VIRTUE, REASON, AND TELEOLOGY IN RECENT NEO-ARISTOTELIANISM

DISSERTATION

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ABSTRACT: Neo-Aristotelian ethical naturalism must give an account of each interlocking concepts that constitute a complete ethics and metaethics: virtue, practical reason, human nature, and human flourishing. It must explain how ethical naturalism is both naturalistic (accurately descriptive of the way things *are*) as well as genuinely ethical and normative (giving guidance on the way things ought to be). This dissertation offers such an account.

KEYWORDS: virtue, practical reason, teleology, neo-Aristotelianism, ethical naturalism

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Dedicated to Lindsay, who read every page and discussed every idea. You not only bore our children and bore our suffering away from home, but you bore these ideas first. You are my Diotema and my Socrates, oracle and midwife. As Chesterton said: ”Oh, who shall understand but you; yea, who shall understand?”

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γένοι᾽ οἷος ἐσσὶ μαθών.

Pindar, *Pythian* 2, line 72.

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MW = *Mind and World*

LORUM ipsum.

Chapter 1

The Virtue Triangle

> Not everything that is last claims to be an end, but only that which is best.
>
> Aristotle, Physics 194a 32–33.

Chapter 2

Natural Norms: Organic normativity in 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).

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

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. 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

and Ought," *The Philosophical Review*, 1959, 451–68

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.

> 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 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

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.

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

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.

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.

The kind of "shaky assumption" she means is this: Moore assumed that "good" was

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 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

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.

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 '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.

12. Ibid., 27.

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

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

good-of-a-kind. It is sensible to assume that the good-for-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-

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, re-

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."
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]

alism 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.

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

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 equivalent 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

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.

22. Bailey, "Animalism," 869.

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, together with the fact that I am a human being, it does not follow that I

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.

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

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.

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 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

29. Leslie, "Generics."

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, fur-

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.

thermore, licenses a range of normative expectations. But we can make the case for natural 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 psy-

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.

> chology, 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 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.

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

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

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.

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 causes corrupted science. So, if best science tells us that nature is *only* descriptive, natu-

39. Also called teleological eliminativism.

ral 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]

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 di-

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 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.

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rectly 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. 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.

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 of organisms, it is irrelevant. The question is

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

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]

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.`

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 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 humanlike 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.

`edu/archives/spr2016/entries/morality-biology/`, 2016).

52. Nagel, *Mind and Cosmos*.

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

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. 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:

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

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.
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.

Chapter 3

Practical Primates

> Human nature is normative, such that to be morally good is to fulfill one's nature.
>
> Chris Toner, "Sorts of Naturalism", 221.

I. Introduction

This chapter argues for the truth of the generic proposition that humans are practical, rational animals. This is "human nature", although I don't insist on the traditional locution, for some reject it on aesthetic grounds.

The last chapter argued that ethical naturalism is at least possible: The is-ought gap is no barrier to a successful theory, so long as we can identify natural norms and show how human norms are examples of natural norms. And I argued that generic propositions do allow us to articulate our scientific knowledge about organisms and the organic normativity of natural life forms and functions. What is needed now is to explain how exactly humans

fit into the broader class of natural organisms and inherit the properties belonging to the broader class. If all of organic nature is subject to evaluation according to patterns of natural normativity, and human beings are natural organisms, then the basic idea is that generic propositions about humans would all us to express scientific knowledge about the natural life form and function of humans. These natural human norms would form a firm basis for ethical evaluations of individual human beings. Rosalind Hursthouse states that ethical evaluations of *human beings* "depend upon our identifying what is characteristic of the species in question."[1] The 'characteristic', I take it, is a differentiam determining or defining the human life form, or nature, or archetype.

In brief, the argument in the remainder of this chapter is this:

Normative Human Nature Argument (1) All natural organisms exhibit formal and functional (i.e., teleological) facts which are expressible in generics. (2) Human beings are natural organisms. (3) Human beings exhibit formal and teleological facts which are expressible in generics.

Chapter 2 argued for premise (1). This chapter will argue for (2) and (3).

Natures?

Chris Toner's quotation in the epigraph says that "human nature is normative." I don't instist on the term 'nature'; we could equally say that a genetically modern homo sapiens sapiens is potentially a practical, rational primate. The important thing is not the term 'nature' or 'human nature' but the concept of a nature. What do I mean by a nature or life form?

In the old classificatory schemes, philosophers provided a genus and a differentiam to pick out the unique "nature" of any life form or natural kind. Not every concept of a kind corresponds to a real nature. But when it does, its nature is potentially discernible both by contrasting it with other kinds of things and by comparing it with instances of the same

1. Ibid., chap. 9 abstract.

kind. As Hans Fink explains:

> The nature of x is both what is special about this x and what makes this x one of the x's as opposed to the y's. When x is defined per genus et differentiam both the genus and the differentiating characteristic and their combination could be taken to express what is the nature of x…. Human nature is what differentiates us from the animals and the plants. By nature we are rational beings. Our human nature, however, is also that in virtue of which we belong to the animal kingdom and to the living organisms. By nature we are mammals. We may thus use the concept of nature to differentiate rather than include, but also to include rather than differentiate. And we may use the concept of nature to express that differentiation and inclusion should not be seen as incompatible."[2]

As Fink points out, the concept of a nature gathers and divides. It gathers up all the members or putative members of a kind and divides the kind from other kinds. With this definition in view, we can see what the point of the old formula was, that man was a rational animal, or a featherless biped. There are many animals, but few (if any) other rational ones. There may even be other rational creatures who are not animals: artificial intelligences, gods, Alpha Centurions, archangels, dryads or what have you. But, so far as we know, we are the only rational animals in the cosmos.

Hence, I think this formula, slightly modified, is still the best way of reflecting on ourselves as members of the organic kingdom, as organisms within the evolutionary tree of life, and as physical objects in the cosmos: a human being is (potentially) a practical, rational primate. This simple, generic proposition is astonishingly rich. I shall argue that it captures the facts of our life form and can be demonstrated to be true from within the human point of view, and from outside it; an alien anthropologist studying human beings from its own non-human point of view could discover that humans are practical, rational primates.

If indeed a neo-Aristotelian account can pinpoint the human life form, then it becomes possible to form a hypothesis as to what kinds of attributes will turn out to be human

2. Hans Fink, "Three Sorts of Naturalism," *European Journal of Philosophy* 14, no. 2 (August 2006): 207.

virtues. And just as we can evaluate an individual wolf by reference to its life form, perhaps we can evaluate individual human characters and abilities, human actions and lives by reference to our life form. Virtues are the qualities belonging to creatures like us. Virtues are the human specific goods-of-a-kind. Relatedly, the acquisition of virtues both causes and constitutes the actualization of our life form as practical rational primates. Truly exemplifying our life form constitutes our species-specific flourishing.

The thought is that virtues are commonly supposed to be excellences of human beings. If virtue is "excellence," relative to what is it excellent? The answer can only be that virtues are excellences relative to our nature or life form. They are the traits or qualities that enable us to actualize our life form, to fully express in a life what we are by nature. If what we are by nature is practical, rational primates, then virtues (we can further predict) will be traits pertaining to practical reason and animality.

Furthermore, if our nature is to be practical, rational primates, then we have some vague notion of our natural "function." I shall not go in for the Aristotelian view that the natural work (ergon) of human beings is contemplative science, an activity by reference to which success and failure may be judged. Rather, I shall be more ecumenical: the telos of every life form is, minimally, to do all the activities that constitute its mature flourishing. So we should predict quite generally that the human telos is to become *fully mature* practical, rational primates. The conceptions of human nature (as practical reasoning animals) must be defined in relation to virtue (the excellences of rational practice and practical reason) and to human nature as it could be, our natural telos (to be excellent and mature practical, rational primates).

As a corollary, any traits that deviate from this life form would be defects. Some "defects" would not be moral defects. For example, human speech consists of such-and-such range of individual sounds, such-and-such variety of pitches and voice, physiological and neurological properties of the tongue and the brain, syntactical and grammatical properties

of the natural language, and so on. These generics help us to identify speech disorders such as apraxia, muteness, and stuttering by comparison to a conception of what human speech is like. But some defects would be moral defects. We might be able to identify moral vices in the same way as we identify disorders, mental illness, injury, and so on – by comparison to a conception of what human virtue is.

Spelling out the details of virtue and vice shall be the task for the next chapter. The task in this chapter is to lay the groundwork by defending a conception of human nature according to which humans fit the larger pattern of natural normativity defended in chapter 2. By comparison to the human life form, evaluations of individual human beings is possible. Our task is to provide a conception of human nature that is seamlessly both normative and descriptive. We must first uncover, if possible, a set of scientific generics about humanity, specifying what kind of natural creature human beings are and what kind of characteristic life they live – what kind of life they live "by nature". Such generics, it is hoped, will give us initial insight into the concept and content of virtue, excellence, wisdom, and flourishing, which are our main themes.

The first section spells out the cluster of concepts entailed in the concept of being an animal and the cluster entailed in 'practical rationality.' It argues that observing human behaviors both from "within" and "without" the human point of view allows us to see what is unique about human beings, their capacities, and ends. The second section discusses a variety of objections. It attempts to sympathetically articulate and provide a response to a series of worries philosophers have about the neo-Aristotelian project of grounding ethical evalutions in some normatively loaded conception of human nature. For example, some think that there are no such things as the sort of "natures" as I have described; others think that there are natures but that there is no human nature; others think that human nature comes with no built in teleological boundaries; others think that human nature comes with a few built in teleological boundaries are the ends of reproduction and survival. Each of

these receives an initial rebuttal, though a few of them will require further comment in a later chapter.

II. Animals of a peculiar sort

I said above in proposition (2) that "Human beings are natural organisms." Is this true? On its face, it appears to be an innocent truism. Humans are primates of the chordata phylum who, like every other organism, enjoy a particular evolutionary history, and move about the earth engaging in activities such as reproducing, sleeping, feeding, dying, and so on.

Nevertheless, as it is currently phrased, the proposition can be agreed upon by two very different readers. One sort of reader believes that human beings are *merely* natural; under the guise of merely asserting an innocent truism, this reader would insist that humans are machines made of meat in the same sense that all animals are machines and all of Laplacian nature is a machine. This first sort of reader can acknowledge that the human brain exhibits rarefied neuro-cognitive processes we do not observe anywhere else but would deny that human beings are different in kind. A second sort of reader believes that humans are natural organisms and something more; under the guise of asserting an innocent truism, this reader would insist that human beings are organisms of an altogether different kind. Perhaps human beings are made in the image of God, or have a divine spark, or represent the crest of the wave of evolution. This sort of reader can acknowledge that the human body is a material organism like many others but would insist that the mind is something of a different order – humans are, (in an unforgettable phrase from novelist Walker Percy) "angelic beasts" or "bestial angels".

Rather than pick sides on this issue, I prefer to leave the premise ambiguous. Debating such matters would take us into deep metaphysical waters, while our main goal is to identify, as far as we can, what exactly characterizes our life form only in order to explore whether this examination bears any relevance to the ethics of virtue and vice. My hope is

that calculated indeterminacy on this issue will allow for both kinds of readers to participate in the dialectic regardless of their prior metaphysical commitments.

What both readers agree on is that human beings are (at least) primates – material beings, living organisms, mammals of a pecular sort. This agreement is not so trivial as it might seem. To be an animal entails the presence of several other properties, some of which will be seen below to have potential ethical significance. For example, it entails a particular set of relations with respect to other animals and ecosystems.

I will first spell out a few properties that come along with being an primate, and show how these properties might have potentially ethical significance. Then, I will spell out the properties involved in being practical rational primates.

What we have in common with other organisms

To be an animal is to belong to the "tree of life" — and to have a location in the broader story of life on earth. As Michael Mautner explains, all living things (on earth at least) share common ancestors and even share genetic material. He says:

> …phylogenetic trees indicate that all terrestrial life can be traced to a common ancestor. Organisms as different from us as yeasts share half; mice, over 90%, chimpanzees, over 95%, and different human individuals share over 99% of our genome. These scientific insights give a deeper meaning to the unity of all Life. Our complex molecular patterns are common to all organic gene/protein life and distinguish us from any other phenomena of nature.[3]

While we should not make too much of the genetic similarities between all living things, we should not ignore it.

Zoom out for a moment and consider the human's place in the cosmos. Consider in your imagination that the earth was formed about 4.5 billion years ago; that life arose on

3. Michael N Mautner, "Life-Centered Ethics, and the Human Future in Space," *Bioethics* 23, no. 8 (2009): 434–5.

earth 3.5 billion years ago; and that anatomically modern humans arose on the earth about 200,000 years ago or in the "Late Pleistocene of 120,000 years ago."[4] The first among our species lived in Africa. They emigrated from that landmass and settled in various parts of the globe. In contemporary classificatory scheme, we can locate humans within the phylum chordata, the class mammalia, the order of primates, the suborder haplorhini, the familiy hominidae, the genus homo, the species homo sapiens.

What can we say about such creatures? Firstly, being an animal entails that one was produced by sexual reproduction. Unlike prokaryotic organisms (such as bacteria), all mammals come to be through process of fusing dimorphic gametes, such as ova and sperm cells, into a fertilized zygote. New fertilized zygotes, once generated, grow through a process of cell division found only in eukaryotic organisms, such as fungi, plants, mammals. Meiosis, unlike mitosis, is a process of division leading to the creation of four daughter cells that do not contain the same genetic material as the original. However, in all such organisms it is possible that errors occur in meiosis, which results in genetic defects. The ethical implications of genetic defect in humans is profound, since some genetic defects are associated with common mental illnesses.[5] And mental illness is in turn prevalent among prison populations, or people who are unwilling or unable to conform to the minimum legal and ethical standards of their community.[6] Not all inmates are justly imprisoned, and not all are "bad people"; my point is any reproductive technology which increases the chances of errors in meiosis or mitosis might be ipso facto ill-advised.[7]

4. R. Stephen Brown, *Moral Virtue and Nature: A Defense of Ethical Naturalism* (Continuum, 2008), 102.

5. Jo C Phelan, "Genetic Bases of Mental Illness–a Cure for Stigma?" *Trends in Neurosciences* 25, no. 8 (2002): 430–31.

6. Pamela M Diamond et al., "The Prevalence of Mental Illness in Prison," *Administration and Policy in Mental Health and Mental Health Services Research* 29, no. 1 (2001): 21–40.

7. Diana Lucifero, J Richard Chaillet, and Jacquetta M Trasler, "Potential Significance of Genomic Imprinting Defects for Reproduction and Assisted Reproductive Technology," *Human Reproduction Update* 10, no. 1 (2004): 3–18; JOINT SOGC–CFAS GUIDE-

Secondly, being an animal entails mortality. Life is a process with a beginning and an end; an organism begins life as a tiny zygote and progresses through gestation to infancy, maturation, and adulthood, at which point it may reproduce itself before dying. All of these phases we notice in human animals as well. The human life cycle is characterized by various phases, including growth, language acquisition, puberty, physical maturity and characteristic activities, aging, and death. It should not be a difficult or particularly profound inference that human beings are mortal. However, as we shall see, the value of questioning or attempting to subvert this basic condition is one of the live controversies in bioethics. Furthermore, the question of individual death is part and parcel of the larger question of species extinction. To zoom our perspective out a bit further, we can observe that human beings (like other species) not only have a natural history, and a characteristic natural life cycle, but also a natural destiny — such as extinction, or evolution into a new species, or indefinite preservation through sexual reproduction, or something else. I will pick up this theme in a later chapter.

Thirdly, human beings are animals that have a particular pattern of life. At this point in a description of the human species, the difficulty (I should say impossibility) of separating the biological, behavioral, and social conditions of being a human being becomes plain. For example, humans have 23 chromosomes in each somatic cell, with about 22,000 total genes. Genetic defects, however, wreak havoc on the individual human being. Humans have 32 teeth and an extremely diverse diet of carbohydrates, fats, fiber, minerals, proteins, vitamins, and water: they eat vegetables, red meat, fish, nuts, seeds, berries, fruits, mushroom, mollusks, herbs, and more. However, poor tooth care or poor diet can damage a person's health and lead to illnesses and death.

LINE, "Pregnancy Outcomes After Assisted Reproductive Technology," *J Obstet Gynaecol Can* 28, no. 3 (2006): 220–33.

Humans have opposable thumbs, are bipedal, and walk upright, with heights ranging from 4'7" to 6'3" (plus or minus) and weights range from 120-180 pounds (plus or minus). However, these attributes are fragile. Many illnesses or injuries can render humans immoble. Growth disorders such as dwarfism (under 4'10" in human adults) or gigantism can render a person overly large or overly small relative to the healthy levels capture in these generic propositions.

Apparently innocent descriptions of human animals are inseparable from ethological and anthropological descriptions, which can blend into the normative. The property of being an animal encompasses a whole range of biological and neurophysiological facts that obtain in each normal human being. For example, humans have large brains relative to other primates, with a neocortex and prefrontal cortex that correlate with abstract thinking, problem solving, society, and culture. Genetically modern humans don't just hunt and gather like other animals; they farm, store, combine, ferment, and cook food.

Humans don't just suffer phsyiological responses like fear and excitement or arousal, they wilfully seek out such emotions for themselves through art and entertainment and wilfully cause them in others. Presumably, even an alien anthropologist who knew nothing of human language or "what it is like to be a human" would be able to notice, upon examination, that a human's laugh or cry is different from a hyena's laugh or a crocodile's tears.

Part of the alien anthropologist's examination would be to examine the body, brain, and hands of human beings. One of the first things we can imagine they would notice is that humans live in cultures and societies. They are not merely "social animals" like apes; they are language-users, communicating in signs and symbols. Their language is an extremely complex, open-ended system which is both recursive (able to nest propositions within propositions) and productive (able to create sentences by potentially limitless combinations of words). In virtue of language and their opposable thumbs, they are creative; they

don't just live on the ground or under ground, but build houses and shelters, sometimes in new places, such as caves, trees, hills, mountains, etc. Also, they are self-reflective. They establish social relations upon biological grounds (some children growing up with natural parents) and upon normative grounds (some orphans growing up in orphanages created by philanthropists).

What is the point of these reflections? I wish to point out just how much we can know about our form of life by appealing to the "objective" or third-person point of view of scientific exploration, data gathering, inductive generalization. Before we examine the ethical significance of these facts, we must explore the peculiar differentiem of our species: practical rationality.

What is peculiar

Practical reason occupies a place of importance in the theories of many virtue ethicists. My primary sources among the neo-Aristotelians have each thematized practical reason in their own way.[8]

I shall use 'practical rationality' and 'practical reason' as synonymous. Warren Quinn uses 'practical reason' to mean the faculty and 'practical rationality' to mean the excellence use of the faculty. In a later chapter, I will contrast the faculty with 'practical wisdom', which is the excellence thereof.[9] I will also defend a robust account of practical reason in relation to theoretical or speculative reason. For now, I shall only offer an initial exploration of what it means to say that human beings are primates who engage in practical reasoning.

8. Cf. Especially Foot, *Natural Goodness*, chapter 4; John McDowell, "Virtue and Reason," *The Monist* 62, no. 3 (1979): 331–50; Alasdair MacIntyre, *Whose Justice? Which Rationality?* (University of Notre Dame Press, 1988)

9. Cf. Warren Quinn, "Rationality and the Human Good," *Social Philosophy and Policy* 9, no. 02 (1992): 81–95

Taking a wide view, which activities elicit the label 'rational' or 'reasonable' or 'reason'? As we observe human behavior in context of other animal behavior, the activities that we call 'rational' are as follows: to observe, to perceive as, and reflect; to remember, predict, and categorize; to decide, determine and pursue; to abstract, explain, and infer; to criticize, blame, and praise; to admonish, prohibit, and command; and so on. Is there any way to pare down this list or to generalize these capacities?

I do not think the best way to understand the old formula of "rational animals" is to take "rational" to mean "abstract thought." Practical reasoning is indeed a form of reasoning. And while other members of the animal kingdom "think" in one sense of that term, as far as we know, no other animal constructs theories about the cognitive capacities of the animal kingdom. Nevertheless, abstract thinking is not a sufficient property to distinguish the human life form as a whole. Only a relatively small minority of humans engage in that kind of abstract reflection that characterizes science, theology, mathematics, metaphysics, ethics, and so on, while all people of all cultures and of all intelligence quotients engage in practical reasoning and deliberation. I want to make it indelibly clear that I am not supposing human nature to be rationality per se but practical rationality.

I would like to argue that being a potentially rational animal entails at least four other properties besides the capacity for abstract thought. They are: speech, sociality, rational practice, and creativity. Let's consider each in turn, and show how they interconnect.

First, take speech. Aristotle observed that, "Man alone of the animals possesses speech."[10] Nothing in modern science has superseded or contradicted the observation (obvious to anyone) that human speech is different from other animal noises. Other animals have speech and communication. The difference between non-human and human speech is not obvious to infant humans, who learned by imitation words just as well as they learn tweets barks and growls. Upon reflection, researchers have observed that animals communicate

10. *Politics*, 1.1253a.

with non-grammatical closed systems with a small, finite set of symbols. Communication systems used by other animals such as bees or apes are closed systems that consist of a finite, usually very limited, number of possible ideas that can be expressed. In contrast, human language is open-ended and productive, meaning that it allows humans to produce a vast range of utterances from a finite set of elements, and to create new words and sentences. Our language is unique: it is grammatical, open-ended, recursive, and productive. We are animals who use signs and symbols to communicate self-reflective and abstract thought.[11]

Speech is inseparable from self-reflectivity and sociality. Through our animal senses comes a sensitivity to our surroundings, the ability to see the world, ourselves, the sun and stars, to hear our fellow creatures, and to take the whole cosmos into consciousness. But through speech comes a whole second cosmos of culture. Through speech comes intentionality in all its forms. Through speech comes communication ("pass the salt"), distinct languages and cultures (about 5,000 distinct languages), self-consciousness ("who am I?"), abstraction ("all grass is green"), science, philosophy, religion, mythology, technology and more. Perhaps even art and music arise from the rational capacity to direct our actions to create not only what instinct demands but whatever the imagination can invent.[12]

The second constituitive feature of practical reason is sociality. When Aristotle asserted that "Humans are political animals," he did not mean the facile point that human beings prefer to reside in groups or enjoy "getting involved in politics". We ought to interpret this assertion as a generic truth. Human beings are formally constituted by being animals in political or communal settings. This truth is best viewed in light of our animality and speech: for to be a human being is to be a creature produced by the sexual union of two other human gametes, and to be able to speak is to be enculturated in a particular

11. Terrence W Deacon, *The Symbolic Species: The Co-Evolution of Language and the Brain* (WW Norton & Company, 1998).

12. Gordon H. Orians, "Nature & Human Nature," *Daedalus* 137, no. 2 (2008): 39–48. Orians says that "Americans spend more money on music than on sex or prescription drugs."

natural language in a time in human history and a place on the globe. We shall return to the importance of sociality in our discussion of traditions in a later chapter.

The third feature of practical reason is the ability to engage in rational practices. All organisms initiate *action* in the most general sense that they move about and do things. And all higher mammals engage in complex (and often social) practices, such as communal hunting, grooming, and building. Humans exhibit something apparently unique: We do not just act but act on reasons. Micah Lott says: "Human form is characterized by practical reason. This is the capacity to act in light of an awareness of the ground of our actions, to recognize and respond to practical reasons."[13] We set goals. We undertake long, complicated sets of actions in order to achieve those goals. We also reflect on past actions and evalute them to decide whether it is advisable to do the same thing again or try something else. Practical reasoning includes not just deliberating about what to do but weighing the apparent reasons for and against a particular course of action. Hence, as I shall explain more later, it is under the category of 'rational practice' that I will include everything unique about humans having to do with morality.

The fourth feature is rational creation. The concept of 'creativity' is not metaphysically distinct from rational practice, but since it is conceptually distinct, it deserves some mention. Our speech and grammatical systems allow us to create new words, propositions, phrases, and of course to do thing like write philosophy papers or tell stories. Our social identity within a social order allows us to create living spaces, utensils, farming implements, and so on as well as to create new social orders themselves. And one of the forms practical reasoning takes is that we *innovate* — we create and design and plan actions, new behaviors, new games, new languages, new activities, and so on.

The human differentiam of 'practical rationality' entails not only abstract reasoning but speech, sociality, rational practice, and creation. The alien anthropologist, if indeed it

13. Lott, "Moral Virtue as Knowledge of Human Form."

had enough of its own rationality to be able to have anthropological science, could observe these actions and infer the existence of the property of rationality.

Potential

The point of these reflections has been to bear out the truth of the generic that human beings are practical, rational animals. I must address a few possible misunderstandings.

First, some unwittingly entertain the assumption that "rationality" for Aristotle meant speculative reasoning — that is, *theoria*, abstract thinking, or contemplative science. The capacity for abstract or "theoretical reason" is certainly an important feature of human nature and stands out from the capacities of other organisms. But it is not merely *thought* but *thoughtful action* that I would like to emphasize.

Secondly, "human beings are practical rational animals" might be interpreted to mean that anyone who is not rational is not human. There does exist a monstrous thought that humans who are not fully rational are not *"really"* human. An uncharitable critic might accuse me of insinuating that monstrous thought. If people in comas, or the mentally ill, the genetically defective, are not even human then it would seem to be permissible to do all sorts of inhumanities.

Robert P. George makes this point well:

> Various criteria for where the line should be drawn [between living things it is permissible to use and those it is not permissible to use] have been proposed: sentience, consciousness, self-awareness, rationality, or being a moral agent (the last two come to the same thing). We will argue that the criterion is: having a rational nature, that is, having the natural capacity to reason and make free choices, a capacity it ordinarily takes months, or even years, to actualize, and which various impediments might prevent from being brought to full actualization, at least in this life. Thus, every human being has full moral worth or dignity, for every human being possesses such a rational nature.[14]

14. Adam Schulman, *Human Dignity and Bioethics: Essays Commissioned by the President's Council on Bioethics* (Government Printing Office, 2008), chap. 16, "The Na-

On the contrary, one of its strengths of the fact that 'humans are practical rational animals' is a generic is that it blocks this kind of monstrous thought, for it admits of exceptions. Generics describe a life form well only when the sample includes exemplary instances of the species — not young, immature, ill, or injured instances. Especially in the case of young organisms we need to invoke the notion of *potential*. Even single celled organisms have the potential to reproduce and develop.

Anacephalic babies will never exemplify their natural potential for practical reasoning, for they lack the subvenient brain structure necessary for rational consciousness. They are recognizably *human* (they are not opossums), just defectively so. Similarly, we may call humans "bipedal" by nature but recognize that a war veteran is still human even after he or she is no longer bipedal.

Injury, illness, genetic defect, radiation poisoning, coma, mental illness, and any number of other negatives may render a human being sub-rational or non-practical — that is, unable to direct his or her own life. The same point can be applied to those organisms, who by injury or illness, will never reveal the potentials inherit in their life form. Although that individual instance may be imperfectly actuating its species, it is still a member of the species.

Scientists do not judge the characteristics of a newly discovered species by examining its young. If an alien anthropologist were to study 12-year-old humans, they would come to all sorts of conclusions about humanity in general. Their conclusions would be a week since their sample is week. Alien anthropologists would need to look at mature human beings of both sexes, healthy and in the "prime" of life. Younger than this range and humans tend to (but do not always) lack the brain development to fully represent characteristic behaviors; older than this range and humans tend to (but do not always) suffer degenerations of the joints, memory, health, and so on. A similar point can be made with

ture and Basis of Human Dignity".

regard to injury and illness.

Before considering the application of my argument to ethics, I would like to stop and address a few objections.

III. Objections

I would like to consider a couple of possible responses the reader might have at this juncture. These objections are formidable. However, responses are possible, even though some of the responses I will offer now will require further comment in a later chapter. Let's consider each in turn.

No human nature

The first objection is simply that the search for human nature is hopeless because there is no human nature. This objection has three iterations. The first sort of critic might deny that there is any such thing as a human life form because there are no life forms at all. This is an objection to the very concept of a nature. Perhaps, instead of real life forms and natural kinds, we should be nominalist about divisions between various branches of the tree of life. One iteration of this criticism is an alleged tension between the flexibility of species (as represented in evolutionary biology) and a fixed notion of human nature. Ernst Mayr says:

> The concepts of unchanging essences and of complete discontinuities between every *eidos* (type) and all others make genuine evolutionary thinking impossible. I agree with those who claim that the essentialist philosophies of Aristotle and Plato are incompatible with evolutionary thinking.[15]

Arthur Ward is one who agrees with Mayr here. He argues that "naturalists should reject the idea of 'human nature,' and indeed should reject that any organism or its parts or operations

15. Ernst Mayr, *Populations, Species, and Evolution: An Abridgment of Animal Species and Evolution* (Harvard University Press, 1970), 4.

has a nature, purpose, proper function, or the like."[16]

To the idea that there are no natural kinds, I can only give a general and unsatisfactory response. This dissertation cannot chase down the (justifiably important) conversation about realism and nominalism in natural kinds. However, the arguments of the previous chapter, built on the assumption of a minimal scientific realism, is enough to secure a fairly solid grounding for the notion of natural kinds.

Relatedly, the second sort of critic accepts natural kinds but denies that these kinds have teleological features. This reader would agree with Bernard Williams: "The first and hardest lesson of Darwinism, that there is no such teleology at all, and that there is no orchestral score provided from anywhere according to which human beings have a special part to play, still has to find its way into ethical thought."[17]

He says elsewhere:

> The idea of a naturalistic ethics was born of a deeply teleological outlook, and its best expression, in many ways, is still to be found in Aristotle's philosophy, a philosophy according to which there is inherent in each natural kind of thing an appropriate way for things of that kind to behave.[18]

This sort of critic thinks that there are natures or natural kinds and stable species with objective properties, but is underwhelmed by the arguments of the previous chapter to the effect that functional or teleological properties feature in purely biological descriptions of organisms.

My response is this: Williams voices a common opinion when he alleges an incompatibility between Darwinism and teleological realism. The response of Hursthouse, Foot, Brown, etc., is that natural teleology is indeed compatible with Darwinism and does indeed

16. Arthur Ward, "Against Natural Teleology and Its Application in Ethical Theory" (PhD thesis, Bowling Green State University, 2013), 1.

17. Bernard Williams, *Ethics and the Limits of Philosophy* (Taylor & Francis, 2011), 44.

18. Cf. Bernard Williams, in *Making Sense of Humanity: And Other Philosophical Papers 1982-1993* (Cambridge University Press, 1995), 109.

provide a "an appropriate way to behave" (or we might add, *ways*) that is "inherent in each natural kind of thing." Such a view is not incompatible with evolutionary theory.

Strictly speaking, evolutionary theory may be summarized in five theses explaining the current multiplicity and shape of terrestrial life: 1. The earth is very old; 2. Life has progressed from relatively simple to relatively complex forms; 3. Through slow and gradual changes, all the modern forms of live have appeared; 4. All of life originated from one original place and species; 5. Some mechanism such as natural selection drives the process of descent with modification.[19] The set of theses together explain biological processes of genetic mutation, reproduction, preservation, and proliferation. Thus, evolutionary theory, strictly speaking says absolutely nothing about teleological causes or properties.[20]

A sixth thesis, often appended to the first five, is that the process of natural selection is unguided by any causes but mechanical ones. But this claim is a philosophical belief, not a biological one. Polemicists will sometimes cite the popularity of the philosophical belief among biologists as proof that it is a "biological" claim. But we do not determine truth by vote. If belief in God was popular among biologists of a certain era, it does not follow that theological claims are strictly biological claims.

Thomas Nagel recently presented a persuasive (and controversial) case for what he calls "Darwinism plus" — that is, naturalistic Darwinian evolution plus natural teleological causation.[21] Teleological laws work impersonally on entities over time at the same moment that physical laws work impersonally on entities at a given time. I do not wish here to defend Nagel's view so much as to point out that teleological realism is compatible with evolutionary theory. Asserting that teleological realism about biology is incompatible with Darwinism does not make it so. Naturalistic teleological realism is certainly incompatible

19. Cf. Alvin Plantinga, *Where the Conflict Really Lies: Science, Religion, and Naturalism* (Oxford University Press, 2011), 8–9.

20. Cf. ibid., 10.

21. Nagel, *Mind and Cosmos*.

with a teleological nihilism distinctive of (certain brands) of metaphysical reductionism. If our knowledge of natural teleology is well-grounded enough then so much the worse for metaphysical reductionism.

There is another point to make. Williams despairs of finding human nature, including human telos because he thinks such despair is demanded by biological science. But Hursthouse's response to Williams is that his worry is not actually rooted in the progress of modern science. And she is right. Williams himself admits that "many of course have come to that conclusion before… that human beings are to some degree a mess… for whom no form of life is likely to prove entirely satisfactory, either individually or socially."[22] If many have come to that (philosophical) conclusion before, without the benefit of modern science, then it is a non sequitur to cite modern science as evidence for the philosophical conclusion. A condensed caricature of the argument: "modern science is very advanced. Therefore life is absurd."

Instead, Hursthouse points out, we should interpret Williams' worry as an expression of moral nihilism and despair. It may be a rational despair, but the rationality or irrationality cannot simply be read off the biological facts. Indeed, I shall pick up the theme of rational despair in a later chapter. For now I shall only say that Williams believes human nature is a mess *because* he believes no form of life is completely satisfactory for everyone. But cannot the ground and consequent be reversed? Doesn't that blade both ways? If one has hope that some form of life is or may be at least mostly satisfactory for at least some people, it makes sense to believe human nature even at its present state, mid-evolutionary process, is not *completely* a mess. If one looks to exemplary human animals who demonstrate how to live admirable and wise and just lives, even mixed with suffering or tragedy, then perhaps, even if their lives are not *completely* satisfactory, one has a sort of existential evidence that life can be *somewhat* satisfactory. And Hursthouse movingly praises hope as

22. Hursthouse, *On Virtue Ethics*, 261, quoting from Williams.

a virtue.

> Alternatively (or perhaps as well) we could stick with what we have—those facts about human nature and the way human life goes that support the claim that the virtues on the standard list benefit their possessor, and the reading of human history that ascribes our persisting failure to achieve *eudaimonia* in anything but very small patches to our vices. True, it is not easy to hold on to them sometimes; despair and misanthropy are temptations. But we should.[23]

For my part, I should not like to deny that human society and many, many human individuals are indeed "a mess" in one sense. Humans are a "mess" in the sense that corruption is a real feature of human life. A selected list of the dark side of our species: War, oppression, disease, genetic defect, injury, hatred, vice, a large (and ever growing) list of different kinds of injustice. These, also, are empirical facts of anthropology and psychology. I should not like to deny that *things are bad*. I should only like to make space for the possibility that things *are not all bad*. The universal optimist is obliged unrealistically to deny all the dark side of our existence. But the universal pessimist is obliged unrealistically to deny all the light side: peace and freedom, glowing health, genetic order, beauty that persists into old age, love, virtue, and the halting but admirable efforts toward justice and social harmony. In short, the human race is quite a mixed bag. But this is all too grand and sweeping for present purposes. The only question in this section is whether the universal characteristics of human nature can be hypothesized and confirmed.

Below I shall make the case that specific ethical conclusions can be derived from natural facts about human beings. Here I only wish to make room for the possibility that our data set of such facts cannot with integrity include all light and sweetness nor all dank and dark cynicism.

A third iteration of the "no human nature" objection is that if there is such thing as "human nature", it is nothing more or less than our biological and physiological makeup.

23. Ibid., 265.

Tim Lewens argues that "the only biologically respectable notion of human nature that remains is an extremely permissive one that names the reliable dispositions of the human species as a whole. This conception offers no ethical guidance…"[24]

On Lewens' view, the only talk about our "nature" that would be scientific would be an indeterminate series of complicated stories about our genetics, evolutionary history, and neurophysiology, perhaps even including cultural, geographical, and ecological settings. The problem, as we have seen, is that an empirical "scientific" conception of human nature has nothing to do with *ethics*. All of the complicated stories we could tell – if they are genuinely scientific – would be purely *descriptive*.[25]

Bernard Williams expresses a similar point. He says that nature has bestowed upon us an "ill-sorted bricolage of powers and instincts":

> [the problem] lies not in the particular ways in which human beings may have evolved, but simply in the fact that they have evolved, and by natural selection… On that [evolutionary] view it must be the deepest desire — need?— purpose? — satisfaction? — of human beings to live in the way that is in this objective sense appropriate to them (the fact that modern words break up into these alternatives expresses the modern break□up of Aristotle's view).

This is also Fitzpatrick's main worry, not that we have evolved poorly, but that we evolved at all.[26] He argues that evolved organisms have a telos to reproduce, not to "flourish". ""If, however, natural functions and ends in living things are structured by special relations established through the process of evolution through natural selection, i.e., non-incidental relations between traits and a special subset of their effects that figured into the selection process, then natural teleology will not ultimately or generally be about the welfare or flourishing of organisms (FitzPatrick 2000)."

24. Tim Lewens, "Human Nature: The Very Idea," *Philosophy & Technology* 25, no. 4 (2012): 459–74.

25. Cf. Hursthouse, *On Virtue Ethics*, chap. 10; Brown, *Moral Virtue and Nature*, chap. 5; Ward, "Against Natural Teleology and Its Application in Ethical Theory."

26. FitzPatrick, "Morality and Evolutionary Biology."

Stephen Brown is ambivalent but seems to think that ethics is, in the end, a descriptive discipline; even virtue ethics, after being appropriately "naturalized", does not *commend* the virtues so much as *detail* the traits which happen to be adaptive for creatures like us to survive and propagate our genotype.[27]

Although the "characteristic form of life" of human beings involves highly rarified neurological and cognitive processes we do not observe in other animals, nevertheless, nature only reveals one kind of biological concept of nature: a species. And species aim to survive and reproduce.

This objection is certainly relevant. Lewens, Fitzpatrick, and Brown urge that human nature, if it is anything, is simply to reproduce and propagate one's genotype. We are mammals, after all, and the telos of mammals is to reproduce. But this objection begs the question. We are animals, certainly. That is an empirical assertion, as I have been at pains to show. We exhibit quite a sufficient number of tell-tale properties shared by other mammals: a neocortex, hair, mammary glands, and hearts of a particular form and function. But we are also animals of a peculiar sort. That is, we are rational animals. From what we observe of ourselves both "from inside" and "from outside" we exhibit a range of properties not shared by other mammals: grammar and language, fire-making, cooking, sex for pleasure, abstract reasoning, science, philosophy, religion, mythology, agriculture. But to say that humans are *merely* mammals is an anti-empirical assertion that requires denying all this. In light of our status as practical, rational animals, it seems obvious to most people that reproduction is not our only natural telos. Reproduction is certainly *one* of our natural ends. "Human beings reproduce" is an instance of a broader natural generic truth, "organisms survive and reproduce." Human reproduction as a generic pattern is compatible with exceptions: The celibate, the pre-pubescent, the single, the infertile couple, the homosexual

27. Brown, *Moral Virtue and Nature*; Stephen Brown, "Really Naturalizing Virtue," *Ethica* 4 (2005): 7–22.

couple, and others do not reproduce. Nevertheless it may be true that humans reproduce (like every other organism). It may even be true that if, *as a species*, we ceased to reproduce, something would have gone wrong. That individual members of the species do not reproduce is not an automatic sign of defect; that the entire species has ceased (by choice or by injury or illness) to reproduce might be a sign of defect.[28]

I said that classifying reproduction as the end of humanity is obviously a mistake. This may only be "obvious" from within the practical point of view. It is obvious nonetheless. It is even obvious to Lewens, Fitzpatrick, and Brown (although Brown's faith wavers). Their point in bringing up reproduction is that we need something *more* than our natural teleology to capture the distinctively human rational process of deliberately defining teleological goals. That something more is "the practical point of view", the point of view from within human subjectivity, the

The idea that natural teleological facts about human nature can only be known "within" some particular point of view is an important one, and I shall have to address it in a later chapter. For now I shall only say that slippery spatial analogies like "inside" and "outside" admit of multiple senses: "inside" can and often does mean what can be known via introspection (e.g., the way I know what it feels like to be slighted or to be praised, the way I remember the color of my grandmother's house) and what can be known from accepting limitations of a first-personal or second-personal human point of view more generally (e.g., it appears that the sun orbits the earth rather than the other way around; and I know when my mother is upset because I just "know" that look). Looking at things from the "outside"

28. The "Voluntary Human Extinction Movement" is an example of a group who find the reasons for reproduction *as a species* to be on balance outweighed by the reasons for ceasing to reproduce. Two comments: first, on first impression, VHEMT strikes most people as satire. It is a laughable movement. It is not necessarily mistaken, but it is certainly laughable. Secondly, VHEMT acknowledges the prima facie force of the need to reproduce. They argue that that need is outweighed. So in that they think species-wide reproduction is a default natural norm, we agree.

might mean what can be known via sensory perception or what can be known – if anything – by pretending to a neutral, objective, third-person, God's eye view. We can posit counterfactuals, as for example when we speculate what intelligent extraterrestrials would think of humans if they observed and studied our species, with fresh eyes, alongside every other. All that matters for my purposes now is that our species exhibits a range of peculiar activities that distinguish us from mammals, from animals more broadly, and from any other known natural entity in the cosmos – and that recognizing as much is an *empirical* matter. To deny our uniqueness is rationally possible, after a long inquiry. But to be blind to our uniqueness from the outset is to be subject, in all likelihood, to philistine reductionism that has little to do with genuine scientific thinking.

Our nature is unknown

A second objection might come from someone who simply urged that human nature is mysterious. For all we can tell (without the benefit of divine revelation) humanity is an anomaly. Our origin is shrouded in mystery, our destiny undecided.

The main thesis of this chapter has been that the following generic is true: "human beings are practical, rational primates." This generic, I have argued, is defensible both philosophically and scientifically. It is discoverable both by humans examining our species from "within" the human point of view and by alien anthropologists examining our species from "outside" the human point of view (so long as they too were intelligent and rational). This generic picks out a property or set of properties we might describe as 'human nature.'

The final objection that our origin and destiny are mysterious is true but misses the point. That humans are practical rational primates is not supposed to provide complete, comprehensive knowledge of our species. It is a minimal starting point of knowledge upon which to build. Knowing that snakes are legless reptiles is not an end to the scientific inquiry, but a beginning. Indeed, one cannot know about snakes unless one knows, roughly, what

snakes are. So capturing the genus and differentiam of a kind of organism is in fact necessary for creating a conceptual placeholder *on which to attach new knowledge*. Knowing what human beings are, however roughly, gives us a concept-category within which to fill in the depth and breadth of facts and information.

Knowing from "Inside" Human Point of View

A third objection states that are no objective properties obtaining in each and every human *which can be known from the objective, external, scientific point of view.* Perhaps some universal intersubjective properties, like a desire for belonging, obtain in all human beings who have conscious experiences. Even so, these can only be known "from within" the practical point of view and so would not count as "scientific" in a narrow sense.

Those properties that can be known externally would be irrelevant. If by being practical reasoners we are free of the tyranny of biology, then biology is irrelevant to morality. Hursthouse assumes that knowledge of humanity "from the outside" is useless or futile. She says, "Ethical naturalism is not to be construed as the attempt to ground ethical evaluations in a scientific account of human nature."[29] She emphatically *does* mean to make evaluations of human beings can be made in a way analogous to the way we evaluate cacti or deer. In each case we rely on the notion of natural kinds and their appropriate way of behaving:

> [I]n relation to which they are evaluated as good or defective. The evaluations do not—as they might in a post□Darwinian age—evaluate members of species of living things simply as good, or not so good, or downright defective, as replicators of their genes.[30]

Hursthouse and McDowell's alternative is to base ethical considerations on our nature as rational agents. This is still loosely naturalistic, in that we are talking about "human nature" or "second nature". This objection will be picked up in a later chapter.

29. Hursthouse, *On Virtue Ethics* especially chapter 10.
30. Ibid., 257–8.

IV. Conclusion

I have said that the generic truths about the human life form, if we can pinpoint them, would be of momentous importance for ethics for we could identify some human norms that are universal across every member of our species, regardless of culture and upbringing.

Both "practical rationality" and "primate" entail a cluster of concepts. To be a primate is to be an animal that is alive and so on. This is what we have in common with all of organic nature. Mautner continues: "Life is a process whose outcome is the self-reproduction of complex molecular patterns'. Importantly, Life is then a process that requires a constant flow of information, matter and energy."[31] That process of life on earth has been a continuous one, throughout time, since the first origins of life on the planet. Furthermore, we are not just "living beings" but primates belonging to a wider class of mammals. We come to be in similar ways as other mammals, have similar needs for oxygen, food, society, warmth, exercise, and sleep. And to be a common life form entails that each of us begins life in roughly the same way, need the same range of nutrients to grow and survive, and deserve the same respect.

To be a practical rational primate means that something changes when we examine human beings compared to all other animals or all other natural kinds.[32] We are not just animals but practical rational primates. This entails the emergence of a new set of capacities: abstract thought, speech, sociality, rational practice, and creativity. So, we can predict that just as the scientist evaluates members of a species by how well or badly it exemplifies its particular life form, human beings are evaluable by how well or badly they exemplify their particular life form. We continue to evaluate humans on the basis of their species, but we evaluate not just their health and normal developmental stages, and their maturity, but their

31. Mautner, "Life-Centered Ethics, and the Human Future in Space," 435.

32. Katherine Hawley and Alexander Bird, "What Are Natural Kinds?" *Philosophical Perspectives* 25, no. 1 (2011): 205–21.

actions.

Michael Thompson summarizes:

> … we may view this line of thought as beginning with the idea… that will and practical reason are on the face of it just two more faculties or powers a living being may bear, on a level with the powers of sight and hearing an memory. The second crucial thought is that an individual instance of any of the latter powers — sight, hearing, memory — is intuitively to be judged as defective or sound, good or bad, well-working or ill-working, by reference to its bearer's life-form or kind or species.[33]

The good-of-a-kind for our species is not *only* about practical reasoning, but also about animality. For example, starving to death, or being born without limbs, or being unable to reproduce is a bad-of-a-kind for creatures like us (not a moral bad, of course, but a real misfortune). So an exemplary member of our species would have to exemplify a whole range of good properties.

The sort of naturalism(s) represented by Foot, Hursthouse, and McDowell aim to ground evaluations of a member of a species on the life form of that species. The generic that 'a human being is a practical, rational animal' captures the life form of the species in a manner that is accessible to an "alien anthropologist" observing humanity from the "outside", from outside the practical point of view. The presence in humanity of such generically animal behaviors such as birthing, reproducing sexually, eating, sleeping, and dying betray a common root and identity with the animal kingdom and with the biological world as a whole; yet other human behaviors, especially language, deliberation, reflection, and intentional action betray a curious difference. As such, those qualities that enable human beings to be practical, rational animals are liable to turn out to be virtues. Those qualities of natural excellence enable the member of the species to actuate the potentials inherent in such a life form. Showing how such qualities as show up on "normal" catalog of virtues,

33. Thompson, *Life and Action*, 29.

and how perhaps even others, fall under the concept of natural excellence, is the task for the next chapter.

Chapter 4

Rational Practices

Chapter 5

Practical Reason

Chapter 6

Natural Reasoning

Chapter 7

Traditional Reasoning

Chapter 8

Conclusions

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