander, 1991; Godfrey-Smith, 1994). By drawing on this theory, Varner sets to provide a nonarbitrary criterion for ascribing functions to biological items and

for specifying what the biofunction-based interests of organisms are. Thus, Varner (1998, p. 68) proposes the following account of biological interests:

An organism *O* has a biological interest in *X* if and only if *X* would fulfill some biological function *F* of *S* (a part or a subsystem of *O*), where *F* is a biological function of *S* in *O* if and only if:

- (a) *F* is a consequence of *O*'s having *S* and
- (b) *O* has *S* because achieving *F* was adaptive for *O*'s ancestors.⁵

It should be noted that Varner presents this account of biological interests as part of a more encompassing disjunctive account of the overall interests of organisms in general (i.e., sentient and nonsentient).⁶ While nonsentient organisms have only biological interests, sentient organisms, in his view, have both biological interests and sentience-based interests (which Varner analyzes in terms of desire satisfaction). Sentient organisms have both kinds of interests insofar as, besides being sentient beings, they also are biological entities with function-bearing parts and subsystems. According to Varner, attributing both kinds of interests to sentient organisms is necessary for making sense of the idea that sentient beings sometimes have interests that they are not aware of (e.g., despite the fact that the cat Nanci strongly desires to go outside, she may nevertheless have an interest in being kept inside because going outside would expose her to risks of having accidents or of getting fleas) (Varner, 1998, p. 59-60, 62).

Common to Attfield, Taylor, and Varner is the contention that nonsentient organisms can be benefited or harmed in essentially the same way as sentient beings can. To be sure, sentient beings and nonsentient organisms differ in that the latter cannot feel pleasure or pain and do not have subjective preferences that might be satisfied or frustrated. However, as conceived by Attfield, Taylor, and Varner, those sentience-based abilities make no essential difference as to whether some entities can be bearers of welfare. Welfare can be borne as much out of the possession of functional capacities or teleological tendencies as out of abilities to feel pleasure or pain or out of subjective preferences. Thus, in Attfield, Taylor, and Varner's view, sentient and nonsentient organisms are both bearers of welfare and, consequently, both qualify as candidates for moral considerability.

On this point, animal ethicists typically disagree. In the view of many animal ethicists, while it may be conceivable to speak of states of affairs as being good or bad *for* nonsentient organisms and to ascribe them some kind of good of their own on the basis of their functional capacities, the type of goodness of one's own involved has nothing to do with welfare or the possession of interests (see, e.g., Regan, 1976, p. 494-497; Sapontzis, 1987, p. 116-117; Singer, 1993, p. 276-280).⁷ The biofunction-based notion of goodness of one's own that applies to nonsentient organisms must be conceptually distinguished from the sentience-based notion that applies to sentient beings, and only the latter concerns welfare. Therefore, according to those animal ethicists, the biofunction-based notion of goodness of one's own of which non-sentient organisms are bearers is not of the

appropriate kind for qualifying them as candidates for moral considerability. Only sentient beings genuinely are such candidates.

Commonly, animal ethicists' criticism of biocentrists' biofunction-based accounts of welfare takes the form of a *reductio*. Their strategy, which I will refer to as the "*reductio ad artificium*," consists in drawing a parallel between the way we speak of states of affairs as being good or bad for nonsentient biological entities and the way we often speak of states of affairs as being good or bad for *artifacts* (see, e.g., Regan, 1976, p. 494-497; Sapontzis, 1987, p. 116-117). As proponents of this critique emphasize, just as we often say such things as "nutrients are good for plants" and "invasive species are bad for ecosystems," we also often say things such as "oil is good for tractors" and "viruses are bad for operating systems." Such "goodness for" statements are grammatically identical when formulated with respect to nonsentient biological entities and artifacts, and, as such, they seem to ascribe a good of their own as much to artifacts as to nonsentient biological entities. Moreover, it is noteworthy that artifacts, just like living organisms and possibly some ecological wholes, have functional capacities and teleological tendencies (e.g., tractors *have the function* of pulling agricultural machinery, operating systems download updates *in order to* protect themselves from viruses). Thus, as Steve Sapontzis (1987, p. 117), for instance, argues:

While "need," "want," "lack," "harm," "benefit," and "good" are all commonly applied to plants, artifacts, and so on, "interests" is not. "Interests" is commonly reserved for the people and animals who will benefit or be harmed by the needs of the plants, artifacts, and so on being met or unmet. For instance, the tractor "needs" oil to run efficiently, but it is "in the farmer's interest," not the tractor's, that the tractor be well oiled. Again, wheat "needs" water to survive and flourish, but it is "in the farmer's interest," not the wheat's, that the wheat be properly watered." Similarly, if the marshland "needs" protection against developers, it is not "in the interests" of the marshland itself but "in the interests" of providing habitat for migrating birds and other animals living there.

In line with Sapontzis's parallel treatment of nonsentient biological entities and artifacts, it seems arguable that the kind of biofunction-based goodness of one's own that applies to nonsentient biological entities similarly applies to artifacts. If this is the case, then, unless one is willing to grant that artifacts are bearers of welfare (and, consequently, that they can be candidates for moral considerability), one seems compelled to reject accounts of welfare in terms of biological functioning and teleology.

This *reductio ad artificium* has indeed prompted responses on the part of biocentrists and philosophers sympathetic to the idea that nonsentient biological entities are bearers of welfare. Those responses have focused on identifying some ontologically significant difference between the functionality and teleological character of living organisms and those of artifacts (Attfield, 1981, p. 39; Taylor,

1986, p. 124; Varner, 1998, p. 68-69; Holm, 2017); or, alternatively, on arguing that the implication that artifacts might be bearers of welfare is more plausible than one might think (Basl and Sandler, 2013). Philosophers adopting the first line of response typically argue that the functions of artifacts are in some way derivative of external ends pursued by their users, whereas, the functions of nonsentient organisms are independent of such external ends (those philosophers however adopt divergent understandings of this contrast). I will not discuss those responses here. Instead, I wish to highlight that the focus of the discussion on the *reductio ad artificium* is too narrow. Fundamentally, what is at stake between biocentrists and ecocentrists, on the one hand, and animal ethicists, on the other, is not just whether the functionality and teleological character of nonsentient biological entities and those of artifacts differ in any ontologically significant way. The issue is whether the biofunction-based notion of goodness of one's own elaborated by biocentrists really has to do with *welfare*. The *reductio ad artificium* is only one (indirect) way of casting doubt on the claim that it does, and legitimate doubts might remain even if some ontologically significant difference turned out to be identified between the functionality and teleological character of nonsentient biological entities and those of artifacts.

In the next section, I will discuss a distinct challenge to purported biofunction-based accounts of welfare that has been neglected in discussions of biocentrism and ecocentrism. This challenge is derived from Wayne Sumner's (1996) analysis of welfare and his critique of "objective theories" of welfare. Sumner's critique, I think, constitutes a more direct challenge to biocentrists and ecocentrists' contention that the biofunction-based notion of goodness of one's own on which they build their theories amounts to a genuine notion of *welfare*.

3. SUMNER'S CHALLENGE: PRUDENTIAL OR PERFECTIONIST VALUE?

Sumner's critique of purported biofunction-based accounts of welfare is grounded in his analysis of the notion of *welfare*, or what he also more technically calls *prudential value*. In its ordinary sense, Sumner remarks, the notion of welfare, or prudential value, refers to an entity's condition of *faring well* or *doing well* (Sumner, 1996, p. 1). It is the condition of being *well off*. Welfare, in other words, concerns "how well [a life] is going *for the individual whose life it is*" (Sumner, 1996, p. 20; italics in the original). Thus, an essential element in the ordinary concept of welfare is its distinctive relativization to "the proprietor of a life," its evaluation of a life in a way that is "subject relative" or "perspectival." My welfare, Sumner explains, is *mine* in a very particular and intimate way, which concerns the way in which my life goes well *for me* (Sumner, 1996, p. 20; italics in the original). This contrasts with other standpoints from which my life can be evaluated, such as its aesthetic, perfectionist, and ethical values (see Sumner, 1996, p. 21-25). Thus, according to Sumner, an adequate theory of welfare—in contrast to accounts of other kinds of value—must reflect and provide an interpretation of this distinctive subject relativity of prudential value (see Sumner, 1996, p. 20-21).

Sumner maintains that this analysis of welfare raises a challenge for purported “objective theories” of welfare, which do not make an entity’s welfare logically dependent on its attitudes of favour and disfavour. As he argues, “subjective theories,” by acknowledging such a logical dependence between welfare and an entity’s attitudes, have at their disposal a straightforward way of interpreting the subject relativity of welfare: they make a person’s welfare dependent on his or her own concerns. As he explains:

What is crucial on such an account is that you are the proprietor or manager of a set of attitudes, both positive and negative, towards the conditions of your life. It is these attitudes which constitute the standpoint from which these conditions can be assessed as good or bad *for you*. It follows on this sort of account that a welfare subject in the merely grammatical sense—an individual with a distinct welfare—must also be a subject in a more robust sense—the locus of a reasonably unified and continuous mental life. Prudential value is therefore perspectival because it literally takes the point of view of the subject. (Sumner, 1996, p. 42-43; italics in the original)

Since, by definition, objective theories of welfare eschew all references to the attitudes or concerns of subjects, this interpretation of the subject relativity of welfare is not available to them. The success of those theories thus hinges on their proponents’ ability to provide an alternative interpretation of this subject relativity (see Sumner, 1996, p. 43-44). Reviewing some prominent candidate objective theories of welfare, such as needs-based accounts (e.g., Thomson, 1987), the capability approach (e.g., Sen, 1985; Nussbaum, 1988), and the biofunction-based accounts advocated by Attfield (1981) and Taylor (1986), Sumner concludes that defenders of those theories of welfare are still yet to provide such an alternative interpretation.

Before I turn to Sumner’s particular critique of biofunction-based accounts, it should be emphasized that his critique of objective theories of welfare does not amount to a mere tautological reaffirmation of his observation that welfare is subject relative. In his view, whereas recognizing the subject relativity of welfare is a matter of conceptual analysis, adopting a subjectivist interpretation of this subject relativity—i.e., one that makes an entity’s welfare logically dependent of its attitudes of favour and disfavour—is a matter of substantive philosophical argument. In principle, an objective theory that adequately reflects the particular and intimate way in which an entity’s welfare concerns how well things are going *for it* could be elaborated, and the interpretation of this central aspect of welfare offered by subjective theories could turn out to be mistaken (see Sumner, 1996, p. 43-44).⁸

Sumner’s particular critique of the biofunction-based accounts of welfare advocated by biocentrists is grounded in his analysis of welfare and the distinction he makes between *prudential* and *perfectionist* values (see above). As he charac-

terizes it (drawing on Hurka, 1993), *perfectionist value* is about an entity's being "a good instance or specimen of its kind," its exemplifying "the excellences characteristic of its particular nature" (Sumner, 1996, p. 23). This kind of evaluation, Sumner remarks, can be applied as much to artificial as to natural entities. In the case of individual organisms, it usually appeals to standards associated with species membership. Perfectionist value, thus, consists in the characteristically Aristotelian *goodness-of-one's-kind* type of evaluation, often referred to as *attributive goodness* (e.g., Geach, 1956; Foot, 2003). Sumner illustrates the distinction between prudential and perfectionist value, and the possibility of their divergence, with the following example:

You can easily imagine yourself, at the end of your life, taking pride in your high level of self-development but none the less wishing that you had got more out of your life, that it had been more rewarding or fulfilling, and thinking that it might have gone better for you had you devoted less energy to perfecting your talents and more to just hanging out or diversifying your interests. Whatever we are to count as excellences for creatures of our nature, they will raise the perfectionist value of our lives regardless of the extent of their payoff for us. There is therefore no logical guarantee that the best human specimens will also be the best off, or that their underdeveloped rivals will not be faring better. ... The perfectionist value of a life is conceptually independent of how well it is going for its owner. (Sumner, 1996, p. 23)

On the basis of this prudential/perfectionist distinction, Sumner contends that the purported biofunction-based accounts of welfare advocated by biocentrists are in fact more plausibly interpreted as accounts of the *perfectionist value* than of the *prudential value* of entities. This, he notes, is most clearly noticeable in Attfield's version of this account (see the quotation in section 2), which explicitly defines the "flourishing" of nonsentient biological entities in terms of their goodness of their kind (Sumner, 1996, p. 77-78). Thus, the biofunction-based evaluations of nonsentient organisms on which biocentrists build their ethical theories have more to do with some kind of *excellence* than with welfare. Interpreting the biofunction-based notion of goodness of one's own elaborated by biocentrists as being about welfare therefore amounts to conflating perfectionist and prudential value. While Sumner's discussion most explicitly targets Attfield's (1981) version of the biofunction-based account, he takes his criticism of biofunction-based accounts to apply to Taylor's (1986) version as well.

Sumner's critique of purported biofunction-based accounts of welfare lends support to animal ethicists' contention that those accounts do not in fact concern welfare. If Sumner is correct, then ordinary language "goodness for" statements such as "nutrients are good for plants" and "invasive species are bad for ecosystems," which implicitly ascribe a good of their own to nonsentient biological entities, should *not* be interpreted as implying that those biological entities are bearers of *welfare*. The (false) impression that they do can be *explained away* by interpreting those statements as being about those biological entities' *perfec-*

tionist value—i.e., as statements about what nonsentient biological entities need to achieve their species-specific (or kind-specific) *excellences*.

Does Sumner's criticism also apply to Varner's (1998, chap. 3) more sophisticated account derived from the selected-effect theory of function? To be sure, Varner's account is not as obviously perfectionist as Attfield's. Its formulation does not include explicit references to notions of organisms' being good specimens of their kind or any related notions.⁹ What Varner's account refers to is the naturally selected functions of organisms' parts and subsystems.

Nevertheless, Sumner's general criticism of objective accounts of welfare still seems to apply. Varner nowhere explains how it may be in the interest of nonsentient organisms *in some subject-relative sense* that their parts and subsystems perform their naturally selected functions. Varner's main improvement upon Attfield's and Taylor's accounts lies in his specification of how biological functions should be understood. Although this is a significant improvement, there does not seem to be any reason to expect that such a specification can make welfare as defined by his account more subject relative than as defined by Attfield and Taylor. Thus, an interpretation of the distinctive subject relativity of welfare remains missing from Varner's account.

Moreover, I think that considering some cases of biofunction-based evaluations involving (presumably) sentient organisms can give a sense that those evaluations have more to do with some kind of species-specific excellence than with welfare, even when biological functions are conceived along the lines of the selected-effect theory of function. Those cases will put pressure on Varner's idea that the fulfillment of their parts and subsystems' functions is constitutive of the welfare of *sentient* organisms; and, by so doing, they will also indirectly put pressure on the claim that *nonsentient* organisms are bearers of a welfare constituted by the fulfillment of their parts and subsystem's functions.¹⁰

Consider first the case of honeybees and their sting. Presumably, a honeybee's sting has the (naturally selected) function of protecting the hive. However, knowing that a honeybee typically dies after using her sting, it would seem that a dysfunction of her sting that would make her unable to sting would, all else being equal, contribute to the welfare of the honeybee. Such a dysfunction could save the honeybee's life and presumably help her avoid some significant amount of suffering. It would therefore seem implausible to say that having a normally functioning sting promotes the welfare of the individual honeybee. Consider next the case of salmon and their reproductive behaviour (commonly called the "salmon run"). Salmon presumably have parts or subsystems that have the (naturally selected) function of enabling them to swim upstream and spawn in the river where they were born (presumably including parts and subsystems associated with salmon's capacity of recognizing the characteristic smell of their native river and of orienting themselves on the basis of detection of the earth's magnetic field).¹¹ However, knowing that a salmon's condition deteriorates when he or she stays in freshwater for a long time, typically leading salmon to die after spawn-

ing, it would seem that a dysfunction of an individual salmon's parts and subsystems leading him or her to stay in saltwater rather than swim upstream to his or her native river would, all else being equal, promote the welfare of the individual salmon. Such a dysfunction could save the salmon's life and presumably help him or her avoid some significant amount of suffering. It would therefore seem implausible to say that having normally functioning salmon-run-associated parts and subsystems promotes the welfare of individual salmon.¹²

Two observations can be drawn from the honeybee and salmon cases, which together indicate that Varner's biofunction-based account of biological interests is more plausibly interpreted as an account of some kind of species-specific excellence than as an account of welfare (just like Attfield's and Taylor's accounts). First, the fact that normal functioning and welfare diverge in those two cases indicates that, at least with regards to sentient beings, the relationship between welfare and normal functioning is *instrumental* and *contingent* rather than *conceptual* as Varner's account would require. I submit that the linkage of welfare to normal functioning appears plausible in the case of sentient organisms only because, usually, the normal functioning of many of their parts and subsystems happens to promote some sentience-based interests.¹³ This is most clearly the case with the functions of vital organs and subsystems (e.g., the heart, lungs, the liver, the circulatory system), but is also the case with the functions of many other organs and subsystems involved in the life of animals (e.g., eyes, ears, the nose, muscles, claws, the immune system). However, the fact that welfare and normal functioning diverge in some cases (like that of stings in honeybees and salmon-run-associated parts and subsystems in salmon) implies that the normal functioning of their parts and subsystems cannot be *constitutive* of the welfare of sentient organisms.¹⁴ In contrast, interpreting the normal functioning of stings in honeybees and of salmon-run-associated parts and subsystems in salmon as constitutive of some kind of *excellence* that honeybees and salmon can achieve qua members of their species does not seem wholly implausible (although this indeed raises questions regarding the adequacy of thinking of biological entities as belonging to kinds). Thus, with regards to *sentient* organisms, Sumner's contention that biofunction-based evaluations have more to do with a notion of perfection than with welfare still seems to hold.

The second observation that can be drawn from the honeybee and salmon cases, I think, is that the conclusion just reached with regards to sentient organisms must also hold with regards to *nonsentient* organisms. If, as I just argued, normal functioning concerns some kind of perfection rather than welfare in the case of sentient organisms, then it would seem odd that things be different in the case of nonsentient organisms. At best, Varner (or his supporters) would have to give up the idea that biological interests are a class of interests that are borne by both sentient and nonsentient organisms. This would require him (or his supporters) to explain how it can be that those interests are borne only by the latter, despite the fact that both sentient and nonsentient organisms have function-bearing parts and subsystems. But there is more. Varner (or his supporters), I think, would also have to explain two other things. Firstly, they would have to explain how it

can be that what is a measure of perfection in the case of sentient organisms becomes a measure of welfare when applied to nonsentient organisms. And, secondly, they would have to explain how it can be that two distinct accounts of welfare—sentience-based and biofunction-based ones—apply respectively to sentient and nonsentient organisms. It would seem much simpler to grant that biofunction-based evaluations concern something other than welfare both in the cases of nonsentient and sentient organisms. Thus, I take it that Varner's account, like those of Attfield and Taylor, is more plausibly interpreted as an account of some kind of excellence that nonsentient organisms can achieve than as an account of their welfare. Hence, Sumner's contention that biofunction-based evaluations have more to do with perfection than with welfare also seems to apply to Varner's account of biological interests derived from the selected-effect theory of function.

It should be emphasized that the considerations raised by Sumner's critique of purported biofunction-based accounts of welfare are independent of the considerations raised by the *reductio ad artificium* (see section 2). Sumner's criticism that purported biofunction-based accounts fail to reflect the distinctive subject relativity of welfare holds irrespective of whether an ontologically significant difference can be identified between the functionality and teleological character of nonsentient organisms and those of artifacts. Let's grant that, as typically argued by biocentrists, the functions of artifacts are derivative of their users' ends, whereas the functions of nonsentient organism are not (see section 2). All that such a contrast implies is that the functional performance of artifacts should be evaluated on the basis of standards of excellence that are extrinsic (user derivative), whereas the functional performance of nonsentient organisms should be evaluated on the basis of standards of excellence that are (in some sense) intrinsic (see Sumner, 1996, p. 212). Considering that intrinsicity is not sufficient for subject relativity in Sumner's sense (for instance, the fact that a rock's ability to fall is intrinsic to it does not entail that weight is subject relative), the standards remain ones of excellence in both cases. What they evaluate, therefore, has nothing to do with welfare. Sumner's critique of purported biofunction-based accounts of welfare thus lends independent support to animal ethicists' contention that the notion of goodness of one's own that applies to nonsentient biological entities is not of the appropriate kind for qualifying them as candidates for moral considerability.

4. FROM PERFECTIONIST VALUE TO HEALTH

How should biocentrists and ecocentrists respond to Sumner's criticism? I see four possible lines of response:

- (1) Rejecting Sumner's subject-relativity requirement for welfare
- (2) Proposing another biofunction-based (or another kind of objective) account of welfare that meets Sumner's subject-relativity requirement¹⁵
- (3) Maintaining that, although perfection and welfare are conceptually distinct, there nevertheless is some noncontingent relation between

perfection and welfare, such that biofunction-based perfectionist evaluations have some noncontingent bearing on welfare¹⁶

- (4) Rejecting the (strict) welfare requirement for candidacy for moral considerability, and arguing that some entity can be a candidate for moral considerability in virtue of being a bearer of perfectionist value as construed by Sumner

In the following, I will adopt the fourth strategy (although I will reject the terminology of perfection). I will argue, first, that Sumner's notion of perfection is in fact better construed as a naturalistically understood notion of *health* and, second, that it is *prima facie* plausible to think that being a bearer of health qualifies an entity as a candidate for moral considerability.¹⁷ In closing this section, I will give one particular reason why I think that this strategy should be privileged over the three other ones, which have in common their attempt to rebut Sumner's claim that welfare is an exclusively sentience-based notion.

I think that an important point must be conceded to Sumner: sentient and nonsentient biological entities are *not* bearers of the same type of good of their own. The notion of goodness of one's own that has to do with welfare is, as Sumner argues, the one that makes an entity's welfare logically dependent of its attitudes of favour and disfavour. In contrast, the biofunction-based notion of goodness of one's own that applies to nonsentient organisms concerns something other than welfare. Thus, I suggest that a twofold take on "goodness for" statements should be adopted, according to which those statements alternatively refer to two distinct notions:

Welfare: "*A* is good for *X*," meaning "*A* promotes *X*'s welfare."

Normal functioning: "*A* is good for *X*," meaning "*A* promotes *X*'s ability to function normally."¹⁸

Qua sentience based, the former notion applies only to sentient beings, whereas the latter notion applies to any entity that has function-bearing parts and subsystems.

However, I think that Sumner's association of the biofunction-based notion with *perfection* is misleading. This association suggests (falsely, I think) that biofunction-based evaluations have some connection with moral *virtue*, and this association therefore creates the (false) impression that being a bearer of a biofunction-based good of one's own can surely not qualify one as a candidate for moral considerability. This is because moral virtue is a concept that serves to evaluate entities qua moral *agents* (entities that can be praised or blamed for their actions), whereas candidacy for moral considerability depends on the possibility of evaluating entities qua moral *patients* (entities to which actions or states of affairs can be beneficial or detrimental). In more concrete terms, my moral considerability as a person does not hinge on my ability to behave in more or less morally admirable (virtuous) ways. It hinges on my ability to be made better or worse off by states of affairs (i.e., my being a bearer of *welfare*).

It should be highlighted, though, that what Sumner refers to as *perfectionist value* cannot be an *ethical* kind of perfection (i.e., moral virtue). Sumner himself distinguishes *perfectionist value*, which has to do with whether an entity is a good specimen of its kind (i.e., Aristotelian attributive goodness), and *ethical value*, which has to do with how one's choices affect the lives of others (see Sumner, 1996, p. 23-25). Thus, Sumner's own understanding of perfectionist value casts this notion as distinct from *ethical* perfection, and the kind of "perfection" he has in mind must therefore be a *nonmoral* type of perfection.¹⁹ The relationship between this notion on the one hand and biological functions and teleology on the other suggests that it is a *biological* notion. I submit that this biological notion amounts to a naturalistically understood notion of *health*.

The suggestion that the notion of *normal functioning* that Sumner associates with *perfection* in fact amounts to a naturalistically understood notion of *health* seems reasonably plausible. In one way or another, most naturalistic accounts of health advocated in the philosophy of medicine link health with functions (e.g., Boorse, 1977, 2014; Wakefield, 1992; Saborido and Moreno, 2015). They mainly differ as to which philosophical theory of function offers the best starting point for developing an account of health.²⁰ Thus, I suggest that it is more illuminating to interpret the biofunction-based evaluations that Sumner associates with perfection as being ones having to do with *health* (naturalistically understood).

Now let us return to the honeybee and salmon cases discussed in section 3. Are the biofunction-based evaluations of the sting of honeybees and the salmon-run-associated functions of salmon more plausibly interpreted as having to do with health than as having to do with welfare? I contend that they are. While, as seen above, it seems implausible that the normal functioning of an individual honeybee's sting would be constitutive of her welfare, it seems quite plausible that this normal functioning is constitutive of her *health*. Likewise, while, as seen above, it seems implausible that the normal functioning of an individual salmon's salmon-run-associated parts and subsystems would be constitutive of his or her welfare, it seems quite plausible that this normal functioning is constitutive of his or her *health*. Health (the normal functioning of parts and subsystems) and welfare simply happen to diverge in those two cases. Such a divergence often occurs also in the human case. For instance, imagine that a person who does not wish to have children (and whom we have no reason to expect will change her or his mind) learns from her or his physician that she or he has a disease whose only effect will be to make her or him sterile. Insofar as having this disease will greatly simplify her or his life, by freeing her or him from the inconveniences of contraception and from the risk of unwanted fecundation, having such a disease would seem to promote her or his welfare.

Thus, I contend that the second notion of "goodness for" identified above (the one associated with normal functioning) should be interpreted as concerning health. "Goodness for" statements that are about the normal functioning of some biological entities, I submit, have more to do with those entities' health than with

anything related to moral perfection or virtue. This proposal entails (reformulating the above-proposed twofold take on “goodness for”) that ordinary-language “goodness for” statements should be conceived as referring to either one of the following two notions:

Welfare: “*A* is good for *X*,” meaning “*A* promotes *X*’s welfare.”

Health: “*A* is good for *X*,” meaning “*A* promotes *X*’s health.”

Hence, my proposal is that, typically, when we formulate statements of the type “*A* is good for *X*” in relation to sentient beings, what we implicitly mean is “*A* promotes *X*’s welfare,” whereas, when we formulate such statements in relation to nonsentient organisms, what we implicitly mean is “*A* promotes *X*’s health.”

I contend that, when reinterpreted as referring to health, biofunction-based evaluations constitute a more plausible basis for nonsentient organisms’ candidacy for moral considerability than when they are construed (as Sumner suggests) as being about perfection. As remarked above, an entity’s candidacy for moral considerability clearly does not hinge on its being a bearer of perfectionist value (its being able to be more excellent or virtuous). It seems less obvious, however, that moral considerability cannot hinge on an entity’s being a bearer of health. If what I said above is correct, health, just like welfare, is a notion with reference to which “goodness for” statements can be formulated (although, as I argued, welfare and health are two distinct notions). Those statements made with reference to health are about what is in some sense beneficial or detrimental to some entities. Thus, if, as maintained by Goodpaster (see section 1), being an entity to which states of affairs can be beneficial or detrimental is sufficient for candidacy for moral considerability, then an entity’s being a bearer of health seems sufficient for it to qualify as a candidate for moral considerability. Consequently, I propose that what Sumner’s critique of purported biofunction-based accounts of welfare should be taken to indicate is that defences of the moral considerability of nonsentient biological entities should be built on those entities’ being bearers of health rather than of welfare.²¹

One could object, however, that this proposal involves a somewhat liberal interpretation of Goodpaster’s requirement for candidacy for moral considerability. Specifically, one could object that, if we grant my above interpretation of “goodness for” statements as being either about welfare or about health, then moral considerability should be considered to hinge more specifically on an entity’s being able to be benefited or harmed by states of affairs *in the welfare sense*. This more restrictive (welfare-exclusive) interpretation of Goodpaster’s requirement for candidacy for moral considerability would bring us back to animal ethicists’ contention that candidacy for moral considerability hinges on the possession of a sentience-based type of good of one’s own. By being bearers of health rather than of welfare, nonsentient organisms would still not be bearers of the right kind of good of one’s own to qualify as candidates for moral considerability, and my response to Sumner’s critique would fail as a defence of the nonnecessity of sentience for candidacy for moral considerability.

This objection is a crucial one, and I must admit that I will not be able to give a full response to it here. Responding to this objection would, I think, require some further analysis of the notion of moral considerability and, more specifically, some analysis of the kind of moral *attitudes* associated with it. I think that moral considerability should most likely be associated with the adoption of rational attitudes of *care* and *respect* towards entities. As Goodpaster (1978, p. 309) states, moral considerability as he understands it “is construed broadly to include the most basic forms of practical respect.” So, the issue of how to interpret Goodpaster’s requirement for candidacy for moral considerability, I contend, should be approached as one about what grounds the adoption of (rational) attitudes of care and respect towards entities.

I am happy to leave this question open here. In fact, as I see it, one main aim of this paper is to highlight that this question deserves more attention from environmental and animal ethicists. The question of what kind of good of one’s own is required for candidacy for moral considerability is a crucially important one, and I think that the suggestion that health may be sufficient for candidacy for moral considerability cannot be rejected on the sole basis of a presumption in favour of the welfare-exclusive interpretation of Goodpaster’s requirement.

Another possible objection to my proposal that the candidacy for moral considerability of nonsentient biological entities should be grounded in their being bearers of health rather than of welfare concerns the naturalism/normativism debate in the philosophy of medicine. Above, I introduced my proposal that biofunction-based evaluations of organisms be conceived as having to do with health, specifying that I meant health *naturalistically understood*. One may object that this begs the question in favour of the biology-centred, *naturalistic* accounts of health, and does not consider the possibility that the more value-laden *normativist* accounts are the most plausible ones. Proponents of naturalist accounts of health argue that the concept of health can be analyzed in purely descriptive biological terms (e.g., Boorse, 1977, 2014; Hausman, 2012; Saborido and Moreno, 2015), whereas advocates of normativist accounts argue that health is a value-laden concept that is properly analyzed with reference to social values or constituents of the welfare of entities (e.g., Engelhardt, 1976; Reznek, 1987; Nordenfelt, 1987).²² Analyzing health with reference to welfare would make my characterization of health and welfare understood as two distinct and conceptually independent notions collapse.

Just like the previous one, this objection is one to which a full response cannot be given here. Fully responding to this objection would amount to providing a definitive solution to the naturalism/normativism debate in the philosophy of medicine. Nonetheless, one of the challenges faced by welfare-based normativist accounts of health, which has particular relevance to our discussion, can be recalled. An objection sometimes raised against those accounts points to the difficulty they have in ascribing health to nonsentient organisms. As Christopher Boorse (2011, p. 52) argues: “Many philosophers, including all utilitarians, agree with Singer (1994, p. 200) that nonsentient beings have no interests.

Beings without interests cannot suffer harm or benefit. Yet biologists freely attribute diseases to plants and lower animals.” Thus, a problem for proponents of welfare-based normativist accounts of health seems to be that, unless they can provide a sound explanation of how nonsentient organisms can be bearers of welfare (one which, among other things, avoids Sumner’s criticism), they will be compelled to accept the implausible result that nonsentient organisms are *not* bearers of health. This would force them to maintain that biologists are confused when they use terms like “health,” “disease,” and “pathology” with reference to nonsentient organisms. It would seem much simpler to adopt the view, as I propose, that health and welfare are two distinct and conceptually independent notions, and that health must be analyzed naturalistically.²³

Before I close this section, it may be relevant to highlight one advantage of the health-centred response to Sumner’s critique of purported biofunction-based accounts of welfare over other possible lines of response identified at the beginning of this section. As I mentioned, those lines of response have in common their attempt to rebut Sumner’s claim that welfare is an exclusively sentience-based notion. I think that an advantage of the health-centred response pertains to its ability of fostering a more fruitful discussion between nonsentientist environmental ethicists (i.e., biocentrists and ecocentrists) and animal ethicists. As the above discussion has highlighted, the issue of whether only the sentience-based notion of goodness of one’s own is relevant to moral considerability has been a tenacious matter of disagreement between animal and environmental ethicists. Given the tenacity of this disagreement, it seems unlikely, on the one hand, that animal ethicists will give up on the idea that sentience endows sentient beings with a special kind of good of their own of which nonsentient beings cannot be bearers. On the other hand, it also seems unlikely that biocentrists and ecocentrists will give up on the project of defending the moral considerability of nonsentient organisms and ecological wholes.

Given this background, I think that a shift on the part of biocentrists and ecocentrists, away from the attempt to extend the (paradigmatically sentience-based) notions of welfare and interests to nonsentient biological entities, would lay a more propitious ground for discussion between nonsentientist environmental ethicists and animal ethicists. The discussion could then be fruitfully refocused from the question of whether sentient beings and nonsentient biological entities are bearers of the same kind of good of their own to that of whether candidacy for moral considerability *really* hinges on having a good of one’s own *in the welfare sense*. As I emphasized above, I think that this question is crucial to the debate between nonsentientist environmental ethicists and animal ethicists on moral considerability, and that it is one that deserves more attention.

5. CONCLUSION

This paper has discussed a challenge faced by the purported function-based accounts of the welfare of nonsentient biological entities advocated by biocentrists and some ecocentrists (a challenge that has been neglected in discussions

of environmental ethics). This challenge derives from Wayne Sumner's (1996) critique of objective theories of welfare and his claim that biocentrists' and ecocentrists' purported function-based accounts of welfare are more properly interpreted as accounts of the perfectionist value of nonsentient biological entities. I argued that the appropriate way for biocentrists and ecocentrists to respond to this challenge consists in granting Sumner's contention that the function-based accounts of the good of their own of nonsentient biological entities are *not* genuine accounts of those entities' welfare. Granting this, I remarked, lends support to animal ethicists' claim that nonsentient biological entities are not bearers of the same kind of good of their own as sentient beings. I, however, argued that Sumner's association of the function-based evaluations of nonsentient biological entities with a notion of perfection is misleading. Those evaluations, I maintained, should instead be interpreted as having to do with the health (naturalistically understood) of those entities. I maintained that it is *prima facie* plausible that their being bearers of health qualifies nonsentient biological entities as candidates for moral considerability.

As I emphasized, this proposal raises the question of whether candidacy for moral considerability should be restricted to entities that are bearers of a good of their own *in the welfare sense* or whether candidacy for moral considerability should be understood more broadly. I hope that the above discussion has succeeded in drawing attention to the conceptual and normative importance of this question.

ACKNOWLEDGEMENTS

The author would like to thank Valéry Giroux, Félix Aubé-Beaudoin, and two anonymous referees for helpful comments, as well as Xander Selene for linguistic revision of the manuscript. He also thanks Germain Fourneaux for stimulating discussions on biocentrism. The work for this paper was supported by a postdoctoral fellowship from the Social Sciences and Humanities Research Council of Canada (SSHRC, 756-2015-0748) and a research grant from the Fonds de recherche du Québec – Société et culture (FRQSC, 2018-CH-211053).

NOTES

- ¹ Although the notion of teleology is sometimes regarded as being incompatible with the naturalistic outlook of modern science and contemporary philosophy, it should be remarked that many contemporary biologists and philosophers in fact acknowledge the importance of the notion of teleology (properly understood) for biology (see, e.g., Nagel, 1961; Mayr, 1988; Millikan, 1989; Neander, 1991).
- ² However, Aldo Leopold and J. Baird Callicott, arguably the most influential ecocentrists, do *not* defend claims that ecological wholes are bearers of *welfare* or *interests*. They develop their ethical views more primarily around notions of *land* or *ecosystem health*, thus instead supporting a view of ecosystems as bearers of *health* (in line with what I advocate below) (see, e.g., Leopold, 1949; Callicott, 1992, 1995, 2013).
- ³ For discussions of particular issues raised by the extension of those accounts to wholes, see Harley Cahen (1988), Katie McShane (2014), Jay Odenbaugh (2016), John Basl (2017), Antoine C. Dussault (forthcoming a).
- ⁴ It must be emphasized that, in this paper, I will be concerned with nonsentient biological entities' *candidacy* for moral considerability—that is, with the *conceivability* of ascribing them moral considerability. I will not be concerned with defending those entities' *actual* moral considerability (on this distinction, see Goodpaster, 1978, p. 312–313). Insofar as it is conceivable to acknowledge that an entity has a good of its own while denying that this good is one that should be taken into account by moral agents, establishing the *actual* moral considerability of (some) nonsentient biological entities would require additional arguments (for discussions of this point, see Taylor, 1986, p. 59–60; O'Neill, 2001, p. 169).
- ⁵ Although Varner himself does not emphasize this, a reason why the selected-effect theory of functions offers a promising starting point for an account of the good of their own of nonsentient organisms is that this theory ascribes functions *normatively* to biological items (in contrast to some alternative theories, such as Robert Cummins's 1975 *causal-role* theory). By grounding function ascriptions in past selective history, the selected-effect theory makes it possible for biological items to have functions they are unable to perform. The functions of biological items are, to use Ruth Millikan's (1984, p. 17) phrase, functions that they are "supposed to" perform. This normative character of functions as construed by the selected-effect theory thus makes it possible for organisms to have biological interests that are unfulfilled. By doing so, it provides an understanding of the way in which states of affairs may be beneficial or detrimental to living organisms. For the sake of simplicity, in this paper I will refer to "having function-bearing parts and subsystems" as the condition for being a bearer of a biofunction-based good of one's own. When doing so, I should be understood to mean parts and subsystems bearing functions *normatively*.
- ⁶ For the sake of simplicity, I reproduce only the biofunction-based component of this account here.
- ⁷ Although Tom Regan admits the use of the term "interest" in relation to plants and artifacts, he is careful to emphasize that the kind of good of one's own of which plants and artifacts are

bearers “is a kind of goodness that is distinct from well-being, when this is understood to mean ‘happiness’” (Regan, 1976, p. 494). (As we shall see below, Regan and many animal ethicists claim that the good of their own that applies to nonsentient beings is of the same kind as the one that applies to artifacts.)

⁸ In this respect, Sumner’s critique of objective accounts of welfare can illuminatingly be compared with his critique of objective accounts of *happiness*, which he rejects on sheer conceptual grounds (see Sumner, 2002).

⁹ Varner (1998, p. 64-65) in fact explicitly rejects accounts of the good of their own of nonsentient organisms in terms of goodness of their kind.

¹⁰ It should be recalled that, as seen in section 2, Varner’s account entails that sentient organisms, as well as nonsentient ones, are bearers of biological interests (in virtue of their having function-bearing parts and subsystems). Thus, Varner or a supporter of his approach could not avoid the implications I will draw further on in my argument by claiming that sentient organisms have only sentience-based interests.

¹¹ Here, I say “(naturally selected) function” (with parentheses) because I think that the points I raise hold irrespective of which normative theory of function is adopted as a starting point for an account of biological interests. Presumably, stings in honeybees and salmon-run-associated parts and subsystems in salmon would bear functions on any satisfactory theory of function. Therefore, although my discussion focuses on Varner’s account and the associated selected-effect theory of function, I think that the divergence between function fulfillment and welfare I will highlight could not be avoided by adopting an account of biological interests derived from another theory of function. This point is worth mentioning given that some philosophers (Delancey, 2004; Holm, 2012, 2017) have defended alternative accounts of biological interests derived from the systems-based or organizational theory of function (Schlosser, 1998; Mossio, Saborido, and Moreno, 2009).

¹² I borrow the honeybee and salmon cases respectively from William FitzPatrick (2000, p. 63-64) and Robert Cummins (1975, p. 754-755).

¹³ For a criticism of Varner’s claim (see section 2) that attributing biological interests to sentient organisms is necessary for making sense of the idea that they sometimes have interests that they are not aware of (e.g., Nanci the Cat’s interest in being kept inside), see Nicholas Agar (2001, p. 74-77).

¹⁴ It might be objected that Varner’s account can successfully deal with such cases by appealing to a distinction between *prima facie* and *all things considered* interests. Thus, a supporter of Varner could argue that what cases like the stings in honeybees and salmon-run-associated functions in salmon show is that an organism’s fulfilling its parts and subsystems’ (naturally selected) functions is not always in its interests *all things considered*. Even when this is so, it may remain the case that those organisms still have a *prima facie* interest in the fulfillment of those functions. It just happens that, in the particular circumstances at issue, some of those organisms’ biofunction-based interests conflict with some of their sentience-based interests, and that the latter outweigh the former. Although conceivable, this reading of cases like those of honeybees and salmon strikes me as implausible. I submit that, unless we suppose that a honeybee experiences some significant pleasure or satisfies some deep preference when stinging an enemy of the hive, or likewise, that a salmon experiences some significant pleasure or satisfies some deep preference when swimming upstream and spawning in its native river, the idea that the honeybee has a *prima facie* interest in the normal functioning of her sting and that the salmon has a *prima facie* interest in the normal functioning of his or her salmon-run-associated parts and subsystems has no intuitive appeal. Thus, unless one can provide independent reasons for thinking otherwise, I take it that the honeybee and salmon cases should be regarded as indicating that normal functioning is *prima facie* welfare neutral, and that it affects the welfare of an entity only by promoting or impeding the fulfillment of some sentience-based interests.

¹⁵ Resources for developing such a line of response might be afforded by accounts of biological interests derived from theories of function other than the selected-effect theory (Delancey,

2004; Holm, 2012, 2017), though see my skepticism expressed in footnote 11 regarding this possibility. Resources might also be afforded by approaches that attempt to extend Amartya Sen and Martha Nussbaum's *capability approach* to nonsentient biological entities (e.g., Schlosberg, 2012; Fulfer, 2013).

¹⁶ Resources for developing such a line of response may be afforded by the work of neo-Aristotelian ethicists (e.g., Thompson, 1995; Foot, 2003). For a direct response to Sumner along Aristotelian lines (which, however, is not concerned with environmental ethics), see Christopher Toner (2006).

¹⁷ A full defence of the idea that health is sufficient for candidacy for moral considerability, however, lies beyond the scope of this paper.

¹⁸ William FitzPatrick (2000, chap. 3, sect. 4) points to a similar contrast when he distinguishes an entity's *welfare-related* needs and its *function-related* needs.

¹⁹ It may be objected that not all ethicists would agree that ethical value (moral virtue) and goodness of one's kind are entirely independent notions. Famously, neo-Aristotelian ethicists such as Michael Thompson (1995) and Philippa Foot (2003) argue that ethical statements about what it is to be a virtuous person can be conceived as ones about what it is to be a good specimen of the human species (or of one functionally defined subtype within the species). A full discussion of the neo-Aristotelian approach to ethics indeed lies beyond the scope of this paper. It may nonetheless be recalled that this approach faces serious challenges regarding its ability to avoid implausible ethical implications, such as the implication that a person can be morally virtuous by being a good member of an organized criminal group (see Watson, 1993, p. 462-463; Levy, 2009; Odenbaugh, 2015). Criticism similar to that discussed in this paper in relation to biocentrism and ecocentrism has also been raised regarding the linkage made by neo-Aristotelians between welfare and the fulfillment of functions (FitzPatrick, 2000).

²⁰ Here, I leave open the question of which naturalistic account of health should be preferred. For more details on the kind of account of health that I support, see Dussault and Anne-Marie Gagné-Julien (2015).

²¹ As regards the project of defending the moral considerability of ecological wholes (species, communities, ecosystems, etc.), adopting this proposal would commit one to the idea that (some) ecological wholes are genuine bearers of health. Such a commitment underpins the work of proponents of the concept of *ecosystem health* (e.g., Costanza, 1992; Rapport, 1995). For discussions of challenges raised by the concept of *ecosystem health*, see Callicott (1995), McShane (2004), Odenbaugh (2010), and Dussault (forthcoming b).

²² On the naturalism/normativism contrast in the philosophy of medicine, see Jeremy Simon (2007), Marc Ereshefsky (2009, p. 222-224), and Dominic Murphy (2015, section 2). Although I will discuss only welfare-based normativist accounts, it should be noted that not all normativist accounts define health in relation to welfare. Some accounts instead define health in relation to socially shared values (e.g., Whitbeck 1978).

²³ Another objection commonly raised against welfare-based normativist accounts of health points to the difficulty those accounts have in distinguishing things that are bad for someone by being detrimental to his or her health and things that are bad for someone in other respects. For a discussion of this objection, see Dominic Murphy (2015, sec. 3).

REFERENCES

Agar, Nicholas, *Life's Intrinsic Value: Science, Ethics, and Nature*, New York, Columbia University Press, 2001.

Attfield, Robin, "The Good of Trees," *Journal of Value Inquiry*, vol. 15, no. 1, 1981, p. 35-54.

Basl, John, "A Trilemma for Teleological Individualism," *Synthese*, vol. 194, no. 4, 2017, p. 1057-1074: <https://doi.org/10.1007/s11229-017-1316-0>.

Basl, John, and Ronald Sandler, "The Good of Non-Sentient Entities: Organisms, Artifacts, and Synthetic Biology," *Studies in History and Philosophy of Biological and Biomedical Sciences*, vol. 44, no. 4, 2013, p. 697-705.

Boorse, Christopher, "Health as a Theoretical Concept," *Philosophy of Science*, vol. 44, no. 4, 1977, p. 542-573.

———, "Concepts of Health and Disease," in Fred Gifford (ed.), *Philosophy of Medicine*, Elsevier, 2011, p. 13-64.

———, "A Second Rebuttal on Health," *Journal of Medicine and Philosophy*, vol. 39, no. 6, 2014, p. 683-724.

Cahen, Harley, "Against the Moral Considerability of Ecosystems," *Environmental Ethics*, vol. 10, no. 3, 1988, p. 195-216.

Callicott, J. Baird, *In Defense of the Land Ethic: Essays in Environmental Philosophy*, Albany, N.Y., State University of New York Press, 1989.

———, "Aldo Leopold's Metaphor," in Robert Costanza, Bryan G. Norton, and Benjamin D. Haskell (eds.), *Ecosystem Health: New Goals for Environmental Management*, Washington, D.C., Island Press, 1992, p. 42-56.

———, "The Value of Ecosystem Health," *Environmental Values*, vol. 4, no. 4, 1995, p. 345-361.

———, *Thinking like a Planet: The Land Ethic and the Earth Ethic*, Oxford, New York, Oxford University Press, 2013.

Costanza, Robert, "Toward an Operational Definition of Ecosystem Health," in Robert Costanza, Bryan G. Norton, and Benjamin D. Haskell (eds.), *Ecosystem Health: New Goals for Environmental Management*, Washington, D.C., Island Press, 1992, p. 239-256.

Cummins, Robert C, "Functional Analysis," *Journal of Philosophy*, vol. 72, November 1975, p. 741-764.

Delancey, Craig S, "Teleofunctions and Oncomice: The Case for Revising Varner's Value Theory," *Environmental Ethics*, vol. 26, no. 2, 2004, p. 171-188.

Dussault, Antoine C, "Can Autopoiesis Ground a Response to the Selectionist Critique of Ecocentrism?" in Tyler DesRoches, Frank Jankunis, and Byron Williston (eds.), *New Directions in Canadian Environmental Philosophy*, Montréal, Kingston, McGill-Queen's University Press, forthcoming a.

———, « Trois faux dilemmes dans le débat sur la santé écosystémique, » in Sophia Rousseau-Mermans and Antoine C. Dussault (dir.), *Penser la protection de l'environnement à partir de l'écologie: Débats contemporains*, Paris, Matériologiques, forthcoming b.

Dussault, Antoine C., and Anne-Marie Gagné-Julien, "Health, Homeostasis and the Situation-Specificity of Normality," *Theoretical Medicine and Bioethics*, vol. 36, no. 1, 2015, p. 61-81.

Engelhardt, H. Tristram, "Ideology and Etiology," *The Journal of Medicine and Philosophy*, vol. 1, no. 3, 1976, p. 256-268: <https://doi.org/10.1093/jmp/1.3.256>.

Ereshefsky, Marc, "Defining 'Health' and 'Disease,'" *Studies in History and Philosophy of Science Part C*, vol. 40, no. 3, 2009, p. 221-227.

FitzPatrick, William Joseph, *Teleology and the Norms of Nature*, New York, Garland Publishing, 2000.

Foot, Philippa, *Natural Goodness*, Oxford, New York, Clarendon, 2003.

Fox, Warwick, *Toward a Transpersonal Ecology: Developing New Foundations for Environmentalism*, Albany, N.Y., State University of New York Press, 1995.

Fulfer, Katy, "The Capabilities Approach to Justice and the Flourishing of Nonsentient Life," *Ethics and the Environment*, vol. 18, no. 1, 2013, p. 19-38.

Geach, Peter T, "Good and Evil," *Analysis*, vol. 17, no. 2, 1956, p. 33-42.

Godfrey-Smith, Peter, "A Modern History Theory of Functions," *Noûs*, vol. 28, no. 3, 1994, p. 344-362.

Goodpaster, Kenneth E, "On Being Morally Considerable," *The Journal of Philosophy*, vol. 75, no. 6, 1978, p. 308-325.

Hausman, Daniel M, "Health, Naturalism, and Functional Efficiency," *Philosophy of Science*, vol. 79, no. 4, 2012, p. 519-541.

Holm, Sune H, "Teleology and Biocentrism," *Synthese*, vol. 194, no. 4, 2017, p. 1075-1087: <https://doi.org/10.1007/s11229-016-1300->.

Hurka, Thomas, *Perfectionism*, New York, Oxford University Press, 1993.

Johnson, Lawrence E, *A Morally Deep World: An Essay on Moral Significance and Environmental Ethics*, Cambridge, New York, Cambridge University Press, 1991.

———, "Toward the Moral Considerability of Species and Ecosystems," *Environmental Ethics*, vol. 14, no. 2, 1992, p. 145-157.

Leopold, Aldo, *A Sand County Almanac, and Sketches Here and There*, New York, Oxford University Press, 1949.

Levy, Sanford S., "Philippa Foot's Theory of Natural Goodness," *Forum Philosophicum: International Journal for Philosophy*, vol. 14, no. 1, 2009, p. 1-15.

Mayr, Ernst, "The Multiple Meanings of Teleological," *Toward a New Philosophy of Biology: Observations of an Evolutionist*, Cambridge, London, Harvard University Press, 1988, p. 38-66.

McShane, Katie, "Ecosystem Health," *Environmental Ethics*, vol. 26, no. 3, 2004.

———, "Individualist Biocentrism vs. Holism Revisited," *Ateliers de l'éthique/The Ethics Forum*, vol. 9, no. 1, 2014, p. 130-148.

Millikan, Ruth G, *Language, Thought, and Other Biological Categories: New Foundations for Realism*, Cambridge, Mass., London, MIT Press, 1984.

———, "In Defense of Proper Functions," *Philosophy of Science*, vol. 56, June 1989, p. 288-302.

Mossio, Matteo, Cristian Saborido, and Alvaro Moreno, "An Organizational Account of Biological Functions," *British Journal for the Philosophy of Science*, vol. 60, no. 4, 2009, p. 813-841.

Murphy, Dominic, "Concepts of Disease and Health," in Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, 2015: <http://plato.stanford.edu/archives/spr2015/entries/health-disease/>.

Nagel, Ernest, *The Structure of Science: Problems in the Logic of Scientific Explanation*, London, Routledge & Kegan Paul, 1961.

Neander, Karen, "The Teleological Notion of 'Function,'" *Australasian Journal of Philosophy*, vol. 69, no. 4, 1991, p. 454-468.

Nordenfelt, Lennart Y, *On the Nature of Health: An Action-Theoretic Approach*, Dordrecht, the Netherlands, D. Reidel, 1987.

Odenbaugh, Jay, "On the Very Idea of an Ecosystem," in Allan Hazlett (ed.), *New Waves in Metaphysics*, Basingstoke, N. Y., Palgrave Macmillan, 2010, p. 240-258.

———, "Nothing in Ethics Makes Sense except in the Light of Evolution? Natural Goodness, Normativity, and Naturalism," *Synthese*, vol. 194, no. 4, 2017, p. 1030-1055.

———, "Protecting Biodiversity and Moral Psychology; or Why Philosophers Are Asking the Wrong Questions," in *The Routledge Handbook of Philosophy of Biodiversity*, 2016.

O'Neill, John, "Meta-Ethics," in Dale Jamieson (ed.), *A Companion to Environmental Philosophy*, Blackwell Publishers, 2001.

Rapport, David J, "Ecosystem Health: More than a Metaphor?" *Environmental Values*, vol. 4, no. 4, 1995, p. 287-309.

Regan, Tom, "Feinberg on What Sorts of Beings Can Have Rights," *Southern Journal of Philosophy*, vol. 14, no. 4, 1976, p. 485-498.

Reznek, Lawrie, *The Nature of Disease*, London, New York, Routledge & Kegan Paul, 1987.

Saborido, Cristian, and Alvaro Moreno, "Biological Pathology from an Organizational Perspective," *Theoretical Medicine and Bioethics*, vol. 36, no. 1, 2015, p. 83-95.

Sapontzis, Steve F, *Morals, Reason, and Animals*, Philadelphia, Temple University Press, 1987.

Schlosberg, David, "Justice, Ecological Integrity, and Climate Change," in Allen Thompson and Jeremy Bendik-Keymer (eds.), *Ethical Adaptation to Climate Change*, The MIT Press, 2012, p. 165-183.

Simon, Jeremy, "Beyond Naturalism and Normativism: Reconceiving the 'Disease' Debate," *Philosophical Papers*, vol. 36, no. 3, 2007, p. 343-370.

Singer, Peter, *Practical Ethics*, 2nd ed., Cambridge, Cambridge University Press, 1993.

———, *Rethinking Life & Death: The Collapse of Our Traditional Ethics*, New York, St. Martin's Press, 1994.

Sumner, L. W., *Welfare, Happiness, and Ethics*, Oxford, New York, Oxford University Press, 1996.

———, "Happiness Now and Then," *Apeiron*, vol. 35, no. 4, 2002, p. 21-40.

Taylor, Paul W, *Respect for Nature: A Theory of Environmental Ethics*, Princeton, N.J., Princeton University Press, 1986.

Thompson, Michael, "The Representation of Life," in Rosalind Hursthouse, Gavin Lawrence, and Warren Quinn (eds.), *Virtues and Reasons*, Clarendon Press, 1995, p. 247-296.

Thomson, Garrett, *Needs*, London, Routledge & Kegan Paul, 1987.

Toner, Christopher Hugh, "Aristotelian Well-Being: A Response to L. W. Sumner's Critique," *Utilitas*, vol. 18, no. 3, 2006, p. 218-231.

Varner, Gary E, *In Nature's Interests? Interests, Animal Rights, and Environmental Ethics*, Oxford University Press, 1998.

Wakefield, Jerome C, "The Concept of Mental Disorder: On the Boundary between Biological Facts and Social Values," *American Psychologist*, 1992, p. 373-388.

Watson, Gary, "On the Primacy of Character," in Owen J. Flanagan and Amélie Oksenberg Rorty (eds.), *Identity, Character, and Morality: Essays in Moral Psychology*, Cambridge, Mass., MIT Press, 1993, p. 449-469.

Whitbeck, Caroline, "Four Basic Concepts of Medical Science," *PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association*, 1978, p. 210-222.

Wright, Larry, "Functions," *Philosophical Review*, vol. 82, no. 2, 1973, p. 139-168.