

The Feebleness of the Concept in Nature
A Challenge to Conceptual Realism?

Robert Stern and Leonard Weiss

I.1 Introduction

Tackling issues in philosophy can sometimes feel like trying to get rid of a bump in the carpet – no sooner do you smooth the carpet down in one place, than a similar bump appears elsewhere. It could be argued that this is the situation with regard to debates about Hegel’s idealism. In response to claims that Hegel is a kind of Kantian idealist according to which reality has a structure imposed on it by our ways of thinking, conceptual realists have argued that Hegel takes that structure to be inherent to the world itself, maintaining instead that on Hegel’s account, individuals are instantiations of substance universals such as “horse” or “human being” which we come to know but which belong essentially to those individuals in their own right. Thus, it is claimed, Hegel is closer to Aristotle than he is to Kant, as he is an idealist not because he thinks we bring form to matter but because he recognizes the reality of conceptual structures such as laws and universals in the world, making his idealism a kind of anti-materialism that is also a type of realism, as it is in Plato and Aristotle.¹ However, critics of this conceptual realist reading have then countered that when we look at his philosophy of nature, Hegel speaks about the “feebleness of the concept in nature,” which seems to allow for a good deal of indeterminacy in the way individuals are classified into kinds; and this then appears to reintroduce a role for cognitive subjects to impose an order onto nature as they see fit, rather than to uncover an order that is already there – suggesting that a more Kantian reading of Hegel’s idealism might be right after all. So the bump in the carpet comes back.

¹ For a brief characterization of conceptual realism with further references, see Redding (2020, chapter 2.4) and Kreines (2015, 22n37). This reading of Hegel is also discussed in Stern (1990, 2009). Further examples of conceptual realist readings are deVries (1988, 1991), Westphal (1989, 2003), Stern (2013), Houlgate (2006), Kreines (2006, 2008), and Yeomans (2012).

It is this debate that we focus on in this chapter. We question whether the argument really works: From the fact that Hegel allows for limits to the taxonomic project, does it follow that the conceptual realist's interpretation of his position is flawed? And if this is the case, is the nominalist reading then correct, allowing for a more constructivist account of the natural order?² We begin by saying a little more about the conceptual realist reading and how it is said to differ from the Kantian one (Section 1.2). We then turn to consider how Hegel's account of the classification of nature in the *Phenomenology* and Philosophy of Nature has been used to raise problems for the conceptual realist reading (Section 1.3). We finally suggest how in fact nothing in what Hegel says about the problems in classifying nature threatens that reading, and everything he says about those problems can be made compatible with it (Section 1.4), as can his talk of the "impotence" of the concept in nature (Section 1.5). Of course, this is not a complete vindication of that reading – but hopefully it does enough to smooth out this particular bump.

1.2 Flattening the Bump: Hegel as a Conceptual Realist

As its name suggests, conceptual realism is a form of realism, in the sense of taking fundamental aspects of what there is to be mind-independent; but it is also a form of idealism, as what is said to be mind-independent in this way includes concepts or ideas, not merely what is material. This approach to Hegel then explains his important distinction between subjective idealism (which he associates with Kant, among others) and his own objective idealism as hinging on this issue: Whereas the former takes the cognitive subject to be the source of the order we find in the world, the latter treats that order as inherent to the world itself, which we uncover through our inquiries – but this still counts as a form of *idealism*, as what that order involves is not mere matter but matter informed by various conceptual structures, such as laws and kinds (what Charles S. Peirce was later to call "real generals").³ These structures are ideal because epistemologically they are not immediately accessible in experience but require thought and inquiry to be revealed, while metaphysically they are not material but rather structure matter. While conceptual realism could take a Platonic

² We are using the term "nominalism" to refer to the view that universals are (1) mind-dependent concepts and therefore (2) do not carve nature at its joints. In the contemporary literature "nominalism" can be used more narrowly just to refer to the view that universals do not exist either in the world or in the mind. "Conventionalism" (or "constructivism") can be used as a label for (1) and/or (2) in this literature, whereas both these aspects are incorporated under nominalism as we understand it in this chapter.

³ For the parallels between Hegel and Peirce here, see Stern (2009, 239–68).

form, placing what is ideal outside the world, it is argued that Hegel's conceptual realism is more Aristotelian, locating these ideal structures within it – so, for example, the natural kind of animal requires to be instantiated in individual animals (cf. *Enc.* 1BD §24 A; *Enc.* §367). Hegel's position on this issue is said to be expounded in his account of the concept in the *Logic* and its dialectical exposition (*WL GW* 12: 32–52/*SL* 529–49) of the categories of universality, particularity, and singularity.⁴

Focusing now just on the case of natural kinds, as this is the one most relevant to this chapter, it is suggested that Hegel adopts a variety of related arguments to defend his conceptual realism with regard to them, which might most simply be understood as arguments directed against a nominalist who disputes the mind-independent existence of such kinds. The aim is to show that the nominalist, due to their denial of objectively existing natural kinds, cannot account for the very individuals which they make central to their account. On this reading, Hegel is committed to three central arguments: Unless individuals exemplify kinds (1) there cannot be individuals at all; (2) there can be no necessary truths about individuals; and (3) there can be no normative truths about individuals.⁵

Given that all these arguments seem to be found in Hegel and given that they all appear to point toward conceptual realism, and given also that Hegel raises objections against various other forms of idealism (such as Kant's) which cannot be elaborated here, this then explains why conceptual realism as characterized here has arisen as a significant option in recent considerations of Hegel's position.

1.3 The Bump Comes Back: The Febleness of the Concept and the Case for Nominalism

However, a number of recent publications (Bowman 2013; Wolf 2018; Lindquist 2020) question the adequacy of conceptual realist readings of Hegel by appealing to his philosophy of nature. In particular, it is claimed that Hegel's emphasis on the "febleness of the concept" in the realm of animal life warrants the conclusion that he treats kinds not as objectively existing universals but as representing more or less artificial boundaries,

⁴ For consistency with the translation by di Giovanni in *SL*, we use "singular/singularity" for "*Einzelnes/ Einzelheit*" and "concept" for "*Begriff*." Throughout translations have been modified where necessary. Where reference is made to the *Encyclopaedia*, we have indicated the § number of the *GW* edition (*Enc.*) as well as the volume and page number of the relevant English translation (*Enc.* 2P, *Enc.* 1BD). Since *GW* 13, 19, 20 (= *Enc.*) omit the Additions/Zusätze, we have cited only the translation when quoting from this material. For comparison with the German text of the Additions, readers are advised to consult MM 8–10 or *GW* 23.3, 24.3.

⁵ For further details of these arguments see Stern (2009, 354–58).

which in turn suggests that Hegel's notion of natural kinds is not robust enough to do the work that the conceptual realist requires it to do, showing that he is closer to nominalism. We now look at some of the relevant material in Hegel and the case that the nominalist builds on it.

1.3.1 *Hegel on the Feebleness of the Concept in Nature*

The context in which Hegel discusses the problematic status of natural kinds is a sort of modern "*Universalienstreit*" among then contemporary biologists.⁶ The debate was about whether biological kinds and species make up a "natural system" which cuts nature at its joints, or if instead they are just useful constructions amounting to an "artificial system" of classification. In discussing these accounts Hegel highlights difficulties in establishing a natural system through the definition of generic terms: On the one hand it is hard to find properties that are unique to a specific kind so that they are exemplified exclusively by members of the kind. For example, while most fish do have fins, defining fish by virtue of this property makes whales a member of this kind, which is implausible regarding their similarities to land animals in other respects. On the other hand, it seems hard to find any list of properties that are exemplified by *all* members of a kind because in nature there are deviant cases ("monstrosities").

The point made by Hegel's nominalist readers is that the resulting difficulties in achieving a natural system are not merely the result of poor science but a consequence of the ontological structure of natural things. The fact that the kinds defined by scientists do not map neatly on to the natural world seems to suggest that nature is not governed by objectively existing universals, that there are no *natural* kinds to be found but only more or less useful constructions to be made. And indeed, on several occasions, Hegel appears to concede to nominalism what he calls the "feebleness of the concept in nature," thereby suggesting that in nature the "moments" of the concept (universality, particularity, and singularity) come apart.

For instance, with reference to the deviant instantiations of animal life mentioned earlier, Hegel says that there "are of course animals which cannot be clearly classified; the reason for this lies in nature's not having the power to remain true to the concept, and to coalesce neatly with the determinations of thought" (*Enc.* 2P §370 A, 3: 187).⁷ The idea that

⁶ On this debate cf. Mayr (1982, 172–85), on Hegel's reception cf. Heuer (2009).

⁷ The section listed as §370 in the English translation (*Enc.* 2P) corresponds to §368 in the German edition (*Enc.* GW 20 viz. MM 9 for the Addition).

natural objects – by their very nature – are incompatible with a full realization of the concept not only leads to some isolated hard cases for taxonomists; rather, the division into kinds is compromised as a whole, because in nature the order that the concept suggests is afflicted by contingency. As Hegel points out, this is especially true of “the animal world” which is

perhaps even less able than the other spheres of nature to present an immanently independent and rational system of organization, to keep to the *forms* which would be determined by the concept, and to preserve them in the face of the imperfection and mixing of conditions, against mingling, stuntedness and intermediaries. The feebleness [*die Schwäche*] of the concept in nature in general, not only subjects the formation of individuals to external accidents, which in the developed animal, and particularly in man, give rise to monstrosities, but also makes the genera themselves completely subservient to the changes of the external universal life of nature. (*Enc.* §368 R/*Enc.* 2P §370 R, 3: 179)

This basic conception of nature as *external* to a full realization of the concept is also conveyed in the *Science of Logic*:

This is the impotence [*die Ohnmacht*] of nature, that it cannot abide by and exhibit the rigor of the concept and loses itself in a blind manifoldness void of concept. We can *wonder* at nature, at the manifoldness of its genera and species, in the infinite diversity of its shapes, for wonder is *without concept* and its object is the irrational. It is allowed to nature, since nature is the self-externality of the concept, to indulge in this diversity. (*WL GW* 12: 39/*SL* 536)

According to the nominalist interpretation mentioned earlier, these passages suggest that Hegel is no conceptual realist regarding natural objects; on the contrary, it is argued, Hegel explicitly embraces a form of nominalism according to which the attribution of kinds to nature is the result of our subjective activity, rather than a matter of “reason in the world”:

We want to know the nature that really is, not something which is not, but instead of leaving it alone and accepting it as it is in truth, instead of taking it as given, we make something completely different out of it. By thinking things, we transform them into something universal; things are singularities however, and the lion in general does not exist. We make them into something subjective, produced by us, belonging to us, and of course peculiar to us as men; for the things of nature do not think, and are neither representations nor thought. (*Enc.* 2P §246 A, 1: 198)

This and the other passages quoted here form an important background for the new nominalists, who argue that the complete interpenetration of reason and world which Hegel advocates cannot be meant to apply to the sphere of nature. We now turn to how exactly critics use them to construct

an argument against conceptual realism and make the case for a Hegelian nominalism.

1.3.2 *The Case for Nominalism*

Starting from Clark Butler's "view that Hegel is a conceptualistic nominalist, not an essentialist" (1985, 125), Brady Bowman argues that it "may well be that substance-kind universals like 'lion' do not in fact exist *in re, pace* Stern and Aristotle" (2013, 144). While Bowman concedes that Hegel is not "a nominalist in the traditional sense," he does maintain that "the robust existence of universals like 'lion' or 'rose' is compromised by metaphysical deficiencies in the finite sphere of nature. Nature falls short of the concept partly owing to its poor nomological behavior, which in turn conditions the degree to which real universals are present and identifiable in it" (Bowman 2013, 145). Similarly, Wolf (2018) constructs an argument against conceptual realism from Hegel's interpretation of the ontological stature of nature. Conceptual realists, Wolf argues, claim that the Hegelian concept somehow *constitutes* things – either as a monist source that "deploys" finite reality (Taylor 1975, 300), or as an inner essence that renders things explicable (Kreines 2015, 7–12 and *passim*), or as a "substance-kind" that accounts for the structure of the object (Stern 1990, 73–76). But given this commitment, how do conceptual realists make sense of Hegel's claim that in nature things do not fully comply to their putative inner, conceptual core? For instance, "on Kreines's essentialist account, it is curious why the ontic concepts that are supposed to function as explanatory reasons should fail to account fully for things. It seems destructive of the realistic view of essences to put a distance between the essence and the thing or to find a defect on the part of the essences themselves" (Wolf 2018, 343). Thus, Wolf concludes, either we have to see Hegel in more Platonic terms and admit that universals are not really immanent to things but have some sort of separate existence; or we have to admit that the correct location of universals is the mind, not the world, as then "it is easy to see why some part of reality might fail to conform, since the concept itself does not stand in an originaive relation to that reality" (Wolf 2018, 343).

Most recently, Lindquist expresses his contention that "uses of Aristotle to illuminate Hegel [are] problematic" because "Aristotelian 'natural kinds' take the form of dichotomous divisions of each higher genus into lower species" while "Hegel's taxonomic categories explicitly *overlap*" (Lindquist 2020, 431). Lindquist acknowledges that according to Hegel, the

definition of kinds must somehow be rooted in “differences which matter to the animal” (Lindquist 2020, 440). But he argues that this does not constitute a commitment to an immanent, ontological structure in nature but merely refers to an ontologically noncommitted adequateness of sortal terms. In face of these considerations Lindquist argues that Hegel is neither a nominalist nor a realist but should be “properly thought of as a sort of ‘species-constructivist’” (Lindquist 2020, 439). But while Lindquist stays neutral on the thorny question of Hegel’s realism, he builds his “constructivist” reading on the same concern about the “impotence of nature” raised by nominalist readers and concludes that according to Hegel “we have to construct our systems of nature because nature herself is too weak to do so” (Lindquist 2020, 439).

Thus, while the opposition to conceptual realism comes in two flavors – an ontologically committed nominalist one and an ontologically neutral constructivist one – we have seen how both variations gain their thrust from Hegel’s appeal to the “impotence” and conceptual “febleness” of nature and his analysis of the difficulties involved in biological taxonomy. The challenge for the conceptual realist is then to demonstrate that these elements of Hegel’s theory are compatible with the interpretation of kinds as objectively existing, immanent universals, which is the aim of the subsequent sections of this paper.

1.4 The Realist Rejoinder: What Bumps?

We now consider the two central nominalist objections. First, on Hegel’s account there is no objective system of natural kinds to be found in nature, due to the “febleness of the concept” in the realm of animal life, which therefore consists in more or less artificial boundaries. Second, it therefore follows that no appeal to kinds can be made in thinking about the essential nature of individuals, in the way the conceptual realist claims. Our response to these challenges is twofold: In Section 1.4.1, we argue that, despite appearances, Hegel is quite positive about the possibility of finding a workable conception of kinds. In Section 1.4.2, we argue that nominalist interpreters reject conceptual realism on the basis of a misunderstanding concerning Hegel’s appeal to immanent universals. Moreover, by providing a more nuanced discussion of Hegel’s appeal to natural kinds, we demonstrate that the “impotence of nature” is indeed compatible with realism about universals in nature (Section 1.5). Thus, what appeared to be bumps will turn out to be mere shadows once examined in the light of further analysis.

1.4.1 *Finding Kinds in Nature*

While it is true that Hegel believes nature cannot perfectly realize the concept, he also points out that some of the issues with finding a system in nature are homemade problems of then contemporary science. His extensive critique of the latter, in the *Phenomenology's* "Observing Reason" chapter, argues that the emaciated epistemology with which observing reason operates means it fails to properly theorize the knowable structure of natural objects and their relations.

Initially, approaching nature in the mode of observation and description seems to yield a theory-neutral representation of the object. However, as Hegel notes, the observing mind of a scientist also aims for *generality* in its findings.⁸ Thus it will "without further ado admit that it is in general not that much concerned with perceiving, and that, for example, the perception that the penknife lies next to this tobacco-box will not count for it as an observation. The meaning of what is perceived should at least be that of a *universal*, not a *sensuous this*" (*PhG* 139/*PS* 144). In fact, Hegel argues, the observational approach always already involves some sort of universality that cannot be traced in sensory impressions as such; for despite its predilection for the realm of "tasting, smelling, feeling, hearing, and seeing [. . .] it has no less essentially already determined the object of this sensing" (*PhG* 139/*PS* 144).

Thus, observing reason's characteristic denial of theory-ladenness doesn't change the fact that any description of an object always already deploys at least some basic universal ideas that are not immediately present in the sensory manifold of empirical material. While pretending to have an interpretation-free interest in the object, the observing mind always already processes perceptive input found in nature and makes a "distinction between the *essential* and the *inessential*" (*PhG* 140/*PS* 145). But in doing so, the allegedly neutral observing mind brings its own notions of distinction into the object and so betrays "that what is at issue essentially has to do at least as much with *itself* as it does with things" (*PhG* 140/*PS* 145). This, in turn, brings about a nagging doubt about the appropriateness of the knower's account of the object to the object's mind-independent reality: There is a "wavering back and forth about whether what is essential and necessary for *cognition* can also be said to be in *the things*" (*PhG* 140/*PS* 145; cf. *Enc.* 2P §246 A, 1: 201). According to Hegel this

⁸ As Hegel elsewhere puts it: "physics contains much more thought than it will either realize or admit" (*Enc.* 2P Introduction A, 1: 193).

hesitation is well justified for he suspects that the universals operational in the sciences of his time are indeed foreign to the so characterized, natural things.

Not only does the empiricist self-misunderstanding of science overlook its own use of universals; in as much as observation *does* involve the use of generic terms, the form of universality with which it works is also severely impoverished. This version of universality (which Hegel calls “abstract”)⁹ is generated through the selection of properties that are common to groups of objects. As Hegel makes clear, the appeal to such *abstract* universality is precisely what brings about the failure to capture the natural order. On the one hand, kinds usually have members that do *not* exemplify features that are statistically normal among the group (cats are usually furry but there are some furless specimens that are nonetheless cats). On the other hand, it is difficult to identify exclusive features exemplified by members of one kind only (cats are carnivore quadrupeds with retractable claws – but so are tigers and foxes). Consequentially, the procrustean method of dividing nature through abstract universals leads to a mismatch between the wealth of natural forms and the order attached to it by observers. In Hegel’s eyes, this mismatch occurs not because nature has no conceptual structure but because the concepts applied to it “silence the universality it has reached, and which set it back again to unthinking observing and describing” (*PhG* 141/PS 147).

A similar concern is at work in Hegel’s engagement with biological taxonomy in the *Encyclopaedia*. Here Hegel argues that most taxonomists of his time deployed the method of reducing essential characteristics of kinds to properties commonly shared among their members. In this way, he claims, taxonomists appeal to a form of generality that is alien to nature:

The method used by research which has as its object the classification of animals, is to look for the common element to which the concrete forms can be reduced, i.e., for a simple sensuous determinateness, which moreover is also an external one. There are no such simple determinations however. For example, one might accept the general concept “Fish,” as the common element of what one includes under this name when one thinks about it, and then enquire as to the simple determinateness or objective characteristic of fish. The conclusion to be drawn from this enquiry would be that fish swim in water, but as a number of land animals also do this, it would be insufficient. What is more, swimming is neither an organ nor a formation; it is a mode of the activity of Fish, and in no respect is it part of their shape.

⁹ In brief: According to Hegel, abstract universals are merely common to many instances, whereas concrete ones determine their own variations. For more on this distinction see Stern 2009, 143–76.

Simply as a universal, a universal such as fish is not bound in any particular mode to its external existence. If one now assumes that a common element must be present as a simple determinateness, such as fins for example, and such a determinateness is not to be found, classification will be difficult. In this classification, the features and habits of the individual genera and species are used as the basis and rule, but the untrammelled variety of life in this genera and species does not admit of any universal feature [*lässt aber nichts Allgemeines zu*]. (*Enc.* 2P §370 A, 3: 180)¹⁰

This last-mentioned universality, which Hegel says is not allowed for in nature, is the abstract universality used in observations and descriptions, which is statistical in approach and which overemphasizes the role of common properties. The corresponding genus-notions are much too rigid and cannot do justice to nature's complexity. However, it is important to recognize that Hegel is not saying here that *no* system of genera can be found in nature, as the nominalist might claim: For, he argues, a more sophisticated type of universal may be able to perform better and do without the overly sharp boundaries taxonomists seek to define. "Thus, a universal like fish" is being misunderstood if we were to make a list of observable features that are necessary and sufficient in order to define "X" as a fish and to exclude "Y" from the fishy kind. This approach fails because it deploys concepts that are too rigid for nature and so yields a crude and arbitrary "map of the world."

Thus, Hegel's point is directed not at universality per se but at the abstract universality achieved through the selection of common features which is inadequate for the type of generality sustained by living things.¹¹ More specifically, Hegel argues that the observable properties exemplified in an individual should be viewed as the result of an underlying *activity* which determines the kind to which the individual belongs. Universality that is "concrete" in this sense pertains primarily to the sort of life an animal lives and only secondarily to the properties it exemplifies in the course of doing so. It is important to note that this concrete universality is compatible with a wide range of qualities and cannot be reduced to any definitive list of properties. At the same time, individuals that share a similar type of inner activity and so live a relevantly similar life may indeed tend to have *typical* surface-properties. But the nature of their kind can be

¹⁰ In MM 9 this section is numbered as §368 Z, and the quotation comes from pp. 502–3.

¹¹ This is why care has to be taken with the passage quoted above (*Enc.* 2P §246 A, 1: 198): When read in context it becomes clear that Hegel is not endorsing a subjective view of universals but rejecting it as a one-sided option to which a realist account of universals is to be preferred.

expressed in different ways, so that any attempt to directly conclude from the resultant properties to the underlying genus-specific activity is bound to fail.

Moreover, Hegel thinks that in some respects biologists of his day did show awareness for this type of process- and activity-related universality. Most notably, researchers such as Carl von Linné and, to an even greater extent, George Cuvier took an interest in properties insofar as they are connected to the functional organization of living beings. That way, their approach can be seen as at least partly moving away from the purely observational interest in properties as convenient signs for knowers. What they are moving toward is, by contrast, an interest in how such properties matter to the living beings themselves characterized in this manner. Although Linné championed a version of the property-based account of classification criticized earlier, Hegel traces a “sound instinct” in his choice to take the distinguishing marks of kinds from the “teeth, the claws etc.” (*Enc.* §368 R/*Enc.* 2P §370 R, §370 R, 3: 178). Hegel finds this choice remarkable because, according to his interpretation, it betrays an implicit understanding of the functional roles of features and how they work toward the maintenance (“reproduction”) of an animal’s specific way of life.

As Hegel argues, kinds acquire reality not merely “in general” but through the individuals that are their members. Part of the activity of self-preservation that these individuals perform is that they relate to the world around them, such that they survive external influence without losing their characteristic form. This self-maintenance in the face of otherness is something animal individuals orchestrate through specialized parts of their bodies – such as their claws and teeth – that serve for fighting back predators or rivals, or for catching prey. Thus, Linné touched upon a relevant aspect of animal life when he suggested taking the distinguishing properties “from the animal’s weapons.” For it is through them that “that the animal, in distinguishing itself from others, establishes and preserves itself as a being-for-self” (*Enc.* §368 R/*Enc.* 2P §370 R, 3: 178).

It is significant to note that this is not only relevant for the problem of individuation but also for the question of how to differentiate kinds from one another. In order to know a kind as different from another one, Hegel suggests, it is important to know how its members are geared to supporting a typical way of relating to the outer world. In this respect, pointing, for example, to the claws of tigers and the beaks of birds is not entirely external to the inner activity or life of entities classified in that way. On the contrary, this choice betrays an “instinct” for how living organisms realize their kind in maintaining a characteristic way of being.

To be sure, Hegel's point is not that Linné had deliberately chosen this sort of functionalist, teleological approach. Rather his interpretation is that – despite Linné's faulty appeal to descriptive properties – an unconscious but “sound instinct” brought about the previously discussed focus on the self-preserving capacities of animals. A more explicit appeal to this train of thought is identified by Hegel in the works of Cuvier. Cuvier's big discovery, as Hegel sees it, is his holism about animal organisms. Cuvier turned away from the idea that isolated features could determine the kind of an individual and instead embraced the view that kind-specific characteristics can only be found in the whole composition of the organism: “particular importance has been attached to the *habit* [*Habitus*] of the individual forms, which has been regarded as a coherence [*Zusammenhang*] determining the construction of *every part*” (*Enc.* §368 R/*Enc.* 2P §370 R, 3: 178). This “coherence” points to the idea of a specific, underlying activity governing the exemplification and composition of features.

The reason why Hegel finds Cuvier's approach more interesting than conventional observation is its turn away from regarding observable properties as immediate expressions of a kind-specific essence. On the perspective Hegel reconstructs as Cuvier's, an observable feature of an animal is not informative as such but only in the context of an overall arrangement of characteristics that, in their totality, bespeak the kind-specific way of life of the individual. The idea that Hegel connects with these discoveries is that animal life follows patterns of organization that betray a purposeful activity, the life typical for a specific kind of animal.

On a fundamental level, he argues, there is a basic pattern common to all animal life. This so-called general type is characterized by the arrangement of functions toward self-preservation (“reproduction”). As such, the basic pattern of animal life, the Goethe-inspired “Urtier,” does not exist. What *does* exist, according to Hegel, are various modifications as particular ways of realizing the basic end of self-preservation: “There is only one animal type, and all animal difference is merely a modification of it. [. . .] The universal type which forms the basis cannot exist as such of course; but the universal, because it *exists*, exists in a *particularity*” (*Enc.* 2P §370 A, 3: 181–82). These modifications of the general type represent what we call kinds or species. Knowing their differences means knowing in what ways different types of animals achieve a self-preserving form through the coordinated (“harmonic”) arrangement of functional properties: “The organism is alive, and its viscera are determined by the concept, although it also develops entirely in accordance with this particularity. This particular determination pervades all the parts of the shape, and harmonizes them

with one another” (*Enc.* 2P §370 A, 3: 182). Studying the way animal organisms are built can lead to understanding in what specific way they achieve functional tasks (such as processing sensory input or reacting to external influences) in order to “reproduce,” that is, to preserve their way of life. Difference on the level of kinds arises through different ways of doing so.

More specifically, Hegel argues that there are two ways in which kinds differ in their specific modification of the general type. They exhibit (1) *different levels of complexity* in the sense that some have primitive “all-rounder organs” while members of more advanced kinds possess specialized organs for fulfilling sensory, nutritive, and other tasks. This type of modification reflects the *degree* of organization and lies at heart of Cuvier’s approach. On the other hand, there is also (2) *a modification of the general type according to the environmental conditions that animals face*. For instance, animals that live in water require a motor system that differs from that of animals that live on land. In fact, their whole bodies will have a different design that is required to maintain life under exactly these living conditions. This is the kernel of truth that Hegel grants to Linné’s idea that the claws have something to do with the characteristics of a genus: They reflect the individuals’ active engagement with their specific environment and as such their “outward orientation toward a determinate inorganic nature” (*Enc.* 2P §370 A, 3: 182). However, Hegel maintains that the relevant target is not an isolated feature like having such and such claws or legs etc. but the overall harmony of functions that such parts serve.

In conclusion, Hegel accepts two basic laws of division: (1) *the degree of complexity in the arrangement of functional properties* and (2) *the adaptation of such features to specific living conditions*:

Two principles are therefore effective in determining the difference between animal genera. The first principle of classification, which is closer to the Idea, is that each subsequent stage is merely a further development of the simple animal type; the second is, that the organic type’s scale of development is essentially connected with the elements into which animal life is cast. (*Enc.* 2P §370 A, 3: 181)

It is true that Hegel did not establish a biological classification along these lines; but what he does say about the principles of division is enough to see that a natural system would have to differentiate kinds according to the overall patterns of organization inherent to their members and acknowledge that the specific execution of such patterns is subject to contingent, external influence. This latter element, the role of contingency, explains

why the inner, concept-governed structure can never be realized in an unadulterated, ideal way. But at the same time, this is not to say that there are no inherent and knowable structures in nature at all. All Hegel says is that these structures cannot be grasped through exact lists of properties common to all members of a kind.¹²

1.4.2 *Kinds as Essences*

Hegel's conviction that abstract universality cannot be traced in nature is thus not to be confused with the nominalist claim that there are no universals to be found at all. As we have seen, while Hegel is critical of the prospects of a nonarbitrary taxonomy based on observable properties, he is more positive regarding taxonomies based on a deeper conception of universal kinds, so in this respect his position is compatible with essentialism. However, we now turn to address a second challenge, which claims that these kinds cannot be essential to individuals in nature, as it is impossible for them to be properly realized in this domain. In response, we show that Hegel's teleological account of immanent universals is compatible with nonideal instances of kinds and can still accommodate the idea that these kinds are essential to their instances even if these individuals realize them imperfectly.

The fact that in nature imperfection is ubiquitous may be regarded as a challenge to *any* account of objectively existing universals in nature – both abstract or concrete. As we have seen, it has thus been argued by nominalists that because things in nature fail to correspond to “their” kinds on a regular basis, it is hard to see these kinds as constituting immanent essences determining the reality of these things. What realists mistake for immanent essences are said to be just *our* more or less appropriate conceptions of things so that concepts “can conform to reality more or less” and things can be more or less appropriate to (what we stipulate as) their concepts.

But upon closer examination this does not constitute a convincing argument against conceptual realism. In order to understand why, we need to remind ourselves of the fact that Hegel's essentialism is teleological in character. As Hegel sees it, the genus-concepts forming the immanent universals of things are to be understood as “their determination and purpose” (*Enc.* §179/*Enc.* 1BD: 253; cf. *Enc.* 2P §245 A, 1: 196).

¹² In the context of contemporary philosophy of biology, this position would seem to resemble Richard Boyd's homeostatic property cluster theory of natural kinds (cf. 1991, 1999).

On this view, concrete, individual oak trees are seen as realizations of a preexisting goal-structure determined by the natural kind “oak tree.”¹³ As deVries (cf. 1988, 8) points out, such goal-directedness relies on the idea that the goal is, in some sense or other, ideal or good, a standard that ought to be realized in one particular way rather than another. But, as he also makes clear, this does not mean that such a standard is always perfectly met. Objective purposes, just like the intentional ends of agents, are approximations to a goal that is achieved in higher or lesser degrees of perfection. The teleological character of Hegel’s essentialism thus makes it possible to reconcile individual imperfection with the assumption of immanent universals as immanent essences: Such essences do not have to be realized in full perfection, rather it is intrinsic to their teleological character that they constitute immanent goals that can be achieved to various degrees of perfection (cf. *WL GW 12: 213–14/SL 712*).¹⁴ As Hegel himself puts it, the “finitude [of things] consists in the fact that their particular [character] may or may not be adequate to the universal” (*Enc. §179/Enc. 1BD: 253*). Such finitude, however, is not a sign of the absence of universals in nature. Quite to the contrary, natural things are regarded as finite precisely *because* they have inner standards which they can fail to live up to; and as mentioned earlier in Section 1.1, it was always part of the conceptual realist’s case that the substance universal provides a normative standard in this way, making this a feature of the position rather than a bug.

That being said, nominalist readers may want to retort that Hegel’s remarks about the “feebleness of the concept in nature” do not only pertain to individual imperfections but also to the very standards individuals (arguably) strive to realize. For example, Hegel writes: “The feebleness of the concept in nature [...] not only subjects the formation of individuals to external accidents [...] but also makes the genera themselves completely subservient to the changes of the external universal life of nature” (*Enc. §368 R/Enc. 2P §370 R, 3: 179*). It might appear that Hegel believes

¹³ Rejecting a Kantian account of purposes as mere aids for our reflection, Hegel says that to the extent that we recognize the inner goal structure of things as their universal content, “[t]his universality of things is not something subjective and belonging to us; it is, rather, the [...] objectivity, and actual being of the things themselves” (*Enc. 2P §246 A, 1: 200*).

¹⁴ This has also been noticed by Knappik, according to whom Hegel holds the view that the concepts of living things “come with standards that individual organisms and persons aim to live up to.” While “these standards are defined by sets of individually necessary properties [...] which are required for a full realization” of a kind-specific concept, Hegel, according to Knappik, “emphasizes” that individual exemplars “can fall short of such full realization” (Knappik 2016, 772).

that in nature not just individuals but also the standards themselves (genus-concepts such as “oak tree” and “lion”) are affected by the feebleness of the concept. This, and other remarks by Hegel in similar a spirit, can be accommodated within a nominalist account of universals. However, a nominalist interpretation is not the only way to make sense of what Hegel says here and given the overall textual evidence for conceptual realism it is not the most convincing one either.

In order to distinguish and then evaluate both readings, consider the following scenario. Suppose the essence of the kind “oak tree” includes that its members grow flowers in spring that develop into acorns when pollinated. Now suppose we find a tree that follows the overall organizational patterns of oak trees but won’t grow any such flowers. It may seem that this tree could either be classified as a poor example of the kind “oak tree” or as an instance of the different kind of “noak trees,” for which it is not essential to grow acorn-producing flowers in spring. In the latter case, it is not that the tree fails to realize the standard determined by the kind of oak trees; there is nothing wrong with it, it simply realizes different standards determined by a different genus concept.

Now, a nominalist would analyze this scenario as follows: Because nature does not contain either of the kind-concepts of oak trees or “noak trees,” it is up to us to decide whether we are faced with a poor oak or with something entirely different, such as a “noak tree.” Since nature is governed by contingency, the decision is a matter of the subject’s choice instead of the world’s own structure. However, from the standpoint of conceptual realism, things look different: Since the standards things aspire to realize are objective and immanent to natural things, it cannot be arbitrary whether something is a bad oak tree or rather a member of a different kind. For each and any such decision there must be an objectively correct way of analyzing some individual as either a defective instance of a kind or as a member of a different kind.

The question is whether such an appeal to a definitive division of natural kinds is compatible with what must be acknowledged as Hegel’s claim that biological kinds are affected by contingency. In order to make this decision we have to examine the way in which Hegel believes the concept is realized in nature, that is, his account of the idea of life. The concept, says Hegel in this context, “is the impulse that gives itself reality through a process of objectification” (*WL GW* 12: 180/*SL* 677). Life as a logical category describes such realization in terms of an unadulterated self-relation of the concept. In nature, however, this impulse is not purely conceptual but conditioned by contingent, for example environmental, factors:

As treated in the philosophy of nature, as the life of nature and to that extent exposed to the *externality of existence*, life is *conditioned* by inorganic nature and its moments as idea are a manifold of actual shapes. Life in the idea is without such *presuppositions*, which are in shapes of actuality; its presupposition is the *concept*. (WL GW 12: 180/SL 677)

For the type of beings that enjoy *natural* life, what it means to realize their immanent standard is not to realize a pure ideal but something more mundane: a compromise between the perfect self-relation of the concept and the conditions of contingent existence. What Hegel says in this passage implies that the realization of universals in nature has contingent presuppositions. But saying this is a way of explaining the existence of universals in nature, not a way of denying it. The fact that natural kinds are, in part, conditioned by contingent factors does not allow an inference to the claim that they are nonexistent. Far from claiming the absence of immanent universals in nature, Hegel puts forth the idea instead that the reality of these universals is conditioned by contingent factors. This view is also operative in the Philosophy of Nature where Hegel says that “one side of it [nature] is formed by the conceptually generated necessity of its formations and their rational determination within the organic totality, and the other by their indifferent contingency and indeterminable irregularity” (*Enc.* §250/*Enc.* 2P 1: 215). As he goes on, the “impotence of nature is to be attributed to its only being able to maintain the determinations of the concept in an abstract manner, and to its exposing the foundation of the particular to determination from without” (*Enc.* §250/*Enc.* 2P 1: 215). This shows that by the “impotence of nature” Hegel means that the concept is not fully autonomous in nature but not that it is absent from it. The true upshot of what Hegel says here is that the realization of universals in nature is a joint venture (so to speak) between the conceptual core of actuality and its contingent reality. But the fact that universals such as “lion” and “oak tree” are shaped partly by contingent factors does not make them unreal. Thus, there is no need to depart from what is generally Hegel’s view, namely that reason is a feature of the world and not just of our thinking.

This interpretation also aligns well with what Hegel intimates about the division of biological kinds. Considering the Janus-faced character of essence in nature, Hegel recommends the joint application of “[t]wo principles [...] in determining the difference between animal genera” (*Enc.* 2P §370 A, 3: 181). One principle directly concerns the universal form of animal life: The essence of an animal kind is characterized by a form of self-realization which constitutes its purely conceptual structure.

The other “is, that the organic type’s scale of development is essentially connected with the elements into which animal life is cast” (*Enc.* 2P §370 A, 3: 181). As such, the purposes that self-realize in nature are partly conditioned by contingent factors. Thus, it could be that some oak trees develop in a way that means they can no longer reproduce, in which case they would be defective members of the kind; or they could develop to have a different way to reproduce themselves, in which case it might make sense to classify them as “noak trees” instead. But either way, it would be wrong to conclude that this made the kind they exemplify either nonimmanent to the things it ensouls or unintelligible to knowers who thoughtfully observe them.

However, despite the responses we have given to the nominalist challenge, a concern may still remain surrounding Hegel’s talk of the “impotence” of nature and the way in which it is “concept-less” (cf. Wolf 2018, 342). In Section 1.5, we acknowledge that there is one further dimension of Hegel’s thinking here that we have not yet covered – but argue that while it does embody a criticism of nature from Hegel’s perspective, it is not incompatible with the essentialist commitments we wish to attribute to him.

1.5 The Infinite Manifoldness of Nature

As we have seen, one passage that is important to the nominalist reading of Hegel on nature is the one where he speaks of “the impotence of nature” in the *Science of Logic*; and this may seem all the more challenging for the conceptual realist when it is cited in full:

This is the impotence of nature, that it cannot abide by and exhibit the rigor of the concept and loses itself in a blind manifoldness void of concept. We can *wonder* at nature, at the manifoldness of its genera and species, in the infinite diversity of its shapes, for wonder is *without concept* and its object is the irrational. It is allowed to nature, since nature is the self-externality of the concept, to indulge in this diversity, just as spirit, even though it possesses the concept in the shape of the concept, lets itself go into pictorial representation and runs riot in the infinite manifoldness of the latter. The manifold genera and species of nature must not be esteemed to be anything more than arbitrary notions of spirit engaged in pictorial representations. Both indeed show traces and intimations of the concept, but they do not exhibit it in a trustworthy copy, for they are the sides of its free self-externality; the concept is the absolute power precisely because it can let its difference go free in the shape of self-subsistent diversity, external necessity, accidentality, arbitrariness, opinion – all of which, however, must not be taken as anything more than the abstract side of *nothingness*. (*WL GW* 12: 39/*SL* 536)

It is easy to think that in saying that the “manifold genera and species of nature must not be esteemed to be anything more than arbitrary notions of spirit engaged in pictorial representations,” Hegel is confining genera and species to a way in which we choose to view the world rather than being features of how things are, thus undermining the realist case completely. However, we now suggest, while this passage does indeed tell us something significant about Hegel’s views concerning the inadequacy of nature in certain important respects, this does nothing to undermine his commitment to essentialism – which we take to be an interpretative advantage of our approach to this passage, as this then makes it compatible with the many other passages in which Hegel seems to endorse essentialism, and which are highlighted by the conceptual realist (cf. Stern 2009, 26–27, 153–58, 354–58).

First of all, it is important to put this passage in context. It comes in the second subsection of the chapter on “The Concept” in Hegel’s *Science of Logic*, where he is dealing with “The Particular Concept,” having dealt with “The Universal Concept” in the previous subsection. By speaking of “particularity” here, Hegel does not mean singularity (which is the topic of the next subsection) but the division of a concept into particular types – for example, isosceles, scalene, and equilateral are particularizations of the universal “triangle,” as these are the three ways in which something can be a triangle. As Hegel notes, there is thus an affinity here between how a universal relates to its particularization and how a genus relates to the species that fall under it.

However, in discussing this example of a triangle in his Introduction to the *Science of Logic*, Hegel claims that this division is

not implicit in the determinateness of the triangle itself, that is, not in what is usually called the concept of a triangle, no more than in the concept of animal in general, or of mammal, bird, etc., one can find the determinations according to which animal in general is divided into mammal, bird, etc., and these classes are then divided into further genera. (*WL GW* 21: 44/*SL* 38)

Hegel argues that while “[s]uch determinations are taken from elsewhere, from empirical intuition,” and so “come to those so-called concepts from without,” by contrast when it comes to the “philosophical treatment of division, the concept must show that it itself holds the source of the determinations” (*WL GW* 21: 44/*SL* 38), which is what Hegel claims for his division of the *Logic* into Being, Essence, and Concept, and likewise elsewhere for other parts of his system, such as the division of beauty in art

into the three forms of symbolic, classical, and romantic (MM 13: 106–14/*LFA* 1: 75–81).¹⁵ Similarly, in an example Hegel gives just before the passage we are discussing, he argues that there can be a complete division into two ways in which causality can manifest itself, namely as cause and as effect (*WL GW* 12: 38/*SL* 535).

Now, it is precisely at this point that Hegel draws a contrast with species in nature, as “there are more than two species to be found in any genus in nature, and these many species cannot stand in the same relation to each other as the one we have been discussing [*viz.* complete division]” (*WL GW* 12: 39/*SL* 536). The key contrast here, then, is a case where we can particularize a universal genus into species through an a priori process of complete division, and where we cannot – and the point Hegel is making here is that we cannot do this when it comes to nature, in a way that we can for the *Logic* and also for forms of art.¹⁶

It is this, then, that Hegel has in mind when he talks in our passage about the “impotence of nature,” namely that it does not manifest the “rigor” of the concept in the sense it cannot be divided completely into species in this way, but instead each genus has many different particularizations, which makes nature manifold in a way that the categories of *Logic* and forms of art are not – there are only three divisions to those categories and art forms, but there are potentially endlessly many ways of being a parrot, a horse, or a human being, and we therefore cannot deduce these ways a priori, hence the “impotence” of the concept in these domains.

Moreover, Hegel warns here, we should not allow ourselves to be impressed by this manifoldness of nature and think it makes nature somehow superior to logical categories or art forms. On the contrary, while this manifoldness might lead us to *wonder* at nature, and enable it to appeal to our representational capacity, this manifoldness should be viewed more severely as a definite fault from a rational perspective, precisely because in all this exuberant diversity we do not find any real rational order, because there is no way to move here from the universal to its division into particular types in a complete and a priori manner; this makes nature an “unreliable copy” of the concept, which is beset by “self-subsistent diversity” (i.e., a diversity that does not itself come from the

¹⁵ Hegel makes similar remarks regarding the division of all the parts of his system, including “the Idea of nature” into mechanics, physics, and organics (*Enc.* §252/*Enc.* 2P 1: 217).

¹⁶ Hegel allows that when it comes to art, there may also be some difficulties in fitting everything into the systematic division into the types of individual arts (architecture, sculpture, painting, music, and poetry), and once more we should not allow ourselves to be impressed by this as again it betokens a kind of “impotence,” just as it does in nature (MM 14: 262–63/*LFA*, 2: 627–28).

universality of the concept), thereby giving rise to “external necessity, accidentality, arbitrariness, opinion” (*WL GW* 12: 39/*SL* 536) in the kinds of diversity that are to be found. Nonetheless, Hegel reassures us, this does not mean that nature is wholly other than the concept, as the concept has the “absolute power” to let this exuberance of nature carry on without its being overcome, so that even in all this manifoldness, “traces and intimations” of the concept are still to be found in nature (cf. *MM* 13: 173–74/*LFA* 1: 129), though we must allow that nature would be *more* rational if this manifoldness were not so and everything in nature could be deduced from the concept. However, as Hegel argues elsewhere, the kind of contingency that leads to this manifoldness is itself essential to nature, and so in that sense it is something we can explain and should not surprise us.¹⁷

Now, if this is the right way to understand this key passage, where does it leave the conceptual realist? In our view, it leaves their position intact, as it is no part of conceptual realism that the individuals for whom kind membership is essential belong to kinds that can be deduced a priori. The essentialist claim is just that kind membership is essential to the individuals who belong to those kinds, not that these kinds can be deduced from some higher kind in an a priori manner. The essentialist can of course allow that this might be possible, as Hegel does in the divisions he offers in the *Logic* and in his aesthetics. But while it may be possible in these cases, this does not mean when it is not, being a dog is any less essential to an individual; and when it is not possible, nor does this prevent Hegel stating that kind membership is essential, as we have seen.

As a result, therefore, we believe the conceptual realist can accommodate the claims that Hegel makes regarding how nature is problematic to reason in certain key respects, but without this undermining the central point that the conceptual realist wants to make, and thus without this undercutting its arguments against those who read Hegel differently. The carpet, it therefore seems, is flat after all.¹⁸

¹⁷ Cf. Henrich’s (1958) classic interpretation of Hegel’s theory of contingency.

¹⁸ We are very grateful to Brady Bowman, Franz Knappik, James Kreines, and Clark Wolf for discussion of their readings of Hegel on these issues, and to our Sheffield colleagues Luca Barlassina, Will Morgan, and Jerry Viera for good naturedly considering with us where Hegel might stand in relation to contemporary debates.