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Hegel on the Normativity of Animal Life

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Abstract

My aim in this paper is to show that and how animal organisms are appropriate subjects of normative evaluation, on Hegel's view. I contrast my reading with the interpretive positions of Sebastian Rand and Mark Alznauer. I disagree with Rand and agree with Alznauer that animal organisms are normatively evaluable for Hegel. I substantiate my disagreement with Rand, and supplement Alznauer's interpretation, by spelling out the role that the 'generic process' or 'genus process [*Gattungsprozess*]' plays within Hegel's account of animal organisms and their normative evaluability. In the course of my discussion, I highlight the main differences that Hegel purports to identify between animal and vegetable organisms and suggest that the upshot of those differences is that some but not all plants are normatively evaluable, by his lights. I also situate Hegel's discussion of the *Gattungsprozess* within the debate on biological functions in the philosophy of biology over the last few decades.

My aim in this paper is to show that and how animal organisms are appropriate subjects of normative evaluation, on Hegel's view. I contrast my reading with the interpretive positions of Sebastian Rand and Mark Alznauer.[1] Rand argues that, for Hegel, animal organisms are not normatively evaluable according to some species-specific standard, whereas Alznauer argues that both plants and animals are evaluable in that manner. I disagree with Rand and agree with Alznauer that animals are normatively evaluable for Hegel. I substantiate my disagreement with Rand, and supplement Alznauer's interpretation, by spelling out (in a way that Alznauer does not) the role that the 'generic process' or 'genus process [*Gattungsprozess*]' plays within Hegel's account of animal organisms and their normative evaluability. In the course of my discussion, I highlight the main differences that Hegel purports to identify between animal and vegetable organisms, on Hegel's account, and suggest that the upshot of those differences is that some but not all plants are normatively evaluable, by his lights. I also situate Hegel's discussion of the *Gattungsprozess* within the debate on biological functions in the philosophy of biology over the last few decades. In doing so, I take myself to be expanding on the work of James Kreines, on whose interpretation of these matters I draw.

The paper is structured as follows. In Section I, I summarize Hegel's understanding of the meaning or content of evaluative judgments or what he calls 'judgments of the concept', that is, judgments of the form 'x is good', 'x is as it ought to be' or, on the other hand, 'x is defective', 'there is something wrong with x', 'x is not as it ought to be'. With Hegel's account of evaluative judgments on the table, I ask in Section II: What makes animal organisms, unlike inorganic nature, appropriate subjects of normative evaluation for Hegel? In other words, what makes it the case that 'this cat', 'that wolf', 'this human' (but not 'this pebble' or 'that rock', say) can figure in the 'x' position of judgments of the sort 'x is as it ought to be' and 'x is defective'? And what is meant by the judgments 'there is something wrong with this tiger', 'this gazelle is as it ought to be', 'this cat is defective' and others, anyway?

I. Judgments of the concept

I.i. Preliminary qualification: anti-subjectivism

In this section, I attempt to explicate Hegel's conception of evaluative judgments or 'judgments of the concept'. Before doing so, however, I should make a clarificatory point to forestall possible misunderstandings. In offering an account of a certain type of judgment, namely, judgments of the concept, Hegel does *not* take himself to be giving an account merely of our evaluative attitudes towards or subjective take on the world, which might for all we know possess or lack the normative features we project onto it. Rather, Hegel's account of judgments of the concept is meant to describe features (in particular, normative properties like goodness and badness) that the subjects of those judgments can have independently of our subjective states or representations. For Hegel, value in general is not a merely subjective projection on our (or any other valuing creatures') part. In other words, certain things would be good or bad, normatively sound or defective, even if creatures capable of using evaluative language had never evolved.

By way of support for this anti-subjectivist point, as we might label it, consider the following pieces of textual evidence. Hegel prefaces his discussion of judgments (evaluative or otherwise) in the *Encyclopaedia* by telling us that '[t]he judgment is not our subjective doing, by which this or that predicate is ascribed to the object' (*Enz.*: §166Z).[2] He begins the next paragraph by elaborating:

> The judgment is usually taken in a subjective sense, as an operation and a form, which occurs *only* in thinking that is conscious of itself. But […] [here] the judgment is to be taken as entirely universal: every thing is a judgment.—That is, every thing is a singular which is inwardly a universality or inner nature, in other words, a universal that is made singular […]. (*Enz.*: §167, emphases modified)

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What are we to make of these passages? Hegel here pits his account of judgments against the orthodox or 'usual' view, according to which judgments are a 'subjective doing' or a mental 'operation' whereby some predicate or universal representation 'is ascribed to the object'. Accordingly, when he goes on to say that 'every thing is a singular which is inwardly a universality', he cannot be using 'universality' to describe a feature of certain subjective representations (namely, concepts as they are 'usually taken') that are predicated, in some mental 'operation', of an object. Rather, when Hegel writes, as a gloss on the claim that 'every thing is a judgment', that 'every thing is a singular which is inwardly a universality or inner nature', he is telling us that every object or thing (that is, every 'singular') bears certain properties or universals which jointly articulate that thing's 'inner nature'. That a 'singular' bears some property or universal might (but need not) be registered by a 'subjective doing' (that is, by a judgment as these are 'usually taken'). These general considerations about judgments go for evaluative judgments in particular, too. When we make some evaluative judgment, understood as a mental 'operation', we are not (primarily or only) attributing to an object some subjective representation, namely, a predicate like 'good' or 'bad'. We are instead registering that some object, thing or 'singular' bears some property or universal, in this case, a normative property. And again, that some object bears a normative property, for example, goodness, might be (but does not depend on its being) registered by a 'subjective doing' or mental 'operation' on our part.

I.ii Truth as the correspondence of object and concept

With this anti-subjectivist qualification in place, let us now focus on Hegel's account of evaluative judgments or 'judgments of the concept' itself.[3] Some of the examples of judgments of the concept that Hegel provides are 'This house is bad', 'This action is good', 'This body is diseased', 'A certain work of art is beautiful'. What characterizes judgments like these? The most general feature of these sorts of evaluative statements—Hegel tells us—is that they 'can contain truth' (*Enz.:* §172A) or have a content that is true (or untrue, as the case may be). In order to understand the precise sense in which evaluative judgments can contain truth for Hegel, we need to consider the contrast he draws between truth and what he calls 'correctness [*Richtigkeit*]'.

Correctness—we read—consists in 'the formal agreement of our representation with its content' (*Enz.:* §172Z). Thus, to use Hegel's own example, the judgment 'The rose is red' will be correct just in case our representation, expressed in that judgment, agrees with its content, that is, just in case the rose that judgment is about is indeed red. Truth, for its part, 'consists in the agreement of the object with itself, i.e. with its concept' (*Enz.:* §172Z). In other words, an object (a house, living body, an action or a work of art) counts as 'true' just in case it satisfies certain

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criteria that define the concept, kind or type to which the object belongs.[4] Houses, for example, are the type of things whose function or end is to provide shelter to its inhabitants. A bad house will be bad or untrue in that it fails to meet criteria that characterize houses as members of the function kind to which they belong, for example, by having thin walls, leaks in the ceilings or being otherwise badly insulated.[5]

Truth, then, understood as the correspondence of an object with its concept, or of a thing with its kind or nature, is the most general concept of normative appraisal, which encompasses the more specific terms mentioned in the examples of judgments of the concept above: good, healthy, just or beautiful. Judgments of the concept characterize a thing or object as good (or healthy, just, beautiful or, in general, true) in the light of its satisfaction of criteria that define the kind or concept to which the thing belongs. As Hegel puts it: 'The predicates good, bad, true, beautiful, correct, etc. express that the thing is measured against its general concept […] and is, or is not, in agreement with it' (*WL*: 344/657–58).[6]

Two implications of Hegel's account of truth and judgments of the concept, as I have here sketched it, bear underscoring. First, the concept or kind to which a thing belongs serves as an 'ought', a normative standard or rule against which that thing is compared and accordingly judged to be good or bad: 'In [the] judgment [of the concept] the concept is laid down as the basis [*ist zugrunde gelegt*] […] it is an *ought* to which the reality may or may not be adequate' (*WL*: 344/657). Thus, normative evaluation for Hegel is internal or immanent in that it proceeds in accordance with criteria that are the object's own (*qua* member of its kind) and not in accordance with some external standard, including our or any other valuing creatures' interests or attitudes.

The second implication of our foregoing discussion that is worth emphasizing is this: According to Hegel's account, a thing (be it a house, action, living body or artwork) can be bad or untrue, and so fail to correspond to the concept to which it nevertheless belongs, without ceasing to exist altogether. In as much as it does not agree with, or correspond to, its own concept, a thing fails to 'agree with itself' (*Enz.*: §172Z) or exists in 'contradiction' (*Enz.*: §382Z), as Hegel puts it.

In the next section, I examine Hegel's account of normative evaluation as it applies to animal organisms. My treatment of Hegel's (somewhat scattered) discussion of the normativity of animal life will be guided by the following pair of questions, corresponding to the two implications of Hegel's theory of truth and normativity that I have just highlighted: In what sense is the normative evaluation of animal organisms internal or immanent, exactly? And how can an animal organism continue to exist as a member of its kind while failing to correspond to the concept or kind to which it belongs? In what sense, that is, can animals endure 'contradiction'?

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II. Animal organisms

II.i. Formation, assimilation, reproduction

In this section, I aim to understand what makes animal organisms appropriate subjects of normative evaluation, according to Hegel. As I noted above, in the course of my discussion, I contrast my interpretation with recent work on the topic by Rand and Alznauer. I begin, however, by offering a summary of Hegel's general account of animal life in the final chapter of his *Philosophy of Nature*. This summary will provide the necessary background for our more detailed discussion of the normativity of animal life in the remainder of the paper. More specifically, as we will later see, two of the features by which Hegel characterizes animals, namely, their teleological structure and their membership in a species via reproduction (what Hegel refers to as the 'genus process'), explain what it is that makes animal organisms appropriate subjects of normative evaluation.

Very generally, animals for Hegel are complex causal systems whose parts and whole are reciprocally determined, in particular, each, parts and whole, are simultaneously cause and effect. As Hegel is reported as saying: 'As animal life is its own product and purpose, it is simultaneously both end and means' (*Enz.*: §352Z). The individual parts of an animal organism (for example, its liver or heart) are causally dependent on other individual parts, and ultimately on the organism as a whole, for their proper functioning. Animal life is thus a means to the proper functioning of its parts. But animal life is also an end, as we have just seen in Hegel's quote. The individual parts are also causally responsible for the subsistence of the whole. By cleansing our blood, for example, our liver causally contributes to the survival of the human organism to which it belongs.

To be sure, not only animal but also vegetable organisms seem to exhibit this two-way causal structure. Plants and their parts appear to be simultaneously cause and effect, or means and end. It is thus worth considering what status Hegel awards plants vis-à-vis animals. As I understand it, the main difference between plants and animals, on Hegel's account, is that (a) plant parts can often subsist apart from the whole to which they originally belong and (b) the causal role of some part within the whole can frequently be carried out by other parts, thereby guaranteeing the continued existence of the whole. I take Hegel to be making each of these two points respectively, for example, when he writes:

> [a] [T]he process whereby vegetable subjectivity articulates and sustains itself is one in which it […] falls apart into several individuals. The singleness of the whole individual is simply the basis of these [several individuals], rather than a subjective unity of members; the part—bud, branch, and so on, is also the whole plant […] [b] [T]he differentiation of the organic

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> parts is merely a superficial metamorphosis, and the one part can easily assume the function of the other. (*Enz.:* §343)

Hegel makes the first point, (a), perhaps more clearly in the introduction to the 'Organics' section of the *Philosophy of Nature*:

> [E]ach plant is merely an infinite number of subjects, and the connection whereby these subjects appear as a single subject is merely superficial. The plant is unable to maintain its power over its members, for they detach themselves from it and become independent. (*Enz.:* §337Z)

From (a) and (b) it follows that at least some vegetable organisms are in fact not teleological systems in the sense defined, that is, they are not such that their parts are causally dependent on the whole and vice versa. From (a) it follows that some plant parts do not causally depend on the whole. From (b) it follows that some plant wholes do not causally depend on any of their specific parts (since 'one part can easily assume the function of the other'). In as much as Hegel's account of the normative evaluability of animal organisms relies on their teleological organization, as we will see below, it would also seem to follow from (a) and (b) that not all plant specimens are susceptible of evaluation as normatively sound or defective. Accordingly, if my remarks about Hegel on plants are interpretively on the right track, then it would seem to be a mistake to group together plants and animals and claim that they are both similarly evaluable (or unfit to be subjects of normative evaluation).[7]

Having offered these remarks about the status of plants for Hegel, I return to his discussion of animal organisms. In addition to characterizing them in general terms as teleological systems, Hegel further describes animal organisms in terms of three specific end-directed processes or operations: (i) the 'shape process' or 'formation process [*Gestaltungsprozess*]', (ii) the 'assimilation process' and (iii) the 'generic process' or 'genus process [*Gattungsprozess*]'. All animals are subject to these three kinds of processes, according to Hegel. Hegel describes this 'triad of processes' as follows:

> [T]he *first* of these [processes] is the universal process, the process of the vegetable organism within itself, the relation of the individual to itself […] In the *second process,* [the] living being does not contain its other, but faces it as an external independence […] This is the process which is specified in the face of an external nature. The *third* process is that of the genus, and unites the first two. This is the process of the individuals with themselves as genus, or the production and preservation of the

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> genus. In it, the genus is preserved by the destruction of individuals, as the production of another individual. (*Enz.:* §346)[8]

The first, 'shape process' consists of the set of operations of the nervous and other physiological systems of the animal organism. More generally, the 'shape process' is that process (or set of processes) whereby the animal relates to its own body parts and operations, without consideration of these parts' interaction with the animal's external surroundings. 'The first process', Hegel writes, 'is that of the *self-relating* organism' (*Enz.:* §352, emphasis added). By contrast, the second, 'assimilation process' is comprised of both the 'theoretical' operations (sensations) and the 'practical' operations (for example, breathing or nourishment) whereby the animal relates to its external surroundings. In this second process, '[t]he organism is […] considered […] as idea which relates itself *to its other*, its inorganic nature' (*Enz.:* §352, emphasis added). Finally, the *Gattungsprozess* consists at least in part in the production, by some exemplars of an animal species, of other specimens of the same sort or with the same structure. This third process represents the 'unity' of the previous two—as Hegel notes in §346 above—in that the animal 'relat [es] to an other which is itself a living individual, and thereby *relat*[*es*] *itself to itself in the other*' (*Enz.:* §352, emphasis added). To bring together the different pieces of Hegel's description of animal organisms in a single statement: For Hegel, animals are causal systems that are teleologically structured, both (i) internally or physiologically and (ii) externally or in their relations to the environment, so as to guarantee their own survival or individual preservation as well as (iii) their reproduction or the preservation of the species.

II.ii. Normativity, teleology and the Gattungsprozess

Against the background of Hegel's account of animal life, I now summarize Rand's and Alznauer's views, against which I pit my reading of Hegel on the normativity of animal life below. As I noted at the outset of the paper, Rand maintains that animal organisms are not appropriate subjects of evaluative judgments or 'judgments of the concept', according to Hegel. By way of an initial defence of his view, Rand notes that '[w]hen considering *non*-evaluative judgments, [Hegel] routinely uses examples from organic (and also inorganic) nature', whereas 'when he turns to consider evaluative judgment […] he stops using natural examples altogether' (Rand 2015: 74). Rand believes that the pattern he claims to find in Hegel's examples is not fortuitous. He argues that lack or defect (*Mangel*) is a feature of animal organisms generally. All animal organisms undergo some *Mängel* (for example, feelings of thirst and hunger), in response to which they assimilate or take in part of their environment. This process of assimilation, as we have seen above, is one out of the 'triad of processes' that makes up animal life as such. Since *Mangel*, as just described, characterizes healthy, well-functioning organisms, it

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cannot be a sign of badness or normative failure, Rand says. Now, he admits: 'It would be obtuse to deny that there is a difference between getting thirsty and losing a limb' (2015: 78). Nevertheless, he adds that 'whatever that difference may be, it is not relevant here' (2015: 78).[9] As I show below, reflection on the role of the *Gattungsprozess* in animal life reveals that there is a difference between, say, a thirsty and a three-legged gazelle, for Hegel, which Rand does not consider but is very relevant here.

Unlike Rand, Alznauer holds that animal organisms are appropriate subjects of evaluative judgments, in Hegel's view. Alznauer's focus is not narrowly on the normative evaluability of animal organisms. His aim is rather to provide an overview of Hegel's theory of normativity generally, both natural and spiritual. Nonetheless, he is adamant (contra Rand) that both plant and animal specimens can be appraised as normatively sound or defective in as much as they exhibit or lack features that characterize the species or kind to which they belong. Alznauer rightly notes that 'Hegel does not think that *every* divergence of the organism from one of the general characteristics of its species counts as a defect' (Alznauer 2016: 204). What matters for the purposes of the normative evaluation of organisms are the 'essential' features or characteristics. Alznauer continues:

> We pick out which of the given organism's features and capacities are essential to it by seeing which features play an important role in the way organisms of that kind grow, assimilate, and reproduce. (2016: 204)

No doubt due to the scope and aim of his essay, however, Alznauer leaves it underexplained what features play an 'important role' in animal life and thus are essential. How do we determine what features play said 'important role'? And what makes for an 'important role', anyway? Alznauer tells us this much: We should look to the 'necessary determinations of the concept of life itself' (2016: 204), which Hegel spells out in terms of the three processes I outlined in the previous subsection. But is this inquiry into the 'necessary conditions of the concept of life itself' an a priori enterprise? What role does experience play in the normative evaluation of animal specimens? And are each of those processes of life equally relevant to picking out the essential features of an animal species? Or does one of the processes have some privileged status in this regard? Below, I answer the latter question in the affirmative and identify the *Gattungsprozess* as that process. I thus supplement Alznauer's view by arguing that we can extract from Hegel's discussion of the 'genus process' a principle for identifying a species' essential features, which serve as the criteria by which to evaluate specific members of that species. I also indicate the role that empirical observation plays in Hegel's account of the normativity of animal life.

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Having summarized Rand and Alznauer's positions, I now sketch my interpretation of Hegel on the normative evaluability of animal organisms. To this effect, I begin by recalling the two general points I drew from Hegel's discussion of evaluative judgments at the end of Section I, namely: First, that the criterion or standard according to which a thing or object is normatively evaluated is internal to the thing evaluated, in particular, the criterion is to be found in that thing's own kind or concept and, second, that a thing or subject of evaluation can continue to exist as an exemplar of its kind while nevertheless failing to correspond to the concept to which it belongs.

That Hegel thinks that animal organisms are appropriate subjects of normative evaluation is, I believe, evident from some of Hegel's examples of judgments of the concept ('an ill body is not in agreement with the concept of life' [*Enz.:* §172Z]) as well as from his remarks about normative failure and success in the chapter on animal organisms in the *Philosophy of Nature*, where we read for instance:

> If one is prepared to admit that the works of man are sometimes defective, it must follow that those of nature are more frequently so […] In man, the basis of these defects lies in his whims, his caprice and his negligence, e.g. when he introduces painting into music, paints with stones in mosaics, or introduces epic genre into drama. In nature, it is external conditions which stunt the forms of living being… (*Enz.:* §370Z)[10]

In order to understand the precise sense in which animals are appropriate subjects of evaluative judgments for Hegel, I believe that we need to answer two questions (or sets of questions) about animal organisms, corresponding to each of the two points I have just reviewed: First, in judging an organism to be good or bad, sound or defective, in what sense are we judging it on the basis of an internal standard and not some criterion imposed upon it from without? Second, how is it that an animal organism—as Hegel puts it—can endure 'contradiction' or 'self-negation' in that it can fail to agree 'with itself, i.e. with its concept' (*Enz.:* §172Z)? That is, what makes it the case that organic nature (unlike its inorganic counterpart) can exist as a member of a kind or fall under a concept with which it fails to correspond? A first pass at these questions would presumably have it that their answer lies in part in the fact that animals are teleological systems. Although the presumption is correct, both answers are somewhat more intricate than what this bare appeal to teleology might suggest, as we will straightaway see.

I tackle the question about internal evaluation first. That the status of animal organisms as subjects of normative evaluation is very closely connected to their teleological structure is suggested by the following consideration: An organism is as it ought to be when its parts function properly, that is, when they benefit or advantage, or serve the ends of, the whole (at a minimum, self-preservation

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or survival). Indeed, it seems that inorganic nature (a pebble, for example) is not an appropriate subject of normative evaluation precisely because its parts are not teleologically structured, they have no ends or purposes that they can attain or fail to attain. Hegel seems to be expressing something like this thought about teleology and normativity when he writes:

> The organism is in a *diseased* state when one of its systems or organs is *stimulated* into conflict with the inorganic potency of the organism. Through this conflict, the system or organ establishes itself in isolation, and by persisting in its particular activity in opposition to the activity of the whole, obstructs the fluidity of this activity, as well as the process by which it pervades all the moments of the whole (*Enz.*: §371)

An organism is thus defective (or, more precisely, diseased) when one or more of its parts 'obstructs the fluidity of [the] activity [of the whole]', that is, as we might put it, when the functioning of those parts is not conducive but obstructive to the end or ends of the organic whole to which they belong.

Although teleology does certainly play a role in the normative evaluation of animals, the story I have told so far about benefit or conduciveness to the end of biological survival or self-preservation is not by itself sufficient to account for the ways in which we judge animal parts, and accordingly the organic wholes to which they belong, to be well or malfunctioning, normatively successful or defective. In particular, benefit by itself cannot account for the sense in which the evaluation of animals is internal or proceeds in accordance with those animals' own concept. To realize that the account of the normativity of animal life provided up to this point, based solely on the idea of advantage, must be incomplete, consider the question: Why is a three-legged gazelle (but not a four-legged gazelle that lacks wings) defective? The answer cannot rely on benefit or conduciveness to biological survival or self-preservation, for the possession of wings might well—let us imagine—be more beneficial or help gazelles more efficiently attain the end of self-preservation than any number of legs, three or four, in the absence of wings. For example, we might imagine that a winged gazelle would more quickly and safely escape predators than any of its three- or four-legged yet wingless counterparts.

One noteworthy feature of Hegel's remarks about the normativity of animal life in 'The Animal Organism' chapter of his *Philosophy of Nature* is that they occur more specifically in the context of his discussion of the *Gattungsprozess*.[11] By reflecting now more closely on the relation between teleology, on the one hand, and membership in a species via reproduction, on the other, we can understand how exactly the evaluation of organisms is internal or proceeds by comparing an object with its own concept (and is not a matter of judging it in accordance with some external standard). As we have seen, an animal is characterized by having parts that are

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structured in a purposive or end-directed way. To return to a previous example: The function of a human liver is to cleanse blood in order to help guarantee the survival of the organic whole of which it is part. A part of some specific organism, this particular human liver for example, owes its function to the role that parts of that sort play within the kind or species as a whole. More precisely, if human livers in general did not serve the function of cleansing blood, and in this way contributed to the biological survival of the species or kind, specimens or exemplars of that kind would not have managed to survive and reproduce to give rise to other exemplars with similarly functioning parts (human livers). In short, the existence of animal specimens endowed with parts with specific functions or purposes depends on the existence of prior organisms with similarly functioning parts and, more generally, on a species, kind or 'concept' of which those animal specimens are exemplars.

Against the background of the connection between the teleological structure of particular organisms and their membership in a kind via reproduction, we can now return to the gazelle example above. What is it, if not benefit or advantage alone, that makes a three-legged yet not a four-legged but wingless gazelle defective? And how is the verdict about these two gazelles the upshot of an internal evaluation of them, of a comparison of each of them with some internal standard? The answer is that the four legs (unlike the hypothesized wings) of any particular gazelle owe their existence and function to the existence of parts with that same role in other, prior gazelles, and ultimately and more generally, in the species or kind to which that particular gazelle specimen belongs. So a three-legged gazelle (but not a four-legged gazelle that lacks wings) is defective in as much as it lacks a feature without which its species or kind would not have been able to survive and reproduce to give rise to that specific three-legged gazelle. In other words, our three-legged gazelle specimen is defective, or not as it ought to be, in that it fails to exhibit a feature without which its kind or species (and so also our limp gazelle) would not have survived at all. The evaluation of animal organisms is internal in that it is thus the features or characteristics of each animal kind or species that set the standard or criterion by which we judge specimens of that very kind to be successful or defective. The features or, as Hegel puts it, the 'determinations' of a kind or 'concept' constitute a rule or 'ought' against which animal specimens of that kind are measured.[12]

On this reading of Hegel on the normativity of animal life, then, whether or not some feature of an animal species (for example, a certain number of limbs) qualifies as essential depends on the contribution that that feature makes to the survival and reproduction of the species. And an animal specimen is defective if it lacks an essential feature so characterized. The role that reproduction plays in Hegel's account of animal normativity, as I have here sketched it, is worth precisifying. Not all features of an organism that are causally dependent on the existence of ancestors with similar features will qualify as essential features, by Hegel's lights.

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The essential features of an animal organism are just a subset of those transmitted via reproduction, namely, those features of a species without which a current animal organism (defective or otherwise) could not have come about in the first place. What features figure within this subset, exactly, and how long it would take for a species to cease to survive and reproduce in their absence, are empirical and contingent matters and not ones that can be settled on the basis of a priori reflection on the concept of animal life alone.

Having addressed the first question I posed above, about internal evaluation, let us now turn more briefly to the question about contradictory existence. How is an existence in disagreement with itself so much as possible? How, more specifically, can animal organisms exist as exemplars of a kind with which they do not correspond? Inorganic nature is incapable of this feat. A stone, for example, cannot fail to correspond to its concept or kind (without ceasing to exist as a specimen of its kind altogether), it 'is unable to survive chemical decomposition' (*Enz.*: §371Z).

In dealing with this second question, the connection between the teleological structure of a current animal organism and the *Gattungsprozess* (that is, its membership in a species via reproduction) proves once again to be helpful. Consider an instance of gold. Its concept or kind consists in a certain chemical structure. If an alleged piece of gold does not correspond to its concept, or if it has a chemical structure other than that of gold, then the piece of metal in question is not gold at all. In §382Z of the 'Philosophy of Spirit', we read: 'What belongs to external nature is destroyed by contradiction; if, for example, gold were given a different specific gravity from what it has, it would have to perish as gold'. There is thus no defective gold. By contrast, an animal organism can be defective (in that it has a malfunctioning liver, say), and so fail to correspond to its concept, while nevertheless continuing to exist as a specimen of that concept or kind. What explains this difference between inorganic and organic nature? The answer, I propose, is this: A current animal organism with a malfunctioning liver is still an organism of its kind in that it exists, and its parts exist and have (or lack) certain specific causal roles, on account of its being the product of organisms of the same kind or species, a species that could not have survived and reproduced without its parts fulfilling certain causal roles (for example, without livers cleansing the organisms' blood).[13]

With the answer to the two questions I posed above, about internal evaluation and contradictory existence, on the table, I now situate my reading with respect to Rand and Alznauer's positions. Rand claims that there is no way, within the context of Hegel's *Philosophy of Nature*, to distinguish between defects like the feeling of thirst and the absence of a limb (in a limbed species). But in the light of our foregoing discussion in this subsection, there does seem to be such a way. The species-specific ways in which organisms assimilate the environment to overcome *Mängel* like thirst are part of what characterizes the kind or species in question and help

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guarantee the species' survival and reproduction. Not so in the case of a missing limb. The absence of a limb will not figure in the description of that creature's concept or kind and is not conducive but obstructive to the survival and reproduction of the species. More specifically, as I have said, a three-legged gazelle is defective in that it lacks a feature without which its kind would not have been able to survive, reproduce, and so give rise to that three-legged specimen. A healthy, four-legged gazelle, whether thirsty or not, is normatively sound in that it lacks no such features.

For his part, Alznauer, as we have seen, writes that essential features, namely, those that serve as a standard by which to appraise organisms as sound or defective, are picked out 'by seeing which features play an important role in the way organisms of that kind grow, assimilate, and reproduce' (2016: 204). The connection I have drawn between Hegel's *Gattungsprozess*, teleology, and normativity spells out Alznauer's position by providing a principled way of identifying the features that play that 'important role' in animal life, according to Hegel. A feature of an animal species or kind qualifies as essential just in case it is a feature without which the species as a whole would not have been able to survive and reproduce so as to give rise to further specimens of the species, defective or otherwise. It is thus only by viewing organisms through the lens of their reproductive process that we are able to identify the essential features of the species and, in the light of those features, normatively evaluate its members.

Having offered an account of Hegel on the normativity of animal life, and contrasted it with other interpretations, I close by considering the question: Where does Hegel's view of the functions of animal parts fit, if it does, within the debate on functions in the philosophy of biology over the past several decades? My goal in raising and answering this question is to further clarify Hegel's position, as I understand it.

The main camps within the debate on functions can be sorted into historical and non-historical accounts.[14] On the first, causal role account defended by Robert Cummins, in order to identify the functions of the parts of some animal organism we need not look any further than that current organism itself.[15] On this causal role view, the function F of some part P of a current animal organism is just whatever causal role P has within the more complex system that contains it. The causal role and so the function of our livers is *inter alia* to cleanse our blood. The causal role of the liver can itself be explained in terms of the causal roles of its component parts: lobes, ligaments, membranes. The heart has the causal role, and so the function, of pumping blood. But, as others have pointed out, the heart also causes other effects in the organism of which it is a part: for example, it produces a repeated thumping sound.[16] Is producing a sound thereby also a function of the heart? Many participants in the debate have wanted to resist answering this question in the affirmative, as the causal role account seems to commit us to do.

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A second, more recent non-historical view attempts to escape the counter-intuitive consequences of Cummins's position by restricting the function or functions F of some current organism part P to those causal roles performed by P that contribute to the self-maintenance of that current organism. Versions of this view are defended by Peter McLaughlin and Mateo Mossio, et al.[17] Roughly, part P has a function F just in case P contributes to its own existence as well as that of the organism to which it belongs.[18] Thus, even though both pumping blood and producing thumping sounds are effects caused by the heart, only the former of these two causal roles has a functional character, for only that former causal role contributes to the maintenance of itself and the organism of which it is a part.

Contrary to the two views I have just summarized, Ruth Millikan argues that in order to identify the function F of some part P of a current animal organism, we should not look at the organism's current features and causal dispositions but turn instead to that organism's history.[19] Succinctly, according to this historical account, a part of P of some current animal organism has a function F just in case that organism exists and is endowed with P in part as a result of its ancestors possessing P and having actually performed F in the past. Why this heart exists here now and has the function of pumping blood is causally explained by the contribution of hearts in the current, hearted organism's ancestors. Using this account of functions, Millikan moreover maintains, we can explain failure of purpose or defect in ways that the non-historical theorists seem to be unable to. Although some current animal organism may lack P or be unable to fulfil F, it is nonetheless a member of a species or function category defined by F, so long as the current organism is the descendant of other organisms endowed with P and that actually performed F.

Hegel's view, as I understand it, is similarly historical. As we have seen, a part P of some current animal organism has for Hegel the purpose or function that it does on account of the existence of past organisms with similarly functioning parts, which have reproduced to give rise to the current organism under consideration.[20] If the current organism lacks part P, or if P does not fulfil in it the causal role that it fulfilled in its ancestors, then the current organism is on that account defective. This negative appraisal of the current organism is internal in as much as it results from the comparison of some of its parts or features with a subset of the parts or features of its ancestors, namely, those features without which they would not have been able to survive and reproduce to give rise to the current organism.

III. Conclusion

In this paper, I have provided an interpretation of Hegel's account of the normative evaluation of animal organisms. The interpretation answers the following two

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questions, raised by Hegel's discussion of 'judgments of the concept': First, in judging a current animal organism to be sound or defective, in what way is our judgment internal and not based on some standard imposed upon it from outside? Second, in what way, exactly, can animal organisms (unlike inorganic nature) fall under a concept with which they fail to correspond? In a nutshell, the answer to the first question is this: A current animal organism is defective in as much as it lacks some features or is unable to perform certain functions, without which its species or kind would not have been able to survive and reproduce to give rise to that current organism under evaluation. The evaluation of animal organisms is internal in that it is thus the features or characteristics of each animal kind or species that set the standard or criterion by which we judge specimens of that very kind to be successful or defective. The answer to the second question is, again briefly, as follows: A defective animal organism is still an organism of its kind, or falls under its concept, in that it exists as a descendant of organisms of that same kind. These ancestral organisms are ones that could not have survived and reproduced without its parts performing the functions on account of whose lack or malfunction the current organism is deemed defective. By providing this interpretation of Hegel on the normativity of animal life, and situating Hegel's view so understood within the recent debate on functions in the philosophy of biology, I take myself to be offering an alternative to Rand and a supplement to Alznauer and Kreines's positions.[21]

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Notes

[1] See Alznauer (2016) and Rand (2015).

[2] Abbreviations:

Enz = Hegel, *Enzyklopädie der philosophischen Wissenschaften.*
The following translations have been used: *The Encyclopaedia Logic,* trans. T. F. Geraets, W. A. Suchting and H. S. Harris (Indianapolis: Hackett, 1991); *Hegel's Philosophy of Nature: Volume III*, trans. M. Petry (London: Allen & Unwin, 1970); *Philosophy of Mind*, trans. W. Wallace and A. V. Miller (Oxford: Oxford University Press, 2007).
VA = Hegel, *Hegel's Aesthetics: Lectures on Fine Art, Volume I*, trans. T. M. Knox (Oxford: Oxford University Press, 1975).
WL = Hegel, *Hegel's Science of Logic*, trans. A. V. Miller (New York: Humanities Press, 1969).

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The German version of Hegel's texts that I have employed is *Werke in zwanzig Bänden*, ed. E. Moldenhauer and K. M. Michel (Frankfurt: Suhrkamp, 1986). References to the *Encyclopedia* are given by providing the paragraph number (followed by 'A' or 'Z', if the reference is to the *Anmerkung* or *Zusatz*). References to the *Science of Logic* and the *Aesthetics* are given by providing the page number of the corresponding volume of the German edition.

[3] My aim here is not to delve into the technical details of Hegel's account of evaluative judgments or 'judgments of the concept', but to say just enough to set up my discussion of Hegel on the evaluability of animal organisms. For more on evaluative judgments, and the related concepts of truth and correctness, see, among others, Baldwin (1991), Stern (1993) and Halbig (2002).

[4] My discussion of truth and correctness is taken from Hegel's treatment of judgments of the concept in Part I of the *Encyclopaedia*. Later, in the section titled 'The Idea', Hegel writes: '[T]ruth means that objectivity corresponds with the concept—not that external things correspond with my representations (representations of this kind are just *correct* representations held by me as *this* [individual])' (*Enz.:* §213A). Elsewhere, Hegel refers to 'correctness' as 'subjective truth' and contrasts it to 'objective truth.' For example, in the Introduction to his *Philosophy of Nature*, we read: 'If subjective truth is the correspondence between representation and object, objective truth is the correspondence of the object, of the fact, with itself, so that its reality is in conformity with its concept' (*Enz.:* §246Z). This usage of 'truth' or 'objective truth', though technical, is echoed in ordinary English (and German) when, say, someone is a good or true friend or that some piece is a true work of art. Hegel himself notes the similarity with the ordinary usage: 'It is [the] deeper [objective] sense of truth which is at issue when we speak, for instance, of a "true" state or a "true" work of art. These objects are "true" […] when their reality corresponds to their concept. Interpreted in this way, the "untrue" is the same as what is sometimes also called the "bad". A bad man is one who is "untrue", one who does not behave in accord with his concept or his destination [*Bestimmung*]' (*Enz.:* §213Z).

[5] Artefacts like houses are internally evaluable as good or 'true' in the light of their satisfaction of features that characterize the functional kind to which they belong. The function that defines the kind or concept in question guides the activity of the producer, who if successful bestows a shape and arrangement on the artefact parts that render the whole 'true'. Apart from the producer's activity, however, the components of a house (e.g., stones, planks of wood, etc.) can serve any number of purposes other than that of providing shelter. This is not so in the case of animal organisms, as will become clear in the next section. The causal structure of an animal organism is not the result of some external purpose, and the shape and arrangement of its components does not depend on the conscious activity of a creator. Of the difference between artefacts and living organisms, Hegel is reported as saying: 'The particular parts of a house, for example, the individual stones, windows, etc., remain the same, whether they together form a house or not; their association is indifferent to them and the concept remains for them a purely external form which does not live in the real parts […] The members of an organism, on the other hand, do likewise possess external reality, yet so strongly is the concept their own indwelling essence

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that it is not impressed on them as a form merely uniting them externally; on the contrary, it is their sole sustainer' (*VA*: 163/121).

[6] On the concept of (objective) truth that is relevant to my purposes in this paper, the bearers of truth are material things: a house, a work of art, or a living body. But there are at least two other Hegelian usages of the concept of truth on which this is not the case. According to the first such usage, the bearers of truth are pure concepts, categories or 'thought-determinations'. A 'thought-determination' is true—Hegel tells us—just in case it 'agree[s] […] with itself' (*Enz.*: §242Z). This agreement is now not a matter of conformity between an object and its concept but consists in the absence of contradiction within the 'thought-determination' or category itself—an absence exemplified only by the final 'thought-determination' Hegel considers in the *Logic*, the 'absolute idea'. The second other usage of the concept of truth is pervasive throughout Hegel's corpus. He writes for example that 'becoming is the truth of being and nothing' (*Enz.*: §88), that 'the truth of consciousness is self-consciousness' (*Enz.*: §424) or that 'ethical life is the truth of subjective and objective spirit itself' (*Enz.*: §513). Very roughly, by statements of this form, 'X is the truth of Y', Hegel means that Y is somehow incomplete without X or that X is necessary for Y.

[7] See Alznauer (2016: 202). On the two points I have made about plants, (a) and (b), see Haase (unpublished). See also Stone (2018), who writes for example: '[T]he entire set of functions specified by the whole is in principle performed by each part [of the plant]. It may seem that the parts of plants are functionally differentiated: leaves absorb light, roots absorb moisture, stems distribute water and sap, and so on. But each part can, if cut from the whole, take on any of the other functions and undergo a transformation in its material structure to support this. Branches, for instance, can be cut off and planted to become roots from which new plants grow' (2018: 217). My formulations of (a) and (b) are more tentative than Stone's claims in this passage, since it is not the case that all and only vegetable organisms are such that any one of their parts can perform the role of any other and that any part of the organism can continue to exist independently upon being separated from the whole. Not all plant parts are capable of this feat, whereas some parts of some animals (flatworms, for example) are. The general lesson to draw from this latter point is, I believe, that the difference between plants and animals cannot be, on Hegel's account, a hard and fast one.

[8] I cite this passage from Hegel's account of plants only because it strikes me as comparatively clearer than others. Similar statements of this 'triad of processes' can be found in the chapter on animal organisms (specifically, §352 and §352Z). For discussions of the material in Hegel's logic, see *Enz.*: §§217–22. For more on the 'triad of processes', see, in addition to Alznauer (2016) and Rand (2015), Khurana (2013: 175ff.) and (2017: 343ff.) and Brinkmann (1996: 145ff.).

[9] Rand (2015) considers and dismisses two attempts to distinguish between thirst and the loss of a limb: '[Need and damage] may seem to differ causally; it may seem that a dog gets thirsty through its own activity and loses a leg through the imposition of an external force. But a dog can get thirsty by being locked in a hot car, and what happens when it is hit by a truck (or cut by a vet's bone saw) is determined by its body's constitution and its response to trauma. Alternately, need and damage may seem to differ in frequency or statistical likelihood; all dogs get

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thirsty, but not all get hit by trucks. Yet for the analysis of their form, frequency is wholly irrelevant. What matters is the way in which both damage and need figure in the animal's activity of bringing about its continued individual life, and in this respect they are the same' (2015: 78).

[10] If Rand was right about defect and animal life, then one would expect this passage to say that nature is not just more frequently but always defective, and that external conditions do not stunt but enable or facilitate 'forms of living being' (by offering animal organisms the opportunity to overcome the defect or lack that defines animal life as such).

[11] On the connection between teleology and the *Gattungsprozess*, see Kreines (2013: 138–39), reprinted with slight revisions as Kreines (2015: 96–97). In the remainder of the paper I take myself to be expanding on Kreines's discussion in those pages.

[12] In §370Z of the *Philosophy of Nature* we read: 'The general determinations must be made to rule […] and the natural forms compared with them. If the natural forms do not tally with this rule, but exhibit certain correspondences, agreeing with it in one respect but not in another, then it is not the rule, the determinateness of the genus or class etc. which has to be altered. The rule does not have to conform to these existences, they ought to conform to the determinateness, and this actuality exhibits deficiency in so far as it fails to conform'.

[13] A question that arises in this vicinity is: How far can a thing's failure to correspond to its concept extend before it stops belonging to that concept altogether? That is, how defective can an organism be before it stops counting as an instance of its kind? I do not know of a passage in which Hegel answers this question in a clear and succinct way. Given our own discussion in this section, however, I suggest that his answer would go roughly along the following lines: An organism (no matter how defective or malfunctioning) counts as a member of its kind so long as it is brought about as the result of the reproduction of other members of the species.

[14] For further discussion of the views I consider here and others, see Garson (2016).

[15] See Cummins (1975).

[16] See for instance Millikan (1989).

[17] See McLaughlin (2001) and Mossio et al. (2009).

[18] Mossio et al. (2009) spell out this view by arguing that, in order for part P of some current organism to have function F, that part P must contribute to the self-maintenance of that organism and the organism must be organizationally closed and differentiated into parts that perform different causal roles.

[19] See Millikan (1984), especially Chapter 1, and (1989). See also Neander (1991).

[20] According to Hegel, however, it is an organism's reproductive past (not natural selection or its evolutionary past) that explains its possession of some part P with a purpose or function F.

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