

Categories and Normativity
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Anyone who tries to understand categories soon runs into the problem of giving an account of the unity of a category. Call this the “unity problem.” In this essay, I describe a distinctive and under-studied version of the unity problem and discuss how it might be solved.

First, I describe various versions of the unity problem. Second, I focus on one version and argue that it is best dealt with by thinking of at least some categories as “norm-constituted,” in a sense that I try to make clear. Third, I discuss some objections to my proposal. Fourth, I compare norm-constituted categories to categories that are normative in a different sense. Fifth, I briefly discuss the possibility of grounding the normativity of norm-constituted categories. Finally, I raise a few questions for further research.

Let me make two preliminary points. When I say “category” in this paper I am talking very generally about kinds or classes and not, in the specifically Aristotelian sense, about *highest* kinds or classes. And I am restricting my discussion to genuine categories as opposed to spurious ones; by “spurious” I mean categories like “games played in 1997 by red-headed boys.” The restriction presupposes that there is such a distinction, but I cannot provide an account of it here.

Versions of the Unity Problem

To think in terms of categories is to suppose that things belong in groups and that such groups have something to do with the similarity of the individuals so grouped. What I am calling the “unity problem” is the problem of accounting for the unity of a group or category, that is to say, the problem of understanding what sort of similarity gives rise to a category’s unity. And one reason why the unity problem is particularly problematic is that, typically, members of a category have not only similarities but also differences. We must explain how the similarities are not undermined by the differences. There are variations within categories, and we need to understand the unity that categories have in a way that is consistent with those variations.

There is no good reason to suppose ahead of time that there is a single unity problem or a single solution to it; perhaps there are several types of categories, each of which has a different type of unity. Hence it makes sense to speak of “versions” of the unity problem. A convenient

way of uncovering two versions of the unity problem at once is by reflecting on a famous passage from Wittgenstein's *Philosophical Investigations*:

Consider, for example, the proceedings that we call "games." I mean board-games, card-games, ball-games, competitive games, and so on. What is common to all of them?--Don't say: "There must be something common to them, or else they would not be called 'games'"--but look and see whether there is anything common to them all. For if you look at them you will not see something that is common to them *all*. . . . Are they all "amusing"? . . . [I]s there everywhere winning and losing, or competition between the players? . . . Look at the roles played by skill and luck. And how different skill in chess and skill in tennis are.¹

Here Wittgenstein takes aim at the idea that categories have to have their unity in virtue of features shared by all their members. This suggests a distinction between categories that do have their unity in that way and categories that do not. Let us consider them in turn.

First, there are what we can call "rigid categories". Good examples of such categories come from geometry. Consider the category *triangle* and consider three figures: a triangle of area ten, a triangle of area twenty, and a square (of any area). These figures have various features. One is a feature that all the figures share, namely, that of being closed; another is a feature that only the first two share, namely, that of being three-sided; still another is a feature that the first has but that the second does not, namely, that of being of area ten. Now, the category *triangle* contains only figures that are closed and three-sided. Being both closed and three-sided is *non-optional* for being a triangle. This means that the third figure, the square, cannot be a triangle, whereas the second two, because they have the two stated non-optional features, can be triangles (one would have to be sure that there were no further requirements). No variation is permitted, then, with regard to having or not having non-optional features. Figures that lack them fail to be triangles. Note, however, that having this or that area is optional as far as membership in the category of triangles is concerned. This is what allows the first two figures both to belong to the category of triangles, despite the fact that they differ in area.

This gives us the following way of thinking about the unity of a category. For certain categories, the "rigid" ones, there is a distinction between non-optional and optional features. Whatever lacks a non-optional feature is not a member of the category in question; having the

non-optional features is necessary for membership. For this kind of category, the unity problem is solved by insisting on unity in non-optional features and allowing for diversity in optional features.

This way of solving the unity problem does seem to work for some categories. As we have just seen, however, Wittgenstein points us to cases in which it seems *not* to work. He calls our attention to variations within the category “game,” and he seems to be saying that there is nothing common to all the things we call games.² Using the terminology introduced above, he is saying that there are no non-optional features of games. This gives rise to a different kind of unity problem, the problem of accounting for the unity of categories whose members need not have features in common. Assuming that there really are categories of this sort, there are two basic responses. One is to take rigid categories as the only type of category and to conclude that games and the like are “not real categories.” Another is to find a way of dealing with the unity problem different from that embodied in rigid categories. As is well known, this is the approach that Wittgenstein points us towards with what has come to be known as the “family resemblance” theory. Roughly, the idea is that relationships of similarity can bind members into a sufficiently strong unity, even if there are no distinguishing marks that all the members have. Wittgenstein’s remarks have given rise to a fair amount of discussion. Just what is a family resemblance category?³ Could all categories be of this sort?⁴ Are family resemblance categories categories for which we can state necessary and sufficient conditions?⁵ The issues are many and complicated. I do not intend here to add to this literature. Instead I would like to think about a third kind of category.

A good way of introducing this third kind of category is by reflecting further on the Wittgenstein text quoted above. When we encounter a game that does not involve competition, we might say, “Oh, it’s a non-competitive game,” but we do not say, “There’s something wrong with this game!” The variations that Wittgenstein is pointing to are not of a normative sort. Parallel variations could be found within the category *waterfowl*.⁶ We can imagine Wittgenstein saying, “Consider the animals we call waterfowl. I mean whistling swans, wood ducks, hooded mergansers, and so on. What is common to them all? Do they all have long necks? Do they all perch in trees? Do they all dive under the water?” The answer in each case would be “no,” and in none of these cases would we say that waterfowl that lack the traits mentioned have something wrong with them as waterfowl--lacking those traits would not make them defective waterfowl.

Unlike wood ducks, hooded mergansers do not perch in trees, but that does not mean that there is something wrong with them as waterfowl.

But suppose our ornithological Wittgenstein were to proceed differently. “Consider the animals we call waterfowl. What is common to them all? Can they all fly? Do they all have working circulatory systems? Do they all have vision?” The answer would again be “no” to each of these questions. Some waterfowl have broken wings; some are about to die of heart failure; some have been blinded. Again we have variation, but this time with an important difference. Lacking features such as these means that there is a defect. There is something wrong with a waterfowl that cannot fly.

What sort of unity problem do we have with a category of this sort, a category, that is, that exhibits normative variations? We have the problem of explaining how a category can have both defective and non-defective members. Can this problem be solved by the rigid or the loose approach? It is not as easy as it might seem. Consider the rigid approach, which rests on the above-discussed distinction between optional and non-optional features. If we treat flying as a non-optional feature of waterfowl, then crippled waterfowl will be excluded from the category, which seems clearly to be wrong. If, on the other hand, we try to keep them in the category, it seems we will be able to do this only by thinking of flying as an optional feature of waterfowl. Two problems then arise. First, if features like flying turn out to be optional, then the range of what is optional expands enormously. Flying, seeing, having a working circulatory system, being feathered, and many other features all turn out to be optional. There are hardly any non-optional features left, and that is a problem, because the non-optional features are crucial for defining the borders of the category. How then could waterfowl be distinguished from cormorants, or squirrels, or stones? Second, although in one sense flying and the others are “optional” features, it seems clear that in another sense they are not. Diving and non-diving are different ways of being a waterfowl, but flying and non-flying are not. This suggests that there is another sense of “optional” that we need to take into consideration. I follow up on this suggestion in the next section of this essay.⁷

What about the family resemblance theory? Can it explain the unity of a category that exhibits normative variation? Couldn't we say that some non-flying birds are waterfowl because of their family resemblance to flying waterfowl? There are two problems with this approach. First, it leaves all features together in the same class. As was just pointed out, even if, in one

sense, flying and diving are both optional, in another sense only one of them is, and a theory of the category's unity that does not respect this difference is inadequate. In other words, it is a mistake to buy the unity of the category at the price of due attention to the diversity within it. Second, in practice, it seems unlikely that the family resemblance approach would do the job. A waterfowl that lacked a sufficient number of the features it should have might be indistinguishable from a bird of another category that lacked a sufficient number of the features it should have; at least in principle, a defective swan and a defective cormorant could have more family resemblances to each other than to the members of the families they do in fact belong to. So, whatever its merit might be in handling the unity problem for certain kinds of classes, the family resemblance theory seems inadequate to the task of solving the unity problem for categories with normative variations.

One of the arguments just given against using the family resemblance approach to solve the normative version of the unity problem is that it treats normative and non-normative differences in the same way, i.e., that it solves the unity problem by ignoring a difference that ought not to be ignored. Other possible solutions are inadequate for the same reason. Consider the idea that one might appeal to *ceteris paribus* laws by saying that the *Anatidae* are governed by laws of the form “*Anatidae* can fly, all other things being equal.” The best theory of what *ceteris paribus* laws mean seems to be the one that says that they express (overrideable) tendencies. That approach, however, does not help us here; the point is not just that *Anatidae* have a tendency to fly, a tendency that can be overridden, but also that it is normal and good for them to be able to do so, a point invisible to the *ceteris paribus* approach.⁸

Other approaches that do not work for much the same reason can be drawn specifically from biology; since biological categories are the main examples under consideration here, that restriction hardly makes them irrelevant. If it seems difficult to explain how something can belong to a category while lacking what would appear to be an important characteristic, perhaps one should define the borders of the category by reference to something other than what would normally be thought of as “characteristics.” For example, one can think of the unity of a biological species in terms of evolutionary descent, so that individuals are conspecific if they are descended from a single population group having its own evolutionary role, or one can think of the unity of a biological species in terms of reproductive isolation. Either of these ways of thinking includes abnormal instances within their classes, which is desirable, but it does so by

making invisible the difference between normal instances (which possess the relevant characteristic) and abnormal instances (which lack it).⁹

This point about non-characterological approaches to categories brings out a further important issue. The normative version of the unity problem arises only when we think of a category in terms of the characteristics that its members have.¹⁰ This does not mean that other ways of thinking about the very same categories should be ruled out. But neither should we abandon a characterological approach. Even if we accept for the sake of argument that non-characterological approaches solve the normativity problem, albeit by being blind to it, still it is important to show how the normativity problem can be solved from within a characterological approach. Otherwise there will be too large a gap between pre-scientific intuitions, which are characterological, and non-characterological approaches. In the long run, it would be better to show how the various approaches converge.¹¹

In light of all these difficulties and failed attempts, one might be tempted to say that the fact that categories such as the *Anatidae* exhibit normative variations proves that they are not really categories, or at any rate only second-rate categories.¹² But perhaps it is better to think in terms of a third kind of category and a third kind of unity problem. In this third kind of category, there can be variation within “non-optional” features, where “non-optional” means something different from what it means in the rigid and loose theories. In the next section, I will propose a solution to the unity problem for this kind of category by explaining this different sense of the optional/non-optional distinction, showing how it can be related to the other sense of the distinction, and showing how it can be used to solve the normative version of the unity problem.

Norm-Constituted Categories

In this section I propose a solution to the unity problem for categories exhibiting normative variation. Recall that this is the problem of figuring out how to draw the borders of a category in a way that includes defective members, without saying that features like flying are purely optional. So the first step is to work out the alternative sense of the optional/non-optional distinction. An optional feature, in this new sense, is a feature such that lacking it does not constitute being defective. Non-optional features, by contrast, are features such that lacking them does constitute having a defect. A waterfowl that cannot fly is a waterfowl, but it is a defective waterfowl. Flying is thus a “non-optional” feature of waterfowl in what we can call the

“normative” sense of the optional/non-optional distinction. And let us call the earlier sense of the distinction, the one that worked so well for triangles, the “non-normative” sense.

As we have seen, flying is optional for waterfowl in the non-normative sense of the “optional/non-optional” distinction, the sense that was inadequate to the task of solving this version of the unity problem. That sense was tailor-made for categories that do not exhibit normative variation, categories of which there are no defective members. There are no defective triangles--a figure that one might be tempted to call a defective triangle is in fact not a triangle at all, but some other figure. Now, however, we have a sense of the optional/non-optional distinction that is more appropriate to the kind of category we are dealing with, a sense that allows us to say that flying is non-optional for waterfowl. But how can we put it to use to solve the unity problem?

The way to proceed is by reflecting further on what is presupposed by this whole line of thinking. To speak in terms of normative variation is to presuppose that, for some categories of things, there is such a thing as the way something should be. A waterfowl, for example, *should* be able to fly. This is something that is true of every waterfowl. We can speak of this by saying that there is a norm, a norm that states that waterfowl should be able to fly, and that every waterfowl is subservient to this norm.¹³

The “should” involved here is not in any way a moral sort of “should.” To say that a non-flying waterfowl is “not what it should be” is to say not that it is being wicked, but only that it is imperfect or defective in a completely non-moral way. If someone were to reply that words like “norm,” “should,” and so on apply only in the realm of human action, I would reply in two ways. First, I would deny that we do actually use the words only in that way. Second, I would give the objector the use of those words and find different ones. In other words, if someone wants to argue that it isn’t right to say that a wingless waterfowl “is not what it should be” but grants that such a bird is “imperfect” or “abnormal,” then I can agree for the sake of argument but then dismiss the point as merely terminological.

Now then, if it is true of every waterfowl that it ought to be able to fly, then we can say that every waterfowl has the property or feature of *being such that it ought to be able to fly*. This allows us to solve the unity problem for this kind of category. Just for the sake of having a handy phrase, let us say that everything that should be able to fly is “subject to the norm of flying.” Then we can put it like this: although some waterfowl can fly and some cannot, all are

subject to the norm of flying, all have the feature of being subject to the norm of flying. Having this feature is a necessary condition of being a waterfowl, so something that didn't have it would not be one--even if it had wings, feathers, and all the rest.

The move that I am making can be made clearer as follows. In the normative sense, it is optional for waterfowl that they be, for example, of a certain color, and non-optional that they be able to fly. Seeing that color falls on one side of this distinction while flying falls on the other is an important insight into the nature of waterfowl. And my proposal is to exploit this insight by taking normatively non-optional features as clues or pointers to non-normatively non-optional features. The feature *being able to fly* is normatively non-optional, and this fact points us to the non-normatively non-optional feature *being subject to the norm of flying*. While the category waterfowl admits of both flying and non-flying members, it does not admit of both members that are subject to the norm of flying and members that are not. It is a necessary condition of being a waterfowl that one be subject to the norm of flying. Thus we have, in a way, figured out how to reduce normative categories to a kind of rigid category. Nonetheless, we have done this only by making the important move of appealing to normative features, features the having of which consists in being subservient or subject to a certain norm. For this reason, it is appropriate to distinguish this kind of rigid category from the ordinary kind by calling it a "norm-constituted" category. The normative requirement is constitutive of the category in the sense that membership in the category is determined by whether or not something is subject to the norm.

One way of clarifying the interplay between the two senses of the optional/non-optional distinction is by reflecting on something once said by Hilary Putnam. In "The Analytic and the Synthetic," he writes, "We are no longer so happy with the Aristotelian idea that a necessary truth can have exceptions."¹⁴ It seems right to say that a necessary truth cannot have exceptions, but the insight behind this Aristotelian idea can be saved by making a distinction. Suppose someone were to say that, necessarily, waterfowl can fly. What would this actually mean? Interpreted one way, it would mean that every waterfowl is subject to the norm of flying; this claim would be necessary and would admit of no exceptions. Interpreted another way, it would mean that every waterfowl could in fact fly; this claim would admit of exceptions and would not be necessary. So the "Aristotelian idea" is not really that a necessary truth can have exceptions. There is a non-necessary reading, the one that doesn't rest on normative features, and this

reading admits of exceptions. There is also a necessary reading, the one that rests on normative features, and this one admits of no exceptions.

Putting things in a way that is easy to grasp but not perfectly accurate, then, we can say that a norm-constituted category is one whose members belong to it not in virtue of what they are but rather in virtue of what they should be. Putting it more accurately, we can say that a norm-constituted category is one whose members belong to it in virtue of what they are, but what they are is this: subject to a norm or set of norms. They *are* such that they *should be* such-and-such.¹⁵

Still more accuracy can be gained by noting that the normatively non-optional features one would point to in defining normative features are not all of the same sort. To begin with, some are such that lacking them results in more or less immediate death; having a working circulatory system is, for waterfowl, a feature of this type. Others, by contrast, are such that lacking them results only in a failure to flourish; having the right number of legs would be a good example. (Probably the line between these two sorts of features is not perfectly sharp.) Further, some features are such that lacking them makes it impossible for an individual of the kind in question to exist in any way at all, even for a short time; animals, for example, absolutely must be physical objects. Now, it would perhaps sound strange to call it a “defect” in an animal not to be a physical object, and this suggests that this feature is not the basis of a normative feature. It would follow that there could be norm-constituted categories that were not wholly norm-constituted but instead were hybrids.

This last remark points to the fact that what I have done is only to show how the normative variations within a category can be handled in a way that does not destroy the category’s unity. There might be other variations within the very same category that would have to be handled differently--by a more straightforward, non-normative use of the rigid approach, or by an appeal to family resemblance, or in some other way.

Thus we have an outline for a solution to the unity problem for categories with normative variations. It is only an outline because in each particular case--waterfowl, mallard, squirrel, oak, and so on--the details would have to be worked out on the basis of actual knowledge of the category in question. In other words, for any given category, what counts as normative and what does not cannot be settled solely through arm-chair analysis. Fieldwork is required.

Before moving on, let us look at some other approaches that attempt to take the normative issues seriously. Two authors who have developed ideas somewhat similar to these are Ruth Garrett Millikan and Nicholas Wolterstorff. Discussing things that are defined in terms of function, Millikan states the issue well: it is possible for something to be a failed or defective can-opener or mating display; the question is what makes it a can-opener or mating display. Her answer is similar to mine in that she sees being subject to a norm as crucial. However, my account of norm-constituted categories is more general, being aimed not only at function-categories but also at substance-categories, such as *Anatida*; further, I would treat the metaphysical grounding of norms quite differently from Millikan, as will become apparent below.¹⁶ Wolterstorff's "norm-kinds" are similar to my "norm-constituted categories." However, my interest in the unity problem leads me to draw out a point that Wolterstorff does not, namely, that it is crucial to every instance of a norm-constituted kind that it be subject to the norms governing that kind. Further, because Wolterstorff is discussing art, which relies on human intention, his account of the basis of the normativity involved in kinds is quite different from the account that I give concerning kinds found in nature (see below).¹⁷

A different approach to the problem of defective instances can be found in the work of E. J. Lowe and Stephen Mumford. Despite their disagreements, they both approach the issue from the standpoint of laws of nature, instead of from the standpoint of categories. Instead of asking how a defective instance of a category can still be a member of that category, they ask how there be laws of nature that admit of exceptions. To use their example, they ask how it can be a law that all ravens are black, given that there are albino ravens. Both hold that the answer is in construing laws of nature as "disposition ascriptions to sorts or kind";¹⁸ in other words, when we say that all ravens are black, we don't mean " $\forall x (x \text{ is a raven} \supset x \text{ is black})$," which admits of no exceptions; instead we mean that instances of the kind "raven" have a disposition to blackness in a way that makes non-black ravens both possible and abnormal.

Mumford and Lowe disagree over whether natural laws should be thought of as "normative." For Lowe, they should, while for Mumford this ought to be resisted, both because the proper grounding of normativity is hard to find and because the differences between laws of nature and paradigm cases of normative laws make the label "normative" suspicious. But both Lowe's and Mumford's accounts are "normative" in the sense I am concerned with, because both want to acknowledge the reality of abnormal cases and nonetheless include them together with

the normal cases. So the question for us here is: can thinking of laws of nature as attributions of dispositions to sorts or kinds be a good solution to the normative version of the unity problem? I believe the answer is no. The disposition-ascription approach to laws is a way of making sense of laws of nature, but any application of such laws presupposes (quite legitimately) that we know which things are subject to which laws. For example, suppose we find a white bird; should we treat it as an abnormal raven or as a normal bird of some other species? The thought that ravens are dispositionally (normatively) black is not relevant until we know whether the bird in question is in fact a raven. So the disposition-ascription approach to laws of nature, whatever its merits, does not solve the unity problem but rather presupposes that it has a solution. (Nor, it should be added, is that approach to laws of nature intended to solve the unity problem; I am not attacking that theory but only pointing out one thing it does not do.)

Some Objections

Now I turn to five objections to the proposal I have been making. The first calls into question the entire project, as follows. There is no solution to the unity problem for categories exhibiting normative variation, according to this objection, because there are no norms (except perhaps those imposed by observers). Believing in norms is part of failing to accept the naturalistic world-view, a world-view according to which no states of affairs are better than any others, there is no difference between normal and abnormal, and so forth.¹⁹ On this basis, one could argue that there is no special kind of category definable on the basis of variation in normative properties.

A full-scale reply to this objection would be an essay in itself. It goes without saying that I myself think that there are norms and normative features, but I cannot argue for it here.²⁰ Those who accept norms can think of this essay as an exploration of their kind of philosophy. Those who do not can think of it as a kind of thought experiment: assuming there were normative features, and assuming there were categories that exhibited normative variations, this is how one could solve the unity problem for such categories.

The next three objections all share the aim of casting doubt on the idea that biological species are normatively-constituted categories. For different reasons, these objections say that modern, post-Darwinian biology has shown that biological species are not properly thought of as norm-constituted categories. Before dealing with them individually, I would like to discuss a

certain way of responding to them collectively. I could simply point out that my argument concerns the nature of norm-constituted categories in general and does not depend on any particular example's being a good one. In other words, I could grant that biological examples are not good ones but insist that my analysis holds for whatever other examples there might be. The weakness of this reply, however, is that biological categories appear to be the best examples of norm-constituted categories. If normality is not found in biology, it is hard to imagine how it could be found anywhere. For this reason, it is wise not to rely too much on this reply and instead to deal with each of the objections head-on.

The second objection, then, points out that modern biology does very well without normativity²¹ and goes on to say that this shows that biological categories are not norm-constituted. In reply, it should first be noted that the pre-philosophical attitude includes the idea that there is a difference between the normal and the abnormal in the living world; this is a very strong intuition that should not be cast aside lightly. Now, has modern biology really shown that normativity has no place? Modern biology could instead be understood as abstracting from such considerations to focus on natural selection and other such non-normative causes. That taking this approach brings a lot of success is not open to doubt, but it does not follow that it is the only possible way of looking at the living world, or the final and most complete way. There might well be a bigger picture that includes norms, a picture into which the mechanistic aspect fits as a crucial part but a part nonetheless. (Analogously, the fact that it is helpful to abstract from the difference between people and luggage when calculating how much fuel to put into an airplane doesn't mean that there is no difference between people and luggage.) Working out how the whole fits together would be a great philosophical task; for present purposes the point is merely that the fact that a particular approach works well does not prove that it is comprehensive or that all other approaches are no good at all. And that is enough to let us go on with our current discussion of normative categories, using biological categories as the most likely examples.

The third objection points out that, according to modern biology, species are not clearly distinguishable from one another. Whether we think in phenotypic or genotypic terms, there are enough inter-specific similarities and intra-specific differences to force us to re-conceive species as peaks on a continuous characterological graph, rather than as discrete groupings of organisms.²² Kinds of warblers, for example, shade over into other kinds. If this is so, then the idea that species represent natural kinds appears highly questionable. Perhaps species are

conventional groupings, formed when biologists draw lines where nature has none. And then, *a fortiori*, this would undermine the idea that biological species are norm-constituted categories. If we cannot clearly mark off one species from another in terms of its traits, then *a fortiori* we cannot mark off one species from another in terms of its normative traits, and therefore we cannot appeal to such traits to solve the unity problem.

There are two replies to this objection. First, it mistakes the purpose of my account. I do not need to give a complete theory of what makes for the unity of a biological species, but only to show how defective instances can be fitted in. The question of what, for instance, settles whether or not the Bullock's Oriole and the Baltimore Oriole are conspecific is distinct from the question of how we may include a defective Baltimore Oriole in its species. This leads to the second reply. Even if there can be fuzzy borders between species, and thus features for which there is no clear answer to the question, "Is this a proper characteristic of the species?", nonetheless there are many features, including many normative features, that are unquestionably characteristic of their species. Even if there is some unclarity about how many species of Oriole there are, it is altogether clear that it is normal for Orioles to have wings, feathers, and legs, be able to fly, and so on. The lack of clear breaks between species, then, does not mean that we are unable to talk about them as norm-constituted categories.

A fourth objection concerns evolution. Modern biology has taught us not only to think of species as having fuzzy borders but also as being subject to change over time; the borders are not only fuzzy but also in motion. This could be taken as another reason for worrying about the fixity of features and therefore, *a fortiori*, of normative features. Even if it is clearly the case that a given feature is normatively non-optional today, it might not be a few million years from now, when a new species has emerged. Now, the case of an established new species might not be a problem, because such a case is precisely a case in which we would expect there to be differences in normative traits; but what about in the interim, the transitional time during which a group of organisms originally belonging to one species is evolving into another? Wouldn't it be unclear whether the organism had a certain normative trait, in which case we wouldn't be able to use it to solve the unity problem?

A reply can be constructed on the basis of what has been said to the previous objection. Suppose that a population belonging to a certain species of warbler is in the process of evolving into a new species. This new species, presumably, is still going to be fairly similar to the

original species; it is not, for example, going to be a species of sea-going mammals. So there is going to be a great deal of continuity between the old and the new species, and in the continuity zone there will be clear cases of normative features, even though there will also be a range of features whose status is unclear. Thus, just as in the previous case, the normative version of the unity problem can be raised and addressed without needing to hold that species boundaries are precisely fixed in every respect. Variation at the edges can co-exist with stability at the center, even through changes across the species barrier.

A fifth objection concerns the particular solution I have proposed. Thinking of categories as norm-constituted, one might say, makes them mysterious and even mystical. If a waterfowl is something that actually has certain non-normative features, then we have tolerably clear grounds for saying what is and is not a waterfowl. But when we start saying that a waterfowl is something that *should* have certain features, we cannot tell by investigation what is a waterfowl and what is not. “Being subject to the norm of flying” doesn’t sound like a property that someone could investigate; putting it differently, it sounds like a property someone could have and never know it. For all I know, I myself am only a very strange bird.

In response to this objection, I would first point out that it is very “theoretical” in the pejorative sense of that term. There is no reason to suspect that I am a duck or a swan and not a human. Second, we can in fact tell--almost always, at any rate--what is a waterfowl and what is not. For one thing, many waterfowl that lack important normatively non-optional traits still have other traits that suggest strongly that they are waterfowl. For another, suppose there is some animal that lacks a given anatid trait, and suppose that makes us doubt whether it is a waterfowl at all. We can ask the following question: “If it were to gain the anatid trait it lacks, would its existence or flourishing be enhanced?” If it would, then we have reason to think that, despite its lacking that trait, it is a waterfowl; if it wouldn’t, then we don’t. Now, actually, this response requires a fair bit of refinement. The question to ask should really be something like, “If it were to gain the trait it lacks without undergoing a major anatomical and physiological overhaul, would its existence or flourishing be enhanced?” The point of speaking about a “major overhaul” is this. It might seem that humans would be better off with feathered wings, but just adding wings would not help. More and bigger muscles, lighter bones, and so on would all have to be added, and this would require the elimination of some, perhaps many, of our current (human) features. The fact that a wide-ranging restructuring would be needed counts against the

suggestion that we ought to have wings; we are just not “designed” to have them. But this is not the place to work out such details. Third, the mere fact that we can make mistakes about the category that something belongs to does not mean that the categories are not real. The theory I am proposing is compatible with a thoroughgoing modesty about our epistemic powers.

Norm-Constituted Categories and Evaluative Categories

I have been calling certain categories “norm-constituted.” The reason I have not been calling them by the simpler name “normative” is that there is more than one way for categories to be involved with norms. So let us turn to a discussion of what I will call “evaluative categories.” An evaluative category is a category like “good” or “justified.” The first thing to note about evaluative categories is that they are not norm-constituted. Recall that a norm-constituted category is a category that something is in only if it ought to have such-and-such a feature. If an evaluative category were norm-constituted, then we would be saying something like this: a belief is justified only if it *should* be such-and-such. But that is not what it is for a belief to be justified. A belief is not justified by virtue of the fact that it should be something; instead, it is justified by virtue of the fact that it actually is one of the things it should be. A belief is justified only if it actually fulfills certain requirements. So an evaluative category is not norm-constituted; it is instead a category that things belong to when (a) they are themselves members of a norm-constituted category and (b) they actually adhere (or fail to adhere--there are negative evaluative categories too) to the requirements constituting that norm-constituted category. Some evaluative categories are rather general, specifying only that norms have (or have not) been adhered to--“good” is close to a fully generic evaluation. Other evaluative categories are domain-specific--“justified” is a good example.

Grounding Normative features

The main goal of this essay, to set forth the normative version of the unity problem and explain how appealing to normative features can solve it, has been accomplished. Now I would like to discuss, briefly, a question one might raise about grounding normative features. Perhaps it is the case, one might say, that normativity isn’t mystical in the sense that it can only be divined through some magical means; perhaps, in other words, it’s true enough that, at least most of the time, we can tell which norms a given being is subject to. But to grant this is only to grant

an epistemic point, i.e., a point about whether we can know about normativity. There is another point that still needs to be addressed, a properly metaphysical one: how are the norms grounded? *In virtue of what* is it the case that a waterfowl should be able to fly, a dog should be able to bark, and so on? This is a question about the metaphysical grounding of norms, not a question about the epistemic accessibility of norms.

Someone who asks this question is not looking for an answer such as the following: a waterfowl should be able to fly in virtue of the fact that it has the feature of being subject to the norm of flying. The questioner wants to know what *causes* waterfowl to have the feature of being subject to the norm of flying. And since it is the normativity that is the difficult point, he wants an answer that does not appeal to normativity. So what he really wants to know is: what are the non-norm-constituted features of waterfowl that make them have their norm-constituted-features?

That waterfowl are subject to the norm of flying will not be because they have a certain shape, or because they have wings, or because they have a certain genome; as we have seen, these are all non-normatively optional, while being subject to the norm of flying is not non-normatively optional for waterfowl. Indeed, it seems unlikely that appealing to *any* ordinary feature or structure is going to provide a satisfactory answer. So we have to face the possibility that normativity goes all the way down, that it is basic and irreducible. This cannot be ruled out *a priori*; after all, *something* has to be basic, on pain of problematic regress.

But what about the soul (in the Aristotelian, not the Cartesian, sense), which was mentioned earlier in a note, only to be deferred? Maybe souls, unlike wings or genomes, can never be defective, and maybe the explanation of why waterfowl are subject to norms has to do with their souls.

There are good reasons for talking about souls, but doing so will not, it seems, enable us to dispense with talk of normativity. Suppose someone wants to know why waterfowl are subject to the norms to which they are subject. It will not be enough to say: because they have souls. We are, after all, dealing with the question of categorization, and in particular with what makes waterfowl belong to the category of waterfowl. So instead we would have to say: because they have *this kind* of soul. But which kind? The answer “anatidian souls” will be true but uninformative; the soul has to be specified. But unfortunately, we cannot (so to speak) look under the hood to see what kind of soul it is. To specify a soul, we must describe it in terms of

what it does for the organism, namely, cause it to live and grow and act in certain ways. In other words, we explain the soul in terms of its powers.²³ But, if there is any point to the normative version of the unity problem, it can happen that a soul is unable fully to exercise its powers--the thing grows wrong, or is handicapped, for example. So we cannot characterize souls in terms of what powers they actually do exercise; if we did, we would have to say that a very handicapped human didn't have a human soul. Instead, we have to characterize souls in terms of what powers they are *supposed* to exercise. In other words, we are back to normativity. So even if a thing's normative features turn out to be secondary characteristics, less fundamental than its having a certain kind of soul, still in practice the most basic characterization we will be able to give of an organism will be one that (in part) describes it as subject to some norms; even much of what we say of the soul itself has to be put like this. This might lead us to qualify some of the strong language used earlier in this paper, according to which norm-subservience "constitutes" categories, but in practice norm-subservience will be our only access to those categories.²⁴

Conclusion

I have discussed a version of the unity problem that has not received much attention in recent philosophy. I have argued that the unity of such categories is best accounted for by construing some categories as norm-constituted, and, more provisionally, I have cast doubt on any hope of reducing their normativity to something non-normative. I do not, to be sure, claim to have solved all problems. I conclude by very briefly mentioning some issues that future research on this topic might take up.

First, although there are clearly norm-constituted categories of a humanly-constructed variety (like Millikan's favorite example of the can-opener), biological categories seem to be the best and possibly the only examples of natural norm-constituted categories. Is this really the case? If so, why?²⁵

Second, if biological categories are norm-constituted, how is this fact to be understood together with the norm-neutral approach usually taken in modern biology? I have indicated some of the questions associated with this when dealing with objections above.

Third, in all of this, it would be helpful to investigate the work of philosophers who give a greater role to normativity than contemporary philosophy typically does. Such investigations would most probably begin with Aristotle and the medieval scholastics.²⁶ How far their views

would have to be modified in order to square them with the findings of modern science is, of course, a crucial question.

If what I have said here is correct, normativity is more bound up with our thinking than we might have suspected. It is intimately involved with some of our most important categories. To go beyond this, however, and to determine its consequences for other matters, will require another occasion.²⁷

Notes

¹ Ludwig Wittgenstein, *Philosophische Untersuchungen*, ed. Joachim Schulte (Frankfurt am Main: Suhrkamp Verlag, 2003), sect. 66; 56-7. My translation.

² As Keith Campbell points out, this is wrong in a way that is easily set right. Of course there are features that all games share--for example, they all take place in time. The point is, rather, that games have “nothing in common sufficient for the predicate’s use”; see Keith Campbell, “Family Resemblance Predicates,” *American Philosophical Quarterly* 2 (1965): 241.

³ For just four of the many articles devoted to clarifying the notion of family resemblance, see Renford Bambrough, “Universals and Family Resemblances,” *Proceedings of the Aristotelian Society* 61 (1960-61): 207-222; Campbell, “Family Resemblance Predicates;” Kathryn Pyne Parsons, “Three Concepts of Clusters,” *Philosophy and Phenomenological Research* 33 (1973): 514-23; David Pears, “Universals,” *Philosophical Quarterly* 1 (1951): 218-227.

⁴ For an argument in favor of a negative answer to this question, see Campbell, “Family Resemblance Predicates,” 243; for an argument that a positive answer is not required, see Parsons, “Three Concepts of Clusters,” 515-16.

⁵ M. W. Beal argues that the question of whether members of a category have something in common is not the same as the question whether we can state necessary and sufficient conditions for that category; see M. W. Beal, “Essentialism and Closed Concepts,” *Ratio* 16 (1974): 190-205.

⁶ I am following the nomenclature of Roger Tory Peterson, who uses the informal name “waterfowl” to refer to the family *Anatidae*, encompassing swans, geese, and ducks; other birds

that we might be tempted to call “waterfowl,” such as cormorants (Family *Phalacrocoracidae*), are thus excluded by the term as I use it here. See *A Field Guide to the Birds of Eastern and Central North America*, 4th ed. (Boston: Houghton Mifflin, 1980), 42.

⁷ An Aristotelian-minded philosopher might object that a biological category could be treated rigidly by saying that *having a certain kind of soul* was what unified the category. This will be discussed in the next-to-last section of the paper.

⁸ For *ceteris paribus* laws understood as expressing tendencies, see Terence Horgan and John Tienson, “Soft Laws,” in *The Philosophy of the Human Sciences*, ed. Peter A. French, Theodore, E. Uehling, Jr., Howard K. Wettstein (Notre Dame: University of Notre Dame Press, 1990), *Midwest Studies in Philosophy* 15 (1990): 256-279; Peter Lipton, “All Else Being Equal,” *Philosophy* 74 (1999): 155-168; Harold Kincaid, “Defending Laws in the Social Sciences,” *Philosophy of the Social Sciences* 20 (1990): 56-83

⁹ For these and other ways of thinking of biological species, see Michael Ruse, “Biological Species: Natural Kinds, Individuals, or What?,” *British Journal of the Philosophy of Science* 38 (1987): 225-42. For confirmation that the genealogical approach does not account for normativity, see David L. Hull, *The Metaphysics of Evolution* (Albany, NY: State University of New York Press, 1989) 12, 17-22.

¹⁰ For biological examples, this means thinking in phenotypic or genotypic terms, but it does not matter which.

¹¹ In “Biological Species,” Ruse describes not only a species-concepts framed in terms of descent and a species-concept framed in terms of reproductive isolation, but also a species-concept framed in terms of morphology and a species-concept framed in terms of genetics. But these, he argues, reinforce rather than compete with one another.

¹² Evan Fales says, “The fact is that there can be and sometimes are monstrous genotypes as well as phenotypic freaks, of greater and lesser degrees. This militates against the existence of strict classification-producing *de re* necessities regarding biological species and individual organisms.” Evan Fales, “Natural Kinds and Freaks of Nature,” *Philosophy of Science* 49 (1982): 85. For Fales, although there are strict kinds at the level of “fundamental entities”—e.g., basic particles—, only a weak and exception-ridden system of classification holds at the level of “derivative entities,” among them biological organisms.

¹³ For further discussion of the notion of norm-subservience, see my “Subjectivism about Normativity and the Normativity of Intentional States,” *International Philosophical Quarterly* 43 (2003): 5-14.

¹⁴ Hilary Putnam, “The Analytic and the Synthetic,” in *Mind, Language, and Reality: Philosophical Papers, Vol. 2* (Cambridge: Cambridge University Press, 1975), 52.

¹⁵ Richard Mohr appears to propose a theory of this type when he argues that universals are best thought of as “standards”; however, the way he develops his theory makes it clear that he does not mean “standard” in a normative way but only as something to which other things are compared. See Richard Mohr, “Family Resemblance, Platonism, Universals,” *Canadian Journal of Philosophy* 7 (1977): 593-600. David Weissman grounds certain kinds of general truths in what he calls kinds that have “normative force,” but he does not mean what I mean when talking about normativity and kinds; he means to speak of kinds that involve immanent, observer-independent, necessities of form. See David Weissman, *Truth’s Debt to Value* (New Haven: Yale University Press, 1993), chap. 5, esp. 235-8, 244-5, 255-8, 261-3, 277-9.

¹⁶ For “function-categories,” see Ruth Garrett Millikan, *White Queen Psychology and Other Essays for Alice* (Cambridge: MIT Press, 1993), 21ff.

¹⁷ See Nicholas Wolterstorff, *Works and Worlds of Art* (Oxford: Clarendon Press, 1980), 45-84, esp. 56-7.

¹⁸ Stephen Mumford, “Normative and Natural Laws,” *Philosophy* 75 (2000): 278. For Lowe’s position, see E. J. Lowe, “Sortal Terms and Natural Laws,” *American Philosophical Quarterly* 17 (1980): 253-60; “Laws, Dispositions, and Sortal Logic,” *American Philosophical Quarterly* 19 (1982): 41-51; and *Kinds of Being* (Oxford: Blackwell, 1989), chapters 8-10.

¹⁹ As Barry Stroud puts it, “Naturalism is widely understood to imply that no evaluative states of affairs or properties are part of the world of nature”; see Barry Stroud, “The Charm of Naturalism,” *Proceedings and Addresses of the American Philosophical Association* 70 (1996): 50; see also 53-54. For another example, see John Searle, *The Construction of Social Reality* (New York: Free Press, 1995), 13-16. For complications concerning Searle, see my “Intentionality, Normativity, and a Problem for Searle,” *Dialogue: Canadian Philosophical Review* 41 (2002): 703-13.

²⁰ For an argument, see Gorman, “Subjectivism about Normativity and the Normativity of Intentional States.”

²¹ Cf. for example Hull, *Metaphysics of Evolution*, 17-22, who argues that notions of normality have little significance in biology.

²² “A traditional assumption that dates back at least to Aristotle is that organisms could be unambiguously sorted into discrete kinds on the basis of overt morphological characteristics. Since the theory of evolution undermined the belief in the fixity of species, this assumption has become increasingly untenable. It is now widely agreed that gross morphological properties are not sufficient for the unambiguous and exhaustive partition of individuals into species. Crudely, this is because there is considerable intraspecific variation with respect to any such property, and the range of variation of a property within a species will often overlap the range of variation of the same property within other species. . . . [I]t may be thought that some description of the genetic material could capture a genuinely essential, or at least privileged, property. . . . But it is equally possible that there should be as much or more genetic variability as morphological variability. That is, intraspecific genetic variability may overlap interspecific variation as much as, or more than, morphological variability does. In fact, there are good reasons for supposing this to be the case.” John Dupré, “Natural Kinds and Biological Taxa,” *Philosophical Review* 90 (1981): 84.

²³ Cf. Aristotle, *De anima* II.2, 413b10-13: “[S]oul is the source of these phenomena and is characterized by them viz., by the powers of self-nutrition, sensation, thinking, and motivity.” Aristotle, *De anima*, trans. J. A. Smith, in *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1941), 557-58. See also Aquinas, who holds that the soul’s essence is distinct from its powers but also that our way of specifying souls is in terms of their powers and not in terms of their essences. Thomas Aquinas, *Summa theologiae* I, quest. 77, art.1, corpus, and ad. 7.

²⁴ The claim that we cannot in practice reduce the normative to the non-normative should not be confused with the highly problematic idea that the normative and the non-normative are two entirely separate realms.

²⁵ For discussion of the “problematic dualism” of the living and non-living, see Richard F. Hassing, “Modern Natural Science and the Intelligibility of Human Experience,” in *Final*

Causality in Nature and Human Affairs, ed. Richard F. Hasking (Washington, D.C.: Catholic University of America Press, 1997), 211-256.

²⁶ See, for example, Aristotle, *Metaphysics* V, 22, 1022b22-1023a6; Thomas Aquinas, *ST* I, quest. 48, art.1; and Thomas Aquinas, *Quaestiones disputatae de malo*, quest. 1, art. 1.

²⁷ In writing this essay I have benefited from comments and discussions with Jean DeGroot, Anne-Marie Gorman, Jorge Gracia, Richard Hasking, Brian Shanley, Barry Smith, and John Wippel.