Chapter 1
Organic Normativity: Natural life forms and functions

"Biology cannot, or at least in practice does not, eliminate functions and purposes." –Mark Perlman, "The Modern Resurrection of Teleology in Biology", 6.

I. Introduction

This chapter argues that there are such things as natural norms. Normativity is to be found, in part, in nature, and not just in human evaluators. The instances of natural norms I shall posit are the life forms and natural functions of various species of organisms. The major alternative view to the one I defend is a view according to which nature is purely descriptive and non-normative. McDowell calls this picture of nature "bald nature" (i.e., bald of values, coldly factual, disenchanted from any supernatural esoterica, and so on) but I think a better term would be "Laplacian nature," since it more closely aligns with Pierre-Simon Laplace's mathematical and, I dare say, unscientific picture of nature.

Relying on the picture of bald or Laplacian nature, the major objection to ethical naturalism is the "is-ought gap." The is-ought gap is sometimes taken to be *the* problem for ethical naturalism. If ethical facts are real, what are they? Where are they? How can they motivate? If ethical facts are non-natural, then are they real or not? I do think the is-ought gap is a problem for some forms of naturalism.

I shall argue that there are at least two forms of the is-ought gap. One of them is insoluble but the other can be solved by appeal to natural norms. Ethical naturalists posit a particular relationship between natural facts and moral facts, or facts and values, or nature and normativity. Each does so in their own way. The attempt to show how facts entail norms is, I think, misguided. Instead, I shall attempt to show that some facts just are norms. These are natural norms. In other words, some scientifically respectable natural facts are also real, mundane, normative facts on a level with properties and processes like 'being a penguin' or 'pumping blood.'

The respectable scientific notions I propose are natural kinds (life forms) and natural functions or ends. Though they can be given anti-realist or reductionist interpretations, anti-realism is by no means the default view of working scientists nor the default view of philosophers with a healthy respect for modern science. Polemicists who pretend that anti-realism or reductionism about natural kinds and natural functions are "the" scientific view are propagating their philosophical doctrine; the rhetoric is certainly powerful but the argument is weak.

The upshot of the normativity of nature for ethics is that if we can defend natural norms, it is at least possible that we can identify human natural norms. That is, we can identify a kind of normativity that is binding on human beings as practical rational animals but that is not merely invented by human individuals or human cultures. It would be natural without being crassly biological; it would be both biological and practical or rational in a way that I will explain later.

Outline

The first section distinguishes the two kinds of is-ought gap that have been thought to render ethical naturalism impossible and explains how natural norms make ethical naturalism at least possible. The second section presents a case for natural norms of two types: formal and functional, organisms and their natural teleological processes. The third section considers and rebuts anti-realist or reductionist interpretations of these natural phenomena. If the case for organic normativity is successful, then the neo-Aristotelian might be able to appeal to natural norms with respect to human organisms.

II. Is and Ought

Many have posed a challenge to the very possibility of ethical naturalism. If this challenge cannot be met, then ethical naturalism is futile. Put the first challenge in this form:

1. If ethical naturalism is possibly true, then descriptive statements can serve as premises in arguments with normative conclusions.
2. But descriptive statements cannot serve as premises in arguments with normative conclusions.
3. Therefore, ethical naturalism is not possibly true.

The first premise sets out a criterion for naturalism as a broad philosophical strategy for grounding ethics. Normative statements such as "You ought to be wise" or "It is good to be tolerant of people with different views" or "It is bad to bring a gun to school and start shooting people" seem to me true and pretty uncontroversial. But why are they true? And how do we know them? The realist non-naturalist has a good explanation: such statements pick out fundamental, non-natural, moral facts. The naturalist anti-realist also has a good explanation: such statements express the speaker's individual and cultural norms. The ethical naturalist's explanation is a bit trickier. He or she must show how such statements relate to the *natural* facts. One way would be to argue that "you ought to be wise" is itself a natural fact, but that way strikes one as rather odd; another way would be to argue that "you

ought to be wise" is a normative truth derivable from some other fact that is natural. Assuming that the natural facts are descriptive facts, the ethical naturalist would have to show how, in general, descriptive propositions can serve as premises with true normative conclusions.

The second premise seems to render hopeless the thought that we can evaluate things on the basis of what they are. But evaluating things on the basis of what they are is central to the kind of neo-Aristotelian naturalism I am pursuing here. Rosalind Hursthouse says that ethical evaluations of humans and non-ethical evaluations of plants and animals "both depend upon our identifying what is characteristic of the species in question."[1] In other words, the normative evaluation depends on the descriptive facts of the species: its activities, its life form, and so on. This would be momentous if true. Is the notion that an is statement can underwrite an ought statement even intelligible?

The is-ought gap is an intuitive notion. The problem originated in Hume.

> In every system of morality, which I have hitherto met with, I have always remarked, that the author proceeds for some time in the ordinary ways of reasoning, and establishes the being of a God, or makes observations concerning human affairs; when all of a sudden I am surprised to find, that instead of the usual copulations of propositions, is, and is not, I meet with no proposition that is not connected with an ought, or an ought not. This change is imperceptible; but is however, of the last consequence."^[(*A Treatise of Human Nature* book III, part I, section I).

Hume is often credited with (or blamed for) insisting that an 'ought' can never be derived from an 'is.' Arnhart and MacIntyre argue that Hume himself allows for a kind of inference from "is" to "ought" in other places.[2] I think Moore is the one to blame (or to credit).

The point is that when it comes to human evaluations, 'is' statements may be interesting but they are useless for practical purposes. Just because "most men wear tuxedos to the Oscars" does not mean that, if I am undecided as to what to wear, "I ought to wear a tux." Just because all human cultures have farmers or hunters who gather food doesn't mean I ought to become a farmer or hunter.

Yet, if we are keeping ourselves to naturalistic accounts of the human life form and human activities, 'is' statements seem to be all that is available. A detailed and scientific description of human nature could hope to supply a "descriptive ethics" that narrates what such-and-such a culture approves of or finds worthwhile compared to what they find worthless and reprehensible. At its best, a descriptive ethics might be able to identify universal moral approbations and disapprobations. For example, there seems to be a universal (cross-cultural) disapprobation for continual drunkenness.

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1. Rosalind Hursthouse, *On Virtue Ethics* (Oxford University Press, 1998), chap. 10, abstract.

2. Larry Arnhart, "The New Darwinian Naturalism in Political Theory," *American Political Science Review* 89, no. 02 (1995): 389–400; Alasdair MacIntyre, "Hume on Is and Ought," *The Philosophical Review*, 1959, 451–68

While habits and attitudes toward drinking alcohol vary dramatically from culture to culture, even cultures (like the Bolivian Camba) that drink regularly and drink heavily disapprove of continual drunkenness.[3] Such insights might be quite interesting, but the is-ought gap reminds us that they are a far cry from *ethical* insights.

Elizabeth Anscombe is a neo-Aristotelian who is not very optimistic about deriving norms from facts. She mentions that one might:

> look for 'norms' in human virtues: just as man has so many teeth, which is certainly not the average number of teeth men have, but is the number of teeth for the species, so perhaps the species man, regarded not just biologically, but from the point of view of the activity of thought and choice in regard to the various departments of life-powers and faculties and use of things needed- "has" such-and-such virtues: and this "man" with the complete set of virtues is the "norm," as "man" with, e.g., a complete set of teeth is a norm.[4]

She's not very optimistic about this possibility because she does not think this sort of norm that can be derived from observation is likely to result in the kind of morally robust notion of justice that we might want. It's the descriptive norm of justice, she says, is likely to result in a sort of dog-eat-dog notion of "justice" like Thrasymachus held.

This is the is-ought objection to ethical naturalism, in a succinct outline. I do think the is-ought gap is fatal to some forms of ethical naturalism, specifically those that defend a notion of "bald" nature (which notion I will explore in a later chapter).

Natural norms

There is a second and more promising path for neo-Aristotelian ethical naturalism to take. That is to start with basic, scientifically respectable natural norms. I call this notion "natural normativity", following Philippa Foot. Some features of nature are properties she calls 'natural goodness' or 'natural defect.' About such qualities, she says:

> ...we might equally have been thinking in terms of, say, strength and weakness or health and disease, or again about an individual plant or animal being or not being as it should be, or ought to be, in this respect or that. Let us call the conceptual patterns found there, patterns of natural normativity.[5]

Natural normativity is an indeterminate concept. The way that Foot uses it she means that normativity exists wherever organic life is found. Wherever

3. "It is important to realize that drinking problems are virtually unknown in most of the world's cultures, including many where drinking is commonplace and occasional drunkenness is accepted." Dwight B Heath, "Sociocultural Variants in Alcoholism," *Encyclopedic Handbook of Alcoholism*, 1982, 426–40.

4. G. E. M. Anscombe, "Modern Moral Philosophy," *Philosophy* 33, no. 124 (1958): 1–19 14-15.

5. Philippa Foot, *Natural Goodness* (Oxford University Press, 2001), 38.

evaluative properties like health and disease appear, there are real instances of natural goodness and natural defect, then some evaluative properties are *primary qualities of nature* just like weight, color, size, relations of time and space, and so on. There is another sense in which 'natural normativity' is used by neo-Aristotelians like John McDowell. The neo-Aristotelians are of two minds about which sense is a more promising foundation for ethics. Where they agree, though, is in thinking that natural norms overcome or rather undercut the is-ought gap.

1. If ethical naturalism is possibly true, then some natural facts are genuinely both normative and natural – there are natural norms.
2. But there are no facts that are genuinely both normative and natural – there are no natural norms.
3. Therefore, ethical naturalism is not possibly true.

This argument like the first one sets out a criterion that ethical naturalism must satisfy. Namely, ethical naturalism must offer an account of some natural norms that are both real and brutely natural, not derived from other (descriptive) facts. The second premise says that all norms are non-natural and all nature is non-normative. So it seems to be impossible to be an ethical naturalist.

Everything depends on whether or not nature consists of merely non-normative facts. I will grant that nature consists of merely *natural* facts. Nature only consists of natural facts is a tautology. I do not grant, without argument, that all facts are descriptive and not normative; that would be to allow my opponent to beg the question. Of course, to stipulate that there are natural norms would beg the question in my own favor. Instead, I will argue that there are natural norms. If the only response to my argument is to insist that, by defintion, all nature is non-normative, then I can return to this point and indict my opponent of begging the question.

So our first task is to supply an adequate defense of the existence of natural norms. Even if such a notion can be defended philosophically and scientifically, we should remember that all that logically follows is that ethical naturalism is possibly true. What we need, beyond mere possibility, is to defend in general natural normativity and then to apply patterns of natural normativity and how these form binding ethical normative structures.

III. The Case for Natural, Organic Norms

So far, all that I've said is that the neo-Aristotelian ethical naturalist denies this premise that all of nature is non-normative or purely descriptive. I'd now like to give some examples of natural norms and spell out the two different neo-Aristotelian strategies.

Let's first start with natural normativity as a broad concept that undercuts the is-ought gap. I'm going to distinguish between formal and teleological normativity, between structures and their functions. We might call these facts of life forms or natural kinds, and teleological or functional facts. My argument is that formal facts (natural kinds) and teleological facts (natural functions) are both instances of natural norms.

Nature is full of kinds; sunflowers are not oxygen; stars are not organisms; lead is not gold; water is not soil; and so on. Kind concepts allow us to both distinguish x from y and to gather together all the x's. Zebras and

horses are both Equidae; lead and gold are both elements; ice and the sea and steam are all water. Thinking in kind categories is intuitive and natural.[6] Thinking in categories is probably inevitable, a constituitive feature of thought.

Nature is also full of end-directed activity. Each thing does its own thing: sunflowers grow toward the sun, wolves hunt deer and deer flee wolves; hearts pump blood and eyes see; the sun warms the planet; phyoplankton oxygenates the atmosphere. Such processes are non-intentional end-directed processes. Non-intentional processes are sometimes called 'teleonomic.'[7] Teleonomic phenomena do not have a *director* but they do have a *direction.*

Kinds and their ends can be conceptually distinguished but not very far. Forms and functions, structures and activities, are two aspects of one thing. Is the hip bone shape adaptive for a purpose or is the purpose conducive to the development of such-and-such shape? Lewens says that the folk biological conception of a kind is a "teleo-essence", a thing with an end.

What are we to make of kinds and their teleonomic behaviors? The explanations may be either realist, reductionist, or anti-realist. Realist explanations argue that kinds and their ends are what they seem to be: fundamental facts of nature. Reductionist or anti-realist explanations argue that kinds and their ends are not what they seem. The nihilist argues that kinds don't exist, there is only one thing; ends don't exist, there is only one mechanical kind of process. The reductionist argues that *some* kinds exist, but they do not correspond to our initial scientific categorization; and *some* end-directed teleonomic processes are real but it is reducible to non-end-directed processes.

Foot

Let's begin with Philippa Foot. Foot argues that human virtues are instances of a broader class of natural properties: 'natural goodness.'[8] To earn an audience for her argument, her first chapter (which she call a "fresh start") clears away some shaky assumptions inherited from Hume and Moore. Instead of treating human valuations as sui generis, a miraculous new appearance in the cosmos that only appears with the existence of humans, that we should expand our scope to examine our status as natural entities. She is well aware that her offering is likely to offend the ears of some listeners. Her defense is the thought (drawn from Wittgenstein) that crude beginnings are often a necessary first step on the way to something refined.

6. Susan A Gelman and Lawrence A Hirschfeld, "How Biological Is Essentialism," *Folkbiology* 9 (1999): 403–46; Stefan Linquist et al., "Exploring the Folkbiological Conception of Human Nature," *Philosophical Transactions of the Royal Society of London B: Biological Sciences* 366, no. 1563 (2011): 444–53.

7. Ernst Mayr, "The Idea of Teleology," *Journal of the History of Ideas* 53, no. 1 (1992): pp. 117–35.

8. Foot, *Natural Goodness*; cf. Sanford S Levy, "Philippa Foot's Theory of Natural Goodness," in *Forum Philosophicum*, vol. 14, 1, 2009, 1–15.

The kind of "shaky assumption" she means is this: Moore assumed that "good" was the ultimate ethical predicate under review. By contrast, she argues that statements like "pleasure is good" are not good paradigms for philosophical reflection. Evaluation of human creatures and evaluation of plants and animals follow *the same logical pattern.* In such evaluations, good is good *for.* Contrast 'good' with other predicates like 'red' or 'beautiful.' In a statement such as 'the house is beautiful', the predicate 'beautiful' doesn't need a complement. The house is *beautiful* – full stop. But 'good' has a different logical function. 'Good' is more like 'useful.' The phrase 'The house is useful' *does* need a complement. When we say 'the house is useful' we must specify what it is useful for – *for a mom of six, or useful for an artist,* or what have you. Likewise, 'good' always means *good for someone* or *for something.* 'Good' always needs a complement. If this crude beginning is anywhere near to correct, we can distance ourselves from Moore's starting point and build on another starting point: the life-form of human beings.

In this Foot agrees with Thompson's groundbreaking work.[9] Thompson argues that the concept of "life" is not, as it may seem to some, a property of some beings where *being* is the fundamental concept; rather "life" is a fundamental concept.[10] He says, "Vital description of individual organisms is itself the primitive expression of a conception of things in terms of 'life-form' or 'species', and if we want to understand these categories in philosophy we must bring them back to that form of description."[11] When we observe and examine living things we rightly employ some shared categories and our conclusions rightly share a logical structure. What is that common structure? Thompson reviews and refutes a variety of crude definitions of life such as that anything that is alive reproduces, grows, metabolizes, etc. Such properties may be co-extensive with the property of being alive, but they are wildly insufficient for the task of *defining* life because such properties depend on a prior understanding of life. Thompson's alternative is that life is a fundamental concept.

Once we accept the intuitive conclusion that life is a fundamental concept (along with 'being', 'quantity' and others) then the argument gets interesting. For every individual living being is a member of a species or life-form. And living beings are not just *acted upon*; they *act.* Species have characteristic actions. Thompson says "action in this sense is a specific form of *life process.*"[12]. Since a particular species engage in particular activities, there are life-form specific *failures* to act. Different life-forms are subject to different normative appraisals.

Now, humans are certainly a unique *kind* of living being with a unique life-form – the biggest difference is that we engage in rational practice. And we shall examine more what difference the differences make. But for now, the point is to identify the broader class of natural properties to which

9. Michael Thompson, "The Representation of Life," in *Virtues and Reasons*, ed. Lawrence Hursthouse Rosalind and Warren Quinn (Oxford: Clarendon Press, 1995), 247–96. Thompson works out the arguments of this article more fully in his 2008 monograph.

10. Michael Thompson, *Life and Action* (Harvard University Press, 2008), chapter 1.

11. Ibid., 57.

12. Ibid., 27.

'natural goodness' belongs. We ought not assume, at the outset, that 'good' and 'bad' are sui generis evaluative properties "in people's heads" as it were; a more reasonable starting place is to assume that such terms are relative to natural kinds especially life-forms. Foot concludes that this point holds about "goodness and badness, and therefore about evaluation in its most general form."

By introducing the term 'natural normativity', Foot is insisting on a point that is both interesting and controversial. If evaluative properties like health and disease are really instances of natural goodness and natural defect, then some evaluative properties are *primary qualities of nature*. Still, McDowell and others will object to this characterization of natural normativity, in part because they think it "queer" that nature should exhibit such properties, and partly because they think it more comfortable to assume that human beings are the only evaluators.

The response to this worry, in part, is to insist that the natural goodness under discussion is not just a human ascription but seems to be something humans *recognize* in all living things. Certainly, some properties are human ascriptions only. Other properties are in the world and only show up in human ascriptions insofar as we accurately reflect the facts. Foot's point is that *some* instances of natural goodness seem much more pluasibly instances of this latter kind. For, there is "no change in the meaning of 'good' between the word as it appears in 'good roots' and as it appears in 'good dispositions of the human will.'[13] The identification of what is *good for* a non-human organism is sometimes identical to the identification of what is *good for* a human being. Foot's theory explains this in the simplest way; by contrast, McDowell and those who would draw a sharp contrast between"moral" and "non-moral" uses of the term must give long and sophisticated explanations for why it makes sense to describe a healthy plant and a moral person both as "doing well." The plant is not just doing well *for my garden* but doing well as itself. It is doing what such plants are supposed to live. The human being is not just living well *for a westerner* or *for a Californian* but doing well as what human beings are supposed to live. Rosalind Hursthouse articulates Foot's basic point in this way:

> The starting point is an idea that she has never lost sight of, and which figures in her early attack on Hare. It is the idea that 'good', like 'small', is an attributive adjective. What that entails is that, although you can evaluate and choose things according to almost any criteria you like, you must select the noun or noun phrase you use to describe the thing you are calling good advisedly, for it determines the criteria of goodness that are appropriate. Hare can call a cactus a good one on the grounds that it is diseased and dying, and choose it for that reason, but what he must not do is describe it as a good cactus, for a cactus is a living thing. He can describe it as a good 'decorative object for my windowsill' or 'present to give my detestable mother-in-law', but not as a good cactus.[14]

The 'good' in question here is not a transcendent platonic form of good. It is rather the good-of-a-kind. It is sensible to assume that the good-for-

13. Foot, *Natural Goodness*, 39.
14. Hursthouse, *On Virtue Ethics*, 195.

us is an instance of the good per se, and so the metaethical question of whether anything is good-per-se is important. Blackman argues that there *is* no good other than goods of kinds.[15] Blackman also disputes the kind of biological foundation of ethics I am trying to defend here. Nevertheless, his article is a good introduction into the sort of "kindism" being discussed. The good-of-a-kind analysis works for all organisms and all biological species, which are natural kinds, rather than social groups, which are not. *Why* this should work is a quite different matter.I shall not be discussing the good simpliciter, but only the good-for-us. While my thesis identifies what is good for us as an instance of something *truly good,* it remains agnostic about the broader metaphysical or cosmic significance of the fact.

A Novel Case from Generics

What are the odds that "identifying what is characteristic of a species" can license normative judgments? The odds are quite good, I think. My case for natural normativity depends on two notions: the first is a minimal scientific realism.[16] The second basic notion is a little-utilized feature of language called "generic propositions," which I shall explain below. The case in brief is this:

1. If some generic statements describing natural entities are true, then some facts are both genuinely natural and normative – there are "natural norms."

15. Reid D. Blackman, "Meta-Ethical Realism with Good of a Kind," *European Journal of Philosophy* 23, no. 2 (2015): 273–92

16. While scientific realism is not uncontroversial per se, my intended audience are committed scientific realists or sympathetic to realism. By minimal scientific realism, I mean something quite general, such as the belief that most sciences, when successful, describe the world. Thus, Anjan Chakravartty: "Scientific realism is a positive epistemic attitude towards the content of our best theories and models, recommending belief in both observable and unobservable aspects of the world described by the sciences. This epistemic attitude has important metaphysical and semantic dimensions, and these various commitments are contested by a number of rival epistemologies of science, known collectively as forms of scientific antirealism... Metaphysically, realism is committed to the mind-independent existence of the world investigated by the sciences. This idea is best clarified in contrast with positions that deny it. For instance, it is denied by any position that falls under the traditional heading of 'idealism'... Semantically, realism is committed to a literal interpretation of scientific claims about the world. In common parlance, realists take theoretical statements at "face value". According to realism, claims about scientific entities, processes, properties, and relations, whether they be observable or unobservable, should be construed literally as having truth values, whether true or false...Epistemologically, realism is committed to the idea that theoretical claims (interpreted literally as describing a mind-independent reality) constitute knowledge of the world." Cf. Anjan Chakravartty, "Scientific Realism," in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, 2015. McDowell, as a sort of idealist, will deny this minimal scientific realism in favor of something a bit more idealist, as we shall see.

2. Some generic statements describing natural entities are true.
3. Therefore, some facts are genuinely both natural and normative – there are "natural norms."

The Special Logic of Generics

Michael Thompson is one of the first to work out "the special logic of judgments we make about living things, and then to indicate its application to ethics." Such judgments have a variety of names in the recent neo-Aristotelian literature: the most common are "Aristotelian categoricals"[17] and "natural-historical judgements,"[18]; less common are "norms,"[19] or "bare plurals."[20] I prefer the shorter and less adorned term 'generic.[21]

My postulate is this: **some generics about human beings are true.** If this is true then, I shall suggest, we have good hope of cutting up nature at the joints. When combined with a moderate scientific realism, generic truths from sciences such as biology, physics, and anthropology (and perhaps others) support a modest natural normativity which will be further articulated (in a later chapter) to indicate which traits are virtues or vices for human beings.

Generics in general: neither universal nor particular

Now, what are generics? "A fine question, but a difficult one," Andrew Bailey says. His recent paper provides a helpful (and humorous) introduction to the topic of generic statements:

> Start with this sentence: 'Buddhists are way into meditation'. This first sentence is, let us suppose, true. So far so good. But is it equiv-

17. Foot, *Natural Goodness*.

18. Thompson, "The Representation of Life"; Thompson, *Life and Action*.

19. Anscombe, "Modern Moral Philosophy.

20. Greg N Carlson, "A Unified Analysis of the English Bare Plural," *Linguistics and Philosophy* 1, no. 3 (1977): 413–57. Carlson's essay is an early attempt to account for a variety of linguistic forms under one concept of reference to kinds

21. Cf. Francis Jeffry Pelletier and Greg N Carlson, *The Generic Book* (University of Chicago Press, 1995); Sarah-Jane Leslie, "Generics: Cognition and Acquisition," *Philosophical Review* 117, no. 1 (2008): 1–47; Andrew M Bailey, "Animalism," *Philosophy Compass* 10, no. 12 (2015): 867–83 for a discussion of a specific generic: "we are animals" in metaphysics and philosophical anthropology; Andrei Cimpian, Amanda C Brandone, and Susan A Gelman, "Generic Statements Require Little Evidence for Acceptance but Have Powerful Implications," *Cognitive Science* 34, no. 8 (2010): 1452–82 for an experiment in cognitive psychology that seeks to quantify the prevalence levels at which subjects tend to agree to generics, i.e., how many birds have to lay eggs before we agree to the assertion that "birds lay eggs"? Manfred Krifka, "Bare NPs: Kind-Referring, Indefinites, Both, or Neither?" in *Semantics and Linguistic Theory*, vol. 13, 2003, 180–203; Ariel Cohen, "On the Generic Use of Indefinite Singulars," *Journal of Semantics* 18, no. 3 (2001): 183–209.

> alent to 'for every x, if x is a Buddhist, x is way into meditation'? It does not appear to be. For the second sentence might be false (some Buddhists might not be way into meditation) even if the first sentence is, as we have supposed, true. The first sentence could be true, somehow, even if not all Buddhists are way into meditation (similarly, 'ducks lay eggs' may be true even if not all ducks lay eggs, 'mosquitos carry dengue fever' may be true even if only a very few mosquitos carry that virus, and so on). We are now positioned to observe one curious property of generics: they admit of exceptions.[22]

Thus, generics are statements of the form "S is F" or "S has or does F" where S is not an individual but a class or natural kind. The logical form of "all S's φ" does not predicate φ-ing to all members of the category S without exception, nor does it simply assert that some "S's φ", which is true but uninteresting. For example, consider the statement "all wolves hunt in packs." Logically, the proposition expressed in this statement is neither strictly universal nor strictly particular. It is not a strictly true universal judgment (for rabid wolves hunt alone, and injured, or very old wolves don't hunt at all). Furthermore, it is true but trivial that *some wolves hunt in packs*.

A generic is interesting because it is, or we treat it as, a truth about forms, or species. The subject of the statement is not all S's nor merely some S's, but the "infima species."[23] In this way, generics pick out what we might call formal facts, facts about the life form in question. Thus Sarah Leslie: "It is widely accepted that [definite] generics are singular statements which predicate properties directly of kinds. For example, "tigers are extinct" predicates the property of being extinct directly of the kind Panthera tigris, and would be true just in case Panthera tigris had the property of being extinct."[24]

Generics are not merely statistical regularities. The members of extinct species do not exhibit any properties at all, yet it is still true in some sense that *the species* is extinct. Likewise, all the living members of a species might fail to exemplify its formal attributes. Consider the fact that "California condors can fly for hours without resting."[25] In 1987 there were only 27 known condors alive. One could easily imagine a scenario in which every living member of such an endangered species were too injured, old, or diseased to exemplify this attribute. It would be strictly false of the individual condors that any of them could fly for hours; nevertheless the generic would still be true that "condors" (as a class) *can* fly for hours.

McDowell thinks that such exceptions are a "logical weakness" in deriving ethical conclusions from generics about human beings. He cites the example from Anscombe (and Aristotle) that "humans have 32 teeth", saying "there is a truth we can state in those terms, but from that truth,

22. Bailey, "Animalism," 869.

23. Christopher Toner, "Sorts of Naturalism: Requirements for a Successful Theory," *Metaphilosophy* 39, no. 2 (2008): 222. "Infima species" is the narrowest cut in a genus-species tree, or the most determinate determinable.

24. Leslie, "Generics," sec. 1.

25. Jeffrey P. Cohn, "Saving the California Condor," *BioScience* 49, no. 11 (1999): 864–68.

together with the fact that I am a human being, it does not follow that I have 32 teeth. (In fact it is false)."[26] McDowell accepts that generics are generally true. His objection to their application seems to be that the relation between a normative expectation and reality fails to reach deductive certainty. If this is his objection, it rather misses the point. Aristotelian-categoricals are not half-hearted universal judgments trying (but failing) to reach deductive certainty. They are judgments of a logically different kind. Far from being a logical weakness, generics are what enable us to capture truths about natural kinds that help explain statistical variation and inconsistency.

Prasada says that, "Much of our conceptual knowledge consists of generic knowledge — knowledge about kinds of things and their properties."[27] We can approach generics through a "formal, quantificational" semantics or through "principled connections". Principled connections support formal explanations, normative expectations, and a statistical expectation of prevalence. In other words, we explain that the dog has four legs *because* it is a dog (formal explanation); we expect that Fido should have four legs *unless something is wrong* (normative expectations); and we expect that if we counted up a population of dogs, *most* dogs would in fact turn out to have four legs (statistical expectation). Generic truths, once discovered, set a "normative expectation" by which we evaluate individual members on how well or badly they exemplify their life form.[28]

There is much to be learned about the linguistic features of generics. Leslie distinguishes between indefinite generics such as "tigers are striped" which admits of the specification "that tiger over there is striped" and definite generics such as "domestic cats are common" which does not admit of specification, "that domestic cat is common". Indefinite generics are trickier: "Ducks lay eggs" is a true generic," while "ducks are female" is false, yet it is only the female ducks who ever lay eggs. "Mosquitoes carry the West Nile virus" is true, and "books are paperbacks" is false, yet less than one percent of mosquitoes carry the virus, while over eighty percent of books are paper backs."[29] Still, despite these unexplored frontiers, their use and acquisition is actually very familiar.

Generic truths are acquired via a normal scientific means of empirical observation, rational reflection, and discussion.To use a silly example, suppose that someone from a warm and landlocked country has never heard of penguins before. This person visits a zoo and sees penguins for the first time. He notices that these astonishing creatures are called 'penguins', and appear to be birds (for they have beaks, feathers, lay eggs, emit squawks, etc.). He reflects that most – if not all birds – have many of these macro features. Fascinated, he consults encyclopedias, biology or zoology textbooks, and consult zoologist friends. All these sources confirm the categorization. Although I am not aware of when the first penguin was studied by a modern naturalist, we can easily imagine that it was from observations and reflections such as these that penguins long ago earned an entry in the annals

26. John McDowell, "Two Sorts of Naturalism," in *Mind, Value, and Reality* (Cambridge: Harvard University Press, 1998), 171–2.

27. Sandeep Prasada et al., "Conceptual Distinctions Amongst Generics," *Cognition* 126, no. 3 (2013): 405.

28. Ibid., 3.

29. Leslie, "Generics."

of scientific knowledge. The biological community gave them a scientific name ('sphenisciformes') and began to fill in gaps with a detailed description of their evolutionary history, characteristics, genetics, environments, diet, predators, and so on. The scientific conclusion, upon initial observation, bolstered by reflection, underwrites the initial hypothesis: penguins are indeed birds. This familiar scientific process may not be easy or free of dangers, but it is at least *a familiar scientific process.* Scientists are continually correcting formerly established generics (the notion that all mammals give live birth was thrown into crisis by the platypus) and working to distinguish between the normal and defective traits of a species.

This familiar process is certainly revisable. For example, an ethologist who discovers a wolf hunting along may have a "normative expectation" that the wolf is not healthy. But she cannot know certainly in advance that this is so. She must test the hypothesis. A few reasonable interpretations are available: perhaps the lone wolf is unhealthy; perhaps the initial generic that 'wolves hunt in packs' was false; or perhaps this wolf is actually a new species of wolf. As it happens, in the case of wolves, no known species of wolf hunts alone so there is very strong reason to conclude that a lone wolf is rabid. But the point more generally is that generics are acquired and modified by a familiar, if complicated, process of scientific reasoning. Michael Thompson points out that: there is a "general and thoroughgoing reciprocal mutual interdependence of vital description of the individual and natural historical judgment about the form or kind."[30] Put differently, Micah Lott says:

> At each stage of an empirical investigation, our observations are mediated by our current understanding of the life form whose members we are observing. At the same time, our observations of those individual members will in turn improve our understanding of the life form itself, which then makes possible even more accurate and extensive future observations.[31]

Again, the fact that generic truths are revisable is not a weakness but a strength of the case I am building. It may be, for all we know, that penguins can fly (in the air), that some species of penguin can fly, or that all penguins are really just defective birds. But the most reasonable belief thus far is the generic truth that penguins don't fly; that they are excellent swimmers, not defective flyers; and that these truths hold of penguins *as a kind* – a biologist or zoologist who discovered the first flying penguin would become (justifiably) famous because we would all be (justifiably) surprised.

Generics are teleological

The first kind of natural normativity I am defending is the mere idea of a life-form. Knowing what a thing is, knowing about its species or life-form, is to know something descriptive and something normative about any member of that species. Knowing what a thing is, furthermore, licenses a range of normative expectations. But we can make the case for natural

30. Michael Thompson, "Apprehending Human Form," *Royal Institute of Philosophy Supplement* 54 (2004): 52.

31. Micah Lott, "Moral Virtue as Knowledge of Human Form," *Social Theory and Practice* 38, no. 3 (2012): 414.

normativity stronger. There is another, related kind of normativity in the natural teleological features of life-forms. Such natural teleology is also capture in generic propositions.

To see this second kind of natural normativity, begin with the concept of a function. Eyes perform the function (in an organism) of seeing, hemlock trees perform the function (in an ecosystem) of shading rivers, and so on. Thompson, for example, cites the scientific observation that "flowers have blossoms of such-and-such type in order that such-and-such insects should be attracted and spread their pollen about."[32] Now, Mayr calls such processes "teleonomic" in order to leave open the question of whether they are genuinely teleological.[33] For my purposes, however, even teleonomic processes would count as instances of natural normativity. Barham clarifies the notion of natural teleology in this way:

> By "teleology," I have in mind such words and concepts as "purpose," "end," "goal," "function," "control," and "regulation," as well as the real-world biological phenomena to which these words and concepts refer. This means that the word "teleology" should always be construed here in its internal or "immanent" sense—purposiveness existing in living beings themselves—and never in its external or "transcendent" sense of an overarching cosmic principle.[34]

Taken broadly, then, the first point is to realize that talk about functions and ends is just as scientific as talk about life-forms, species, and natural health or disease. As Mark Perlman says:

> Many objects in the world have functions. Some of the objects with functions are organs or parts of living organisms... Hearts are for pumping blood. Eyes are for seeing. Countless works in biology explain the "Form, Function, and Evolution of ..." everything from bee dances to elephant tusks to pandas' 'thumbs'. Many scientific explanations, in areas as diverse as psychology, sociology, economics, medical research, and neuroscience, rest on appeals to the function and/or malfunction of things or systems.[35]

Generic propositions usefully capture the functional or teleological properties of natural organisms. As Chris Toner says, "natural-historical judgments readily admit of combination into teleological judgments."[36] This kind of combination of generic truths is very familiar. No sooner have I learned the formal facts about a penguin (that it is a bird, that it can swim, that it has a countershaded white belly and dark back etc.) do I learn that *penguins are countershaded in order to avoid predators from above and*

32. Thompson, *Life and Action*, 293–94.

33. Mayr, "The Idea of Teleology."

34. James Barham, "Teleological Realism in Biology" (PhD thesis, University of Notre Dame; Web, 2011), 1.

35. Mark Perlman, "The Modern Philosophical Resurrection of Teleology," *The Monist* 87, no. 1 (2004): 1–4.

36. Toner, "Sorts of Naturalism," 222.

below.[37] Since an individual penguin may fail to be countershaded in the way that expresses its form, it would be defective. This defect is not a judgment made by scientists and "imposed" as it were, from the outside, on the penguin; but a normative fact about the penguin. As Hursthouse says, "Wolves hunt in packs; a 'free-rider' wolf that doesn't join in the hunt fails to act well and is thereby defective."[38]

We should add that generics express the formal and functional features of natural entities *when they are mature.* It is a normal – indeed universal – fact of organisms that they grow and develop and mature according to the life process of their particular species. Before maturation, we might say, the formal and functional properties in question exist merely potentially. For example, a wolf that cannot hunt might be injured, ill, or simply young. Similarly, eyes that cannot see might be injured, ill, or simply developing.

Nevertheless, it is true that "eyes see". In discovering and expressing the simple generic truth that "eyes see", we abstract away from the processes of maturation and development to pick out a fact that is true of all eyes that are normal and have had enough time. This is a descriptive, judgment that is also a normative judgment – without changing our meaning we could say that fully developed eyes are *supposed to* see, *ought to* see – or just that *eyes see.*

IV. Three Paths Forward

In my overall argument, generic truths are intended to serve as a counterexample to premise 2 of the **Bald Nature Challenge** above. That challenge asserted that no facts are genuinely both natural and normative. Generics are both genuinely natural and normative: natural, in that a large percentage of scientific knowledge consists of scientists predicating generic truths of natural kinds; normative, in that the life-form in question is one which an individual may or may not "live up" to, and in that *some* generics pick out natural functional or teleological facts about life forms (that penguins are counter-shaded *to avoid* predators, that hearts are *for* pumping blood, etc.). On my view, accepting the straightforward, generic truths delivered by such sciences about forms and functions is quite simply the respectable thing to do.

But it seems to me there are three paths forward: reject, reduce, or accept Organic Teleology.

Reject

The first path is to reject generic truths about species and their formal and functional characteristics. Probably, those who are tempted to reject natural teleology believe there are no *ends* (τελοι). Call this view teleological nihilism.[39] Teleological nihilism claims as its evidence "*modern science" as a whole.* Abandoning the search for natural teleology was a harbinger of modern science; Francis Bacon and others believed that the search for final

37. A shark looking up may miss a penguin, because its white belly blends in with the sunlight surface waters; a shark looking down may miss a penguin, because it blends in with the pitch dark waters of the abyss.

38. Hursthouse, *On Virtue Ethics*, 201.

39. Also called teleological eliminativism.

causes corrupted science. So, if best science tells us that nature is *only* descriptive, natural normativity is dismissed out of court.[40] In fact, natural sciences and the experimental, empirical methods that advance them have progressed far more than anyone could have dreamed. In part, this success is the result of giving up magical thinking.

The proper reply to Bacon is that the teleological nihilism hypothesis has been tried and found wanting. Animals, plants, and all living things exhibit end-directed or teleonomic behavior: eyes see, hemlock trees offer shade to fish, stomachs digest, deer leap to avoid predators. Even when Kant denies natural teleology – the biological theory that the form of an organism causes the parts to grow and relate to each other in a particular way – he admits we *cannot help thinking so*.[41]

Things are even clearer when it comes to natural kinds and generic truths about species. If we accept scientific realism of any form, we cannot deny that some generics are true. It is probably true that if we accept *any* form of conceptual knowledge, we are probably implicitly already committed to the truth of some generics, for much of our conceptual knowledge consists in generics.[42]) Animals, plants, and all living things belong to species, and our knowledge of them consists of generic truths about not just individuals but that species. A species involves a defined range of potential attributes that normally come to be actualized over time. An individual hemlock tree may or may not shade any fish in any rivers, but it may in time; or it may never do so, but it is still a scientific insight that that is one thing 'hemlock trees' in general do.[43]

Hence, to reject *all truths* about natural kinds and natural functions, I contend, is untenable. If we suppose for *reductio* that no generic statements are true, then not only do we reject natural functional talk but natural formal talk. If all generics are false (or only conventionally true) then it is in some important sense false that 'wolves hunt in packs' and false even that 'penguins are birds'. It is false not only that "eyes see" but even that "humans are primates". Such denials are, I think, absurdities.[44] If we

40. Cf. Bacon, *New Organon*, Book I. XLVIII "Although the most general principles in nature ought to be held merely positive, as they are discovered, and cannot with truth be referred to a cause, nevertheless the human understanding being unable to rest still seeks something prior in the order of nature. And then it is that in struggling toward that which is further off it falls back upon that which is nearer at hand, namely, on final causes, which have relation clearly to the nature of man rather than to the nature of the universe; and from this source have strangely defiled philosophy."

41. Philippe Huneman, "Naturalising Purpose: From Comparative Anatomy to the 'Adventure of Reason'," *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences* 37, no. 4 (2006): 649–74.

42. Prasada et al., "Conceptual Distinctions Amongst Generics."

43. Compare with Thomas Nagel's point that some "laws of nature would apply directly to the relation between the present and the future." Thomas Nagel, *Mind and Cosmos* (Oxford University Press, 2012) 93.

44. That is not to say that the denial is not worth considering. It might well be true. My point in calling the denial 'absurd' is to say that if it is true, an absurdity is true. If it is true, then the truth is absurd.

accept the truth of at least some generics, then Perlman's surprise is well founded: "It is surprising that analytic philosophers, with their strong focus on science, would reject a notion that is so central to some areas of science, most notably, biology and engineering sciences... Biology cannot, or at least in practice does not, eliminate functions and purposes."[45] The great cost of throwing out generics *as a class* is that we would seem to have to throw out many scientific statements in biology, organic chemistry, anthropology, psychology, sociology, economics, anatomy, and medicine.

The notion that some of nature is normative – or that some norms are natural – is not only a good logical explanation of the natural phenomena of biology but also a good *scientific* explanation. While natural teleological realism is still controversial, it is not a controversy between science and philosophy but a controversy *within science*. It is a legitimate discussion between scientists of one stripe and scientists of another.

Reduce

The second path is to accept natural teleonomic behavior and even the appearance of natural teleology, natural functions, etc., but to *reduce* these phenomena to less spooky (read: more mechanistic) terms consistent with a conception of bald nature.

Now, arguing for or against teleoreductionism has become a cottage industry.[46] It is impossible to do justice to the complexity of the dialectic here. I will content myself to note, and critique, two popular forms of reduction: the first reduces biological functions to causal contributions to a system and the second reduces teleonomic biological functions to naturally selected effects. A proponent of the first reduction is Donald Davidson. A proponent of the second is Ruth Millikan. For example, Ruth Millikan argues that an organism's proper function simply cannot be "read off" its capacities at present but must be known via empirical history. Her theory entails the unpalatable conclusion that an organ that is otherwise physically identical to, say, a heart, that was magically apparated into existence would not have a "proper function". She bites the bullet on this.
James Barham argues that neither of these forms of reduction is very promising. Neither alternative is coherent, in his view. The problem with the "causal-role" reduction of teleonomic phenomena is that in order to even posit a hypothesis about how some parts of a system contribute to the achievement of its end or purpose, we must identify *in advance* which parts of the organism play a role in bringing about the end or purpose. But if we already know the causal contribution of those parts, what more could we learn by positing the causal-role theory?[47]

As regards the second form, things are no more promising. While Millikan's theory of "proper function" might be ingenious and might be true of the historical or "etiological" history of present-day functional attributes

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And reality itself might well be absurd. I don't think it is, but there have been many philosophers who have thought so, and such thoughts cannot be justly dismissed without consideration. Since absurdist philosophers are not my primary audience, I simply lay the issue aside.

45. Perlman, "The Modern Philosophical Resurrection of Teleology," 6.

46. Cf. ibid., sec. III; and Barham, "Teleological Realism in Biology," chap. 3.

47. Cf. Barham, "Teleological Realism in Biology., chapter 3.

of organisms, it is irrelevant. The question is not "how historically did present-day function X come to be?" but "is present-day X a function?" One cannot go looking for the etiological history of a functioning organism if one does not already know, in advance, that the organism in question is functioning.

Michael Thompson, too, insists that judgments about natural teleology are made true from the form of life under question, not from "hypotheses about the past."[48] James Barham points out that the problem with Aristotle's views of biology (say, believing that the seat of perception was not in the brain) was not that he lacked knowledge of evolution, but that he lacked adequate knowledge of physiology.

Accept as is

The third option is to accept that some natural facts are intrinsically normative, irreducible, natural facts. Although the very word 'teleology' is liable to sound quaint to modern ears, Barham has argued that 'teleological realism' is a rationally permissible view to take on biology. Indeed, it is making a come-back. For instance, Arnhart persuasively argues that teleology is assumed in medicine.[49] Zammito clarifies its ongoing relevance in biology, since organisms seem to be intrinsically purposeful.[50] Fitzpatrick says that, "While neo-Darwinian evolutionary theory does soundly reject any appeal to teleology in the process of evolution itself, there is a large literature in contemporary philosophy of biology defending the legitimacy of employing teleological concepts in connection with adaptations."[51]

Thomas Nagel has offered one philosophical defense of scientific, Darwinian, natural teleology.[52] Michael Chorost's review of Thomas Nagel's *Mind and Cosmos* reminds readers that natural teleology is not so scientifically heretical as it might first seem. He says:

> Natural teleology is unorthodox, but it has a long and honorable history. For example, in 1953 the evolutionary biologist Julian Huxley argued that it's in the nature of nature to get more advanced over time. "If we take a snapshot view, improvement eludes

48. Cf. Thompson, "The Representation of Life," 293. Christopher Toner adds that judgments about natural teleological facts are made true regardless of the origin of the facts, "whether about creation or natural selection.", Toner, "Sorts of Naturalism," 223. This seems right to me. It does not matter for present purposes *how* the function came to be, just whether or not it really *is* at present.

49. Larry Arnhart, "Aristotle's Biopolitics: A Defense of Biological Teleology Against Biological Nihilism," *Politics and the Life Sciences* 6, no. 2 (1988): pp. 173–229.

50. John Zammito, "Teleology Then and Now: The Question of Kant's Relevance for Contemporary Controversies over Function in Biology," *Studies in History and Philosophy of Science Part* 37, no. 4 (2006): 748–70.

51. William FitzPatrick, "Morality and Evolutionary Biology," in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Spring 2016 (`http://plato.stanford.edu/archives/spr2016/entries/morality-biology/`, 2016).

52. Nagel, *Mind and Cosmos*.

> us," he wrote. "But as soon as we introduce time, we see trends of improvement."...[53]

Chorost argues that Nagel did not "go wrong" in his thesis but in presenting it philosophically without engaging the support from relevant scientific literature. He continues with a few more examples:

> paleontologist Simon Conway Morris, at the University of Cambridge, has argued that natural structures such as eyes, neurons, brains, and hands are so beneficial that they will get invented over and over again. They are, in effect, attractors in an abstract biological space that pull life in their direction. Contingency and catastrophe will delay them but cannot stop them. Conway Morris sees this as evidence that not only life but human life, and human-like minds, will emerge naturally from the cosmos: "If we humans had not evolved, then something more or less identical would have emerged sooner or later.

My point here is that a respectable subset of scientists and others countenance natural normativity in organic nature. Philosophers of various schools (metaphysicians and ethicists) would do well to dialogue with biologists and cosmologists to come to grips with the possibility that our best evidence suggests that there are normative natural life forms and natural ends.

V. Conclusion

The goal of this chapter has been to meet the **Bald Nature Challenge** to Ethical Naturalism stated above. The challenge, recall, was this:

1. If ethical naturalism is possibly true, then some facts are genuinely both natural and normative.
2. But no facts are genuinely both natural and normative.
3. Therefore ethical naturalism is not possibly true.

The conclusion we have drawn is that indeed *some* facts – especially facts about living things – are both natural and irreducibly normative. These are natural formal and functional facts about organic beings and their parts and operations. Such facts are expressed in perfectly respectable scientific judgments we have called "generics" but may also be called "Aristotelian categoricals", "natural-historical judgements", "norms", "bare plurals", etc. Generics like these render it at least *possible* to conclude the the scientific picture of nature includes normativity in the form of natural teleology. If true generics could be stated about human beings, then it is conceivable we can use them as a basis for ethical theory.

A natural norm is a sort of paradoxical notion: it is not just a prescriptive fact or natural 'ought'; these phrases suggest that natural norms apply only to human agents capable of understanding prescriptions and either complying or not complying with them. J. L. Mackie exploits the apparent silliness of the notion that "to-be-pursuedness" is built into things.

53. Michael Chorost, "Where Thomas Nagel Went Wrong," *Chronicle of Higher Education*, 2013.

To natural norm is not a property of things but a relation between things. For example, one type of natural norm might be a relation between a living thing and another object, such as food, shade, or a predator. Given the kind of thing snakes are, and the kind of thing mice are, a mouse is to be eaten by the snake and the snake is to be fled by the mouse.

Of course, I have not yet tried to show *which* true generics about humans can serve as the basis for ethical theory. All I have tried to show is that *some* of these generics are true. By denying the consequent, we are not necessarily affirming the antecedent. That affirmation requires another step, namely, to apply the above argument to human beings. Foot is well aware that the imposition of normativity onto brute nature, or the derivation of normativity from brute nature, is likely to seem absurd:

> The idea that any features and operations of humans could be evaluated in the same way as those of plants and animals may provoke instant opposition. For to say that this is possible is to imply that some at least of our judgements of goodness and badness in human beings are given truth or falsity by the conditions of human life. And even if it is allowed that certain evaluations of this kind are possible—-those vaguely thought of perhaps as 'merely biological'—-there is bound to be skepticism about the possibility that 'moral evaluation' could be like this.[54]

Despite such legitimate worries, we have followed Foot in trying to earn a hearing for this notion by arguing that the "meaning of 'good' in so-called 'moral contexts'" does not have a special logic of its own. Rather, 'good' and 'defective' pick out natural properties of living things. The goodness of a cactus is relative to its cactus nature; the goodness of human beings is relative to their human nature. And that human nature is to be or have the potential to become practical, rational animals. Hursthouse continues:

> When we moved from the evaluations of other social animals to ethical evaluations of ourselves, there was an obvious addition to the list of aspects which are evaluated. The other animals act [as opposed to chemicals which are only acted upon]. So do we occasionally, but mostly we act from reason, as they do not, and it is primarily in virtue of our actions from reason that we are ethically good or bad human beings. So that is one difference that our being rational makes.[55]

The task in discovering true generics about human beings is capturing what is common between us and other animals and what is unique about rational animals. The argument that will help us transition from generics about the biological world in general to generics about human beings and which may provide the basis of normative *ethics* is this:

Human Normativity

1. On ethical naturalism, generics about natural entities are both descriptive and normative (they are natural norms), and hence can be used as premises in arguments with normative conclusions.

54. Foot, *Natural Goodness*, 38.
55. Hursthouse, *On Virtue Ethics*, 217.

2. Humans are natural entities, (there are some *human* natural norms).
3. Therefore, generics about humans are both descriptive and normative, and hence can be used as premises in arguments with normative conclusions.

Establishing premise 1 has been our task in this chapter. Establishing premise 2 is the task for the next chapter.