

Tracking Eudaimonia

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A basic challenge to naturalistic moral realism is that, even if moral properties existed, there would be no way to naturalistically represent or track them. Here, the basic structure for a tracking account of moral epistemology is given in empirically respectable terms, based on a eudaimonist conception of *morality*. The goal is to show how this form of moral realism can be seen as consistent with the details of evolutionary biology as well as being amenable to the most current understanding of representationalist or correspondence theories of truth.

Keywords

moral realism • evolutionary biology • proper function • fitness • virtue • Philippa Foot

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Moral realism is the view that there are mind-independent facts about morality: facts about which people are morally good or bad, or about which actions are morally right or wrong. On this view, moral discourse is primarily concerned with the discovery of these facts and not merely the expression of our attitudes; moral facts are neither subjective nor derived sociologically from cultural practices. As such, moral realism almost always raises an eyebrow among scientifically-minded philosophers. Detached from both God and non-natural, *a priori* rationality, moral realism does not seem to have much going for it, since it is hard to see how prescriptive moral properties, telling us how things ought to be, could be part of the natural, empirical world. Epistemically, properties seem to need causal efficacy for us to detect them, and yet properties about how things morally ought to be do not seem to do anything. The problems are not only epistemic, but moral too. The natural world, as violent and unjust as it is, simply does not seem like a promising place to look for a realist's foundation for morality. Life is far from fair. There is how things are and how they ought to be, and we have been taught not to infer the latter from the former. Whatever morality amounts to, if it is taken to be compatible with a robust form of realism, it does not also seem to be naturalizable, or capable of being understood in an empirically respectable manner.

David Enoch (2011) is a non-naturalistic moral realist who claims that normativity cannot be reduced to the natural world. He writes, "Normative facts are just too different from natural

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ones to be a subset thereof” (4), though he also concedes that if a proposal reducing the moral to the natural “comes along that scores sufficiently well on the list of theoretical virtues, this may in itself be a good enough reason to take back our commitment to the just-too-different thought. In a way, then, everything depends on the details and resulting attractiveness of specific reductionist proposals” (108). The pragmatic philosopher of science Philip Kitcher (2006), writing on the naturalistic proposals of Thomas Hurka (1993) and Philippa Foot (2001), says, “Both these accounts while often original and insightful, founder, I believe, because of the failure to take the details of current biological understanding sufficiently seriously” (164–5). Sharon Street (2006), the constructivist, writes, “What kinds of natural facts are we talking about, and exactly why did it promote reproductive success to grasp them? The naturalist can certainly try to develop answers to these questions, but at least on the face of things, the prospects are dim” (131), and Richard Joyce (2006), the error theorist, writes, “Something about which Harman [1977] is correctly adamant is that acknowledging the mere possibility of moral naturalism saving the day accomplishes next to nothing if it is not backed up with a concrete theory explaining, with some degree of precision, how the moral fits into the natural” (189). All agree, the devils are in the details.

One way for naturalistic moral realism to empirically vindicate itself would be to show how moral truth works exactly as scientific truth does, namely in terms of representation and correspondence. The view would have to give concrete details explaining how the metaphysical facts about morality or truth conditions for moral claims, can be naturalized and represented, and how we can epistemically track them. Putting the problem for naturalistic moral realism in these terms, Michael Lynch (2009), a pluralist about truth, writes, “[moral] properties, if they exist, *seem unsuited to being represented according to our best theories of what representation is*. If so, and if, as I argued earlier, ‘correspondence’ is best understood in terms of representation, then we have reason to doubt whether moral judgments are true by way of correspondence” (italics in original, 162).

Methodologically, we may posit the existence of naturalistic moral facts—we may assume the truth of moral realism—so that the challenge is to explain how human beings epistemically track the moral truth, in a manner consistent with the details of modern biology and evolutionary theory. The challenges of Enoch, Kitcher, Street, Joyce, Harman, and Lynch can be met by delivering a naturalistic epistemology of moral judgment and evaluation capable of answering to our best philosophical theories of representation.

Here is a start in defense of naturalistic moral realism. We begin with a eudaimonist conception of *morality*, dating back to the ancient Greeks.¹ This means that the truth about human morality is determined by the facts of *human nature*, and answers the question, “How ought I to live?”² On this view, morality is what makes a person’s life flourish, thrive, go well, or be happy. Hellenistic eudaimonism, as a theoretical picture of how morality fits into the natural world, was conceived to make sense of a rough, extant folk theory of morality based on the possession of virtuous character traits or excellences of human nature.³ The virtuous or excellent life is the best life possible.⁴ So, the updated claim is that eudaimonism can substantiate naturalistic moral realism by delivering an empirical account of moral epistemology consistent

¹So, right away, we move away from challenges to naturalistic moral realism based on the idea that morality is fundamentally a social phenomenon, as is found in Barkausen (2016).

²I take the existence of *human nature* to have sufficient scientific credibility to serve as an empirical basis from which to philosophically develop a hypothesis about relations between human nature and human morality. See Brown 2005; Cosmides and Tooby 1997; Tooby and Cosmides 1990 (reprinted in Downs and Machery 2013).

³For an overview of eudaimonism in Hellenistic thought, see Annas (1993). See MacIntyre (1984) for discussion of virtue in Homeric thought.

⁴For more on understanding the happiest life as a life of virtue, see Bloomfield (2014a) and Badhwar (2014).

with evolutionary theory.

The germinal idea is that we can derive an account of what sort of person one ought to be through a biological understanding of “proper function”. Accounts of this kind are already prominent in semantics and epistemology and have attained a respectable empirical standing.⁵ We can understand both linguistic meaning and epistemic justification through an account of *proper functions*, while acknowledging that these discourses are undeniably normative. Given this, it should not be too hard to envision how we may move from naturalistic accounts of “how ought one to speak” and “how ought one to form beliefs” to a similar account of “how one ought to act”. One can infer an “ought” from an “is” in exactly the same way that one can infer from the fact that “*X* is a [living] heart” to the conclusion that “*X* ought to pump blood”.⁶ *This implies that the difference between proper function and malfunction is the fundamental normative difference.* The thesis is that this is all the normativity morality (and semantics and epistemology) requires.⁷ If moral properties are empirically trackable, as is the distinction between proper function and malfunction, and the ontology of moral properties finds its genealogy in evolutionary theory, then we have a naturalized eudaimonist moral realism.

The theory involved is not original in spirit, harkening back to the “harmony of the soul” and *ergon* arguments in Plato, Aristotle, and related aspects of the Stoic view (more on this in §4 below), which have of course been the inspiration for a great deal of contemporary virtue theory, both in moral philosophy and epistemology. In metaethics *per se*, Hurka (1993) and Foot (2001) have already been referenced, but as noted their theorizing is not appropriately constrained by biology as the present account purports to be.⁸ Related theories have also been developed in terms of Boyd’s (1988) “homeostatic cluster properties” (which might be read as falling in the cybernetic tradition of theories of “proper function”), and Railton’s (1986) analogy of between detecting what is morally good for us and how we learn, for example, that drinking clear fluids is better for rehydration than drinking milk. In response to Harman’s (1977) epistemic worries, we can learn how to diagnose (read the signs and symptoms of) what is not directly detectable by the naked eye, thereby tracking the truth.

The outline for what follows is that §2 contains a basic account of biological tracking, while §3 applies this to a general correspondence or representationalist theory of truth. §4 gives a definition of “*eudaimonia*” and §5 explains how we can represent moral truths. §6 takes up the contingency of moral truth and §7 concerns how this account is logically related to secondary quality theories of value. §8 is a discussion of how *eudaimonia* is related to the biological account of “fitness”, how the account diverges from the views of Foot, and gives answers to an important objection to views similar to Foot’s, called the “Pollyanna” objection. §9 responds to two prominent objections concerning moral motivation and relativism.

⁵For example, Millikan (1989), Burge (2009), Graham (2012).

⁶Here I follow A. N. Prior, who claimed that from the premise that ‘He is a sea captain’ we can validly conclude that ‘He ought to do whatever a sea captain ought to do’. This is attributed to Prior by Alasdair MacIntyre (1984, 57) without reference. For related discussion, see Prior (1960).

⁷This is not to say that there is nothing more to be said regarding how we hold agents responsible for their actions and/or character. But praise and blame is a secondary concern, and the focus here is giving an account of right and wrong, good and bad. For worries that this kind of normativity cannot account for categorical imperatives, which some take to be constitutive of moral normativity, see Bloomfield (2013).

⁸For reasons discussed below, Foot (2001, 15, fn. 19) prefers discussing “life forms” instead of “species”, following the usage of Michael Thompson (1995).

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We begin with a basic account of tracking taken from Fred Dretske (1986). There is a species of northern hemispheric bacteria which orient themselves away from oxygen-rich surface water, which is toxic to them, by attending to evolved mechanisms called “magnetosomes”. These tiny inner magnets pull toward the Earth’s magnetic north pole, which is away from the surface. Thus, the function of a magnetosome appears to be to get a bacterium to move toward non-toxic, oxygen-free water. Ruth Millikan (1989), in discussing the case, argues that the best way to understand this function is that the pull of the magnetosomes *represents* the location of the oxygen-free water. Dretske focuses on the way the representation is produced, while Millikan thinks the key to understanding it is to attend to how the representation is used by the organism. This yields a causal account of representation for Dretske, and a teleosemantic account for Millikan, though the differences need not concern us. What is crucial for understanding the function of the magnetosome, its tracking feature, is that the oxygen-free water does not, in any way, *cause* the magnetosome to pull in any direction at all; rather, the natural information carried by the representation involves the direction of the geomagnetic pole, which itself reliably tracks the direction of oxygen-free water. The oxygen-free water is not proximal but distal; the magnetic field is the proximal stimulus of the representation. Importantly, it is easy to “fool” these bacteria into swimming the “wrong” way simply by holding a magnet over them.

Important too is that the toxicity of oxygen-rich water, or the “wrongness” of swimming towards it, plays no direct causal role in this sort of tracking. Noting this preemptively undermines those challenges to moral realism, like Harman’s (1977) (referenced by Joyce’s quote above), based on the lack of causal role that moral properties seem to have in the production of moral belief.

Generalizing upon these mechanisms found in simple bacteria, all biological organisms must evolve analogous representational mechanisms to track items in their environments that are either nutritional or toxic.⁹ The distal evolutionary mechanisms which many animals have adapted in this regard are smell and taste. No one wants to be a full-blooded realist about what tastes and smells good, even if we can be naturalists about them. Nevertheless and indubitably, one of the reasons we have the senses of taste and smell is to discriminate substances which are nourishing from those which are not. There is no fact about whether chocolate ice cream tastes better than vanilla, but it is no accident that humans have not even tried to make, market, and sell ice cream that tastes and smells like rancid meat or feces.¹⁰ Within certain constraints, there may be no facts as to what tastes better than what, but the constraints themselves imply the fact that we evolved to find certain substances objectively noxious and repulsive.¹¹ In relation to morality, the claim defended below (§7) is that the difference between virtue and vice is not ontologically like the difference between chocolate and vanilla but is akin to the difference between nourishing and toxic substances.

In general, smelling and tasting are evolutionarily helpful sensations. But as indicators of which foods are nutritious, they are also quite fallible. True, they generally allow us to avoid eat-

⁹Woodward and Allman (2007) write, “In all mammals, the insular cortex contains a representation of the motor and sensory systems involved in the ingestion and digestion of food (Rolls 2005; Small et al. 1999). It is thus responsible for the regulation of food intake; the ingestion of nutritious food and the rejection of toxins”.

¹⁰This is true even if there are unusual pathologies, such as coprophilia, which involve the desire to eat feces or vomit; this is the point of calling such conditions “pathologies”. This may be the basis for a response to an argument against moral realism based on irrationalism with regard to taste; see Loeb (2003).

¹¹While not making ontological claims about the status of such constraints, Churchland (2011) has argued that much of moral decision-making is “constraint based” in this sense (23–5). For an analysis of this form of decision-making, see Danks (2004).

ing substances which are not food at all, but manufactures of “junk food” have clearly exploited the fact that our taste buds can be deceived. Much like the bacteria fooled by the magnet into swimming into oxygen-rich water, we can be fooled into eating “food” which is not good for us (e.g., trans-unsaturated fatty acids). Toxins, or what is normally bad for us, can enter into our bodies without our detecting them. The fallibility is important, since not everything that tastes good is good for us, and some substances may taste bad, especially at the first tasting (e.g. many bitter foods), when in fact they are salutary.

3

These basic facts about tracking can be marshaled into an account of how beliefs can track facts in the world, and this kind of account of tracking has been seen as the foundation of a representational or correspondence theory of truth.¹² In other words, if the moral realist can give an acceptable account of moral truth in terms of correspondence or representation, such that there are moral facts in the world and we are capable of representing them, then we are providing just the sort of theoretical detail that critics of naturalistic moral realism have claimed are not in the offing. So, shifting away from insentient representation to the way in which beliefs represent the world, we understand this representational function canonically as follows:

(R) (Represent): The belief that “*a* is *F*” is true if and only if the object denoted by $\langle a \rangle$ has the property denoted by $\langle F \rangle$.

Brackets are used in the usual way: $\langle \text{dog} \rangle$ means the concept *dog*; $\langle \text{snow is white} \rangle$ means the proposition that *snow is white*.” “Object” and “property” are meant to imply a full-bloodedly realist and mind-independent ontology, to be contrasted to the various forms of idealism, fictionalism, subjectivism, projectivism, expressivism, constructivism, and conventionalism. (No stand need be taken on the purely metaphysical debate over universals and nominalism; perhaps more accurately, the claim involves realism about property instantiations.) The ontology is thoroughly empirical in nature and so may be contrasted to various form of non-naturalist realism, such as might be apt for rationality, mathematics, or pure logic; and contrasted further in regard to forms of “supernaturalism”, such as those involving divine command theory or miracles.¹³ Denotation can itself be understood in Tarski’s manner:

(D) (Denote): $\langle c \rangle$ denotes *x* if and only if *x* satisfies $\langle c \rangle$.

So that $\langle \text{dog} \rangle$ denotes an object just when that object falls within the extension of the concept *dog*, or is identical to a particular dog. Attending to the teleosemantic understanding of representation, concepts represent what they do because that is their biological function, which can itself be understood as follows:

(T) (Teleological): $\langle \text{dog} \rangle$ denotes dogs = the biological function of $\langle \text{dog} \rangle$ is to be mentally tokened in the presence of dogs, or when dogs are discussed, or considered in planning, etc.

From (R), (D), and (T) we can derive a naturalistic theory of representation by saying that when

¹²I follow here the account of representationalism as presented in chapter 3 of Lynch (2009), though I substitute in “tracking” for his use of “mapping;” for analogous formulations of “correspondence”, see Marian David (2013).

¹³So, I see a disanalogy between morals and mathematics, as these are discussed by Clarke-Doane (2012); it is my opinion that Street-style debunking arguments work against non-naturalistic moral realism, whereas I obviously think they fail for naturalistic moral realism.

a concept's biological function is mentally tokened, reliably, in the presence of a particular object or property in the world, that concept *functionally tracks* that object or property. The success of the tracking is due to the proper functioning of the biological mechanism under consideration. So, the teleosemantic account of representation and truth can be formulated as follows:

(TC) (Teleological Correspondence): The belief that “*a* is *F*” is true if and only if the object functionally tracked by $\langle a \rangle$ has the property functionally tracked by $\langle F \rangle$.

This yields a general account of a representational or correspondence theory of truth based on the notion of tracking which will be employed below with regard to moral truth.¹⁴

4

With these tools in hand, we return to eudaimonist morality. “*Eudaimonia*” is most often translated as “happiness” but is perhaps best translated as “flourishing”, “thriving”, or even “well-being”. For the Greeks, this was not a state of being which is only possible for humans. Rather, it is best thought of as an adverb modifying the verb “to live”, as it denotes the way in which an individual organism, as a token member of a biological species, may live as well as is possible for that species. The Greeks thought that all forms of life were capable of *eudaimonia*, so that it was open to plants and other animals: as there is a thriving oak tree, there is a thriving human being. *Eudaimonia* is a species relative concept (more on this in §6 below). Of course, the Greeks knew nothing of evolution, but this does not mean that the folk-notion of a “flourishing organism” can have no relation to what we now know about biology and evolutionary science. Indeed, there is a genuine sense in which some of the Greeks were downright prescient. This is clear from the “*ergon*” arguments found in Plato’s *Republic* (352d–354c) and Aristotle’s *Nicomachean Ethics* (1097b21–1098a20), as well as the Stoic development of the notion of *kathēkon*, translated as “proper function” or “fitting action” (Long and Sedley 1987, 359–68). In all these, we find arguments concerning how what is morally “proper” or “fitting” is grounded in the proper function of a biological organ or an organism. The final end of this living thing, its goodness or flourishing or *eudaimonia*, is to be understood in terms of the proper function of its parts conducted for the sake of the whole, where this is meant to apply generally to all forms of organism, vegetable, animal, and rational.

To jump to what is characteristic for human beings, Plato argues that the mind’s particular “state of goodness” is when it functions properly by performing well its characteristic activities: “management, the exercise of authority, planning, and so on” (*Republic* 352d3). If what is moral is good, then good states of mind will “agree with” morality, understood in terms of the virtues, so that the mind of a moral person is virtuous or excellent when it is functioning as it ought to function (*Republic* 335c, 350d). Aristotle’s *ergon* argument closely follows Plato’s, though he amplifies it in some detail. The Stoics developed the notion of *kathēkon* in its relation to their view of *oikeiōsis*, or appropriation, such that our moral concerns extend past our own narrowly construed self-interest to the duties that we have by virtue of the “offices” of social life, in accordance with the standards of the virtue of justice. This is why Cicero’s *De Officiis* is translated

¹⁴It might be noted that this is a stronger sense of “tracking” than the one discussed by Nozick (1981), which merely employs two conditions: (i) if *P* were not true, then *S* would not believe that *P*, and (ii) if *P* were true, *S* would believe that *P*. On the present view, tracking meets safety and sensitivity conditions but also requires direct or indirect causal relations to obtain between the belief and what is represented, and these are provided through the account of functions. More on this below. As for the nature of biological functions, while most teleosemanticists explicitly adopt an etiological of function, there is no theoretical necessity here, and I am most inclined toward Wimsatt’s (1972) “learning account” of biological function as it focuses more on ontogenetic development.

as *On Duties* (1913). On the Stoic view, duties are grounded in the roles which we naturally inhabit, including being a child, parent, sibling, neighbor, member of a tribe, citizen, human being, etc.

We may understand how one ought to live over all, “one’s way of life” (*Republic* 335d), by looking at what makes creatures such as *Homo sapiens* function properly and thereby flourish. Evolution tells us that all living organisms strive, in their species-specific manner, to be at least strong enough and adaptive enough to survive the challenges of the natural world—for example, extreme weather, the onslaught of predators, or finding a mate and rearing offspring, whom themselves must turn out well-adjusted enough so as to be capable of having offspring of their own. But a flourishing life is better than one that merely survives and even better than how the average conspecific lives, as living excellently or genuinely flourishing implies doing better than merely “good enough”.¹⁵

We human beings find ourselves with a set of needs, appetites, desires, and passions—conations—that are not too dissimilar from those of other mammals, and quite similar to those of other primates. Most importantly, there are “the facts of life”: we need to breathe and eat and drink, we desire sex, and we must protect ourselves from the dangers of nature, including dangers posed by conspecifics. Also, as with most (but not all) primates, we are social creatures, so that we rely on others, not only for everything when we are babies and children, but for protection from hostile groups our whole lives through. Beyond this, most of us also desire love and the company of conspecifics (though there are exceptional hermits and recluses). All of these conations entail what may be called “life problems”, or a set of problems that must be solved, or at least managed, for us to survive and procreate, constrained as we are by the facts of life. Tyler Burge (2009) calls these “biological functions of individuals” or “whole organisms”, claiming that these are the subset of biological functions involving agency and are to be contrasted with, for example, the functions of particular organs or subsystems. Solving life problems involves activities such as eating, predating, mating, navigating, parenting, etc. Every species has its own set of these life problems, and each evolves species-specific adaptations or capacities to solve them.¹⁶

Given this, *eudaimonia* can be defined as follows:

Eudaimonia: for any species X , a member of that species, x , is a *eudaimon* [is flourishing or thriving] if and only if x has developed to a high [excellent] degree those species-specific adaptations that are characteristic of X , which solve, in normal circumstances, the life problems that are characteristic of X .

Crucially, on such a view, *eudaimonia* is not constituted by successfully surviving and procreating, but rather by the excellent development and exercise of those species-specific capabilities which, under normal conditions, promote survival and procreation. (More on this issue in §8.) This is not intended as a conceptual analysis or definition of “*eudaimonia*”, or “a well-lived life”, but rather as necessary a posteriori identification, one which is epistemologically consistent with similar identifications made in nutritional science between having “a proper diet” (for members of a species) and ingesting a certain combination of vitamins, proteins, and calories. The view yields categorical reasons for individual members of a species, as they apply to all members of a species, irrespective of the contingent and idiosyncratic conations and hypothetical goals of any particular member, or the contingent practices of subsets of members.¹⁷

¹⁵This implies a conception of “positive health” or health that is better than merely an absence of disease. This would imply a theoretical measure between the health of a “normal” human and that of, for example, an Olympic athlete. See Boorse (1977).

¹⁶See Nussbaum (1988) and Bloomfield (2001, 2014a, 2014b).

¹⁷For more on the logic of categorical reasons, especially as they are related to hypothetical reasons and

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How are we to *represent* moral truth? There are two basic types of moral proposition: agent-based assessments of people or their characters, as good or bad people, and act-based assessments of actions as right or wrong. The working normative hypothesis is that people (agents) live good lives and thrive insofar they manifest in their behavior virtuous character traits.¹⁸ The empirical story of how exactly to specify these character traits in operational terms and to test for them has already begun; empirical psychologists are on the job.¹⁹ Given this, it seems unlikely that there are conceptual problems in undertaking it. From this point of view, the worries of the philosophers assayed in §1 are unfounded. If there are moral facts, and one of them is that acting virtuously constitutes *eudaimonia*, then there is no theoretical problem with the project of representing moral truth. This still, however, leaves the question of how the beliefs of virtuous people track the truth about which particular actions are right and wrong.

The ancient Greeks held that virtuous people aimed at “the noble” or “the fine” in their actions, “*to kalon*” in the Greek, but we talk today about “doing the right thing” or doing what we ought to do.²⁰ We may begin by following G. E. M. Anscombe (1958) in replacing these thin and “emphatic” moral terms with the terms for the individual cardinal virtues.²¹ On the present view, there is nothing more to an action’s being the right thing to do, or what ought to be done, than for it to be the most wise, just, temperate, and courageous thing to do, where these character traits are understood as the manifestations of developed capabilities we have adapted to solve the life problems characteristic of the human condition, in the manner indicated above. Importantly, and in contrast to much contemporary virtue theory, right action is *not* understood in terms of what a virtuous *agent* would do (e.g., Hursthouse 1999). No one is perfect, and everyone makes mistakes, so no individual person could play the required role; if we study virtuous agents as a group, then we end up studying what they have in common, or their shared traits directly. So, the capacities required to develop the virtues are taken to be evolved traits and which actions are virtuous will be determined best directly by studying the virtues themselves as they arise out of these capacities in their evolutionary role.

Before moving on, it is important to be clearer about these capacities, or the relation of the virtues to natural selection. As noted, the virtues are character traits, and while some character traits are genetically encoded so that they are expressed in normal conditions, not all character traits function in such a manner. So, while there may be genes that encode for some aspects of temperament, like, e.g., the trait of being shy or inhibited (Kagan 1994), there are no genes to encode courage or justice. Rather, we should understand there to be genes to encode for, say, the fight or flight response, as a part of the sympathetic nervous system. The hypothesis here is that humans evolved the capacity to develop a mechanism which controls how the fight or flight response manifests itself in actual circumstances. This mechanism is (part of) courage.

metaethics, see Bloomfield (2013).

¹⁸Following the psychologist L. A. Pervin (1994), we may understand a character trait as “a disposition to behave expressing itself in consistent patterns of functioning across a range of situations” (108). There are good reasons, however, to follow Christian Miller (2014, chapter 1) in narrowing the range of personality traits that will count as character traits. On such a view, character traits are those personality traits for which a person is responsible, and which also open a person to normative assessment.

¹⁹See the burgeoning work of “positive psychology”, e.g., Tiberius (2013); Seligman and Csikszentmihalyi (2000); Snyder (2002); Peterson and Seligman (2004).

²⁰See Crisp (2014) on the role of nobility in *eudaimonia*.

²¹She writes (1958), “And here we see the superiority of the term ‘unjust’ over the terms ‘morally right’ and ‘morally wrong’. For in the context of English moral philosophy since Sidgwick it appears legitimate to discuss whether it *might* be ‘morally right’ in some circumstances to adopt that procedure [in which the innocent are condemned]; but it cannot be argued that the procedure would in any circumstances be just” (16).

It should be thought of as a capacity because, like, e.g., language, it does not develop without active learning by individuals. We can learn to be courageous, and the capacity to do so is part of our natural genetic endowment.²² The other virtues are to be understood in similar terms, that is, as mechanisms which discern and execute the solutions to our life problems.

While it might be difficult to study courage or justice empirically (due to the ethics of experimental situations involving real danger or injustice), the same is not obviously true for the other two cardinal virtues, temperance and wisdom. Empirical studies on emotional self-regulation and other “executive functions” are directly germane to understanding temperance, and a psychological understanding of wisdom is under investigation.²³ The learning involved in the development of these important character traits does mean that there will be some amount of cultural influence on the development of virtue across places and epochs: the courage of the medieval samurai and the courage of the contemporary, inner-city, emergency room nurse will obviously be quite different, but no form of courage allows one to abandon one’s companions in the face of danger due to fear alone. There are enough articulated principles underlying what the Greeks called “the *logos*” of courageous behavior for us to find easily recognizable and clear, cross-cultural paradigms of courage. (More on this in this section.) And if so, then it is reasonable to conclude that the cardinal moral virtues, including courage, count as “universal” human character traits underlying cultural differences in how they are expressed (cf. note 2).

Returning to the representation of moral truth with which we began the section, we left off with the idea that we have empirically learned to track what counts as good food and that this is not always tracked by the most pleasant tasting food. Evolution has outfitted us with feedback mechanisms beyond sensate pleasure which, when we attend to them and learn from them, allow us to more clearly discern what is good for us and what is not. Some substances are appropriate foods and others, even edible others that might not make us sick outright, are nevertheless not nutritious. Given human biology, it is *fitting* for us to ingest certain substances and avoid others, and *fitness* is central to how we track what is good for us in general.

We can track fitness in the way a key can fit a lock, and a map can fit the lay of the land. This sense of “fitness” has obviously played a large role in evolutionary theory, insofar as a species must fit its ecological niche in order to survive. (Insofar as species construct their niches, they do so in ways that fit them.) These accounts of fitness are themselves fit for a realist’s treatment: it is a fact whether or not a key fits a lock, etc. So, the obvious move to make, with regard to how the moral beliefs of virtuous people track the truth, is to say that these beliefs, about which actions are right and wrong, reliably track the truth by reliably tracking how fitting or appropriate those actions are (or are not), given the circumstances in which they occur. The representational content of these beliefs, what makes them true or false, is meant to track the fitness of the actions in the circumstances. What makes some actions fit? The answer should at this point be obvious: for *Homo sapiens*, actions are fit insofar as they are wise, temperate, just, and courageous, where these are understood as character traits, in the manner above, and as they have been discussed by moral philosophers through the ages and are now being studied by psychologists. A fine example of contemporary philosophy linking fitness and virtue is Lawrence Becker’s *A New Stoicism* (1988). (The role of fitness in evolutionary theory is discussed in §8.)

²²Anachronism aside, this is consistent with Aristotle, who wrote “The virtues therefore are engendered in us neither by nature nor yet in violation of nature; nature gives us the capacity to receive them, and this capacity is brought to maturity by habit” (1934, 1103a24–5).

²³For empirical work related to temperance, see Gross (2014) and the debate between Baumeister, Vohs, and Tice (2007) and Job, Dweck, and Walton (2010). For empirical work on wisdom, see Sternberg (1990); Baltes and Staudinger (2000); Baltes, Glück, and Kunzmann (2005). For related philosophical work, see Tiberius (2013). For a general clearing house of the new empirical work on wisdom, see the publication page from the Center for Practical Wisdom, University of Chicago, at <http://wisdomresearch.org/blogs/publications/>.

Above we defined a general teleological correspondence theory, and now we can fill this out for moral beliefs in particular as follows:

(MTC) (Moral Teleological Correspondence): The belief that “an action x is done rightly” [or wisely, justly, temperately, courageously] is true if and only if the action functionally tracked by $\langle x \rangle$ has the property functionally tracked by $\langle \text{rightly} \rangle$ [or by $\langle \text{wisely, justly, temperately, courageously} \rangle$].

While not mellifluous, the adverbial forms of the key terms are to distinguish the Aristotelian difference between acting in accord with virtue and acting virtuously, or doing the right thing and doing it rightly—that is, as the result of a firm disposition or character trait, as opposed to as a “one off” occurrence (Hurka 2006; Crisp 2015).

To pick up the discussion of the particular cardinal virtues these may be glossed as follows. *Homo sapiens* is a species of animal, and we humans have characteristic ways of solving or managing our life problems. We have our instincts and conations, and we must manage these. The virtue theory under consideration makes the empirical hypothesis that those who develop the character trait of *temperance* possess the virtue by which these conative elements of our minds are most excellently managed. As we have passions, so too do we have knowledge and fear of death, injury, and illness, and the hypothesis is that *courage* is the virtue by which these are managed as well as humanly possible. Starting with the rearing of the young to maturity and ending with how we structure society, our social relations, including friends and family, must be managed, and this is the bailiwick of the virtue of *justice*, broadly construed.²⁴ And all of this takes place in the context of making and executing practical plans to work alone and together in the various projects that are part and parcel of human life. Practical rationality or practical *wisdom* is the virtue that helps us in these planning and executive functions. Again, the empirical hypothesis is that these cardinal virtues, taken by the normative theory to be the foundation of *eudaimonia*, are best understood as the manifestation of capacities naturally selected to make us “fit” to manage human life problems as well as possible. As individuals, we can each manage these problems more or less virtuously.

In general, the reasons we have to pursue our own *eudaimonia* by developing the virtues are no different in ontology and normative “action-guidingness” than the reasons had by the bacteria described above to swim in the direction that their magnetosomes pull, despite obvious differences in the roles these reasons play in the lives of the respective species. The only differences are that our minds have developed to the point where (it at least seems to us as if) we can make free choices over our behavior and this freedom allows for humanly vicious as well as humanly virtuous behavior to be enacted.²⁵ But none of this forces us to see human beings as somehow metaphysically discontinuous with the rest of the animal kingdom, however sophisticated we may have become about our own rationality and exceptionalism.

Returning to culture, while it is true that cultural evolution has had a huge effect on our species (Laland 2017), the basic reasons of practical rationality that are fundamental to morality, concerning eating, mating, the rearing of offspring, etc., are common to most species. Moral reasons are not a special kind of reason with a different authority or weight than, say, prudential

²⁴“*Dikaiosyne*”, central to Plato’s *Republic*, is most often translated as “justice”. Many scholars take issue with this translation. Gregory Vlastos (1968) writes, “I shall use ‘justice’ and ‘just’ merely as counters for *dikaiosyne* and *dikaioi*, whose sense is so much broader, covering all social conduct that is morally right”.

²⁵While I lean toward determinism and a reading of “moral responsibility” based on Aristotle’s understanding of “voluntary behavior”, I take no stand here on the nature of agency or the debate over the existence of free will, other than to reaffirm my commitment to naturalism.

reasons.²⁶ Again, the reasons we have to be moral have the same metaphysical basis as the reasons which the bacteria with magnetosomes have to swim to oxygen-free water; normativity is no more mysterious for us than for the bacteria. Given this form of eudaimonist moral realism, responding excellently to human life problems, in the face of the contingencies of circumstance, including differences of culture, is identical to acting virtuously: that is, acting temperately, courageously, justly, and wisely, even if these are manifested in varying ways from culture to culture. The cardinal virtues are the manifestation of capacities which have been selected for because they allow us to flourish to the greatest possible degree amidst the vicissitudes of life (Nussbaum 1988; Bloomfield 2001).²⁷

6

Given the above, only the moral beliefs of virtuous people reliably track the moral truth. And even here, we should be careful to not over-generalize: though there are people who are truly virtuous, as noted, no one is perfect; everyone makes mistakes. The most perfectly virtuous human being possible will not be omniscient and will have to make judgments and decisions under conditions of incomplete information. (This issue comes up again below in §9.) Mistakes can be made with the best of intentions, and the most skilled expert can make honest mistakes. Since no human being's moral beliefs will perfectly track the truth, the best any of us can hope for is a high degree of reliability.

We should also note the contingency of the moral beliefs that are involved here, as “debunking arguments” have argued that this contingency bedevils moral realism (Bogardus 2016). The present claim is that human beings are capable of tracking the truth about what is morally good for human beings. As noted above, what is morally good is contingent upon our biological and human nature: so, if we were different, the truth about our morality would be different. Since human beings are the only genuinely moral creatures that we know about, appeals to fiction are needed to make the point: there is no reason to think that human beings will flourish in the same way that Vulcans, Klingons, or House Elves will. Indeed, this was noted by Darwin himself (1871), who writes:

It may be well first to premise that I do not wish to maintain that any strictly social animal, if its intellectual faculties were to become as active and as highly developed as in man, would acquire exactly the same moral sense as ours. In the same manner as various animals have some sense of beauty, though they admire widely different objects, so they might have a sense of right and wrong, though led by it to follow widely different lines of conduct. If, for instance, to take an extreme case, men were reared under precisely the same conditions as hive-bees, there can hardly be a doubt that our unmarried females would, like the worker-bees, think it a sacred duty to kill their brothers, and mothers would strive to kill their fertile daughters; and no one would think of interfering. Nevertheless the bee, or any other social

²⁶This is a central theme of Bloomfield 2014a.

²⁷A referee asks, “Let us grant that adaptive behaviors can be tracked. What benefit do we gain from calling them morals? Conversely, why not advocate for an ethics based on biological egoism with inclusive fitness?” In answer, there is no substantial benefit from choosing one set of terminology over another. But at a theoretical level, what is happening is that connections are being found between distinct and up-and-running discourses, each of which have histories of their own. It has long been a goal of naturalistically-minded moral realists to find a way to ground normative moral discourse in the natural world and the present account provides this grounding. Why is this not a form of egoism? This is a long-standing challenge for eudaimonist moral theories; for the best (of many) answers see Annas (2008).

animal, would in our supposed case gain, as it appears to me, some feeling of right and wrong, or a conscience. (73)

If we were born with lobster-like exoskeletons, then the truth about morality would be different: danger, fear, and courage would be different. So too, if we could perform photosynthesis or reproduce asexually, then our appetites and temperance would be different. If we were all social loners like adult, male orangutans, then what we owe each other and justice would be different. There may or may not be some true moral beliefs which are shared by all possible rational creatures, but it is anthropocentric to think that human morality as a whole can be universalized to apply to all possible rational creatures. Even Kant had his moral anthropology. Be that as it may, the narrow claim here is that human beings will track the moral truth for actual human beings insofar as they manifest the moral virtues.

We should distinguish trajectories of evolution which would have left us with something different than actual human nature from those trajectories in which human nature stays as it actually is but that humans develop radically different moral practices. There are worlds quite similar to ours in which, e.g., Hitler won WWII and comes to be seen as a great moral exemplar, and other worlds where a caste system is inextricably woven into the practices of all human life, etc. The claim is *not* that humans necessarily converge on the moral truth; sadly, contra King, the arc of history does not inexorably bend toward justice. Rather, the naturalistic moral realist only claims that the truth about morality, about what makes human lives flourish, is contingent upon our actual, contingent human nature.

7

A Lockean two-dimensionalism can be seen in human moral fallibility, one which demonstrates in short order why response-dependence or secondary quality analyses of moral value fail.²⁸ The moral project does not start with a sensory claim that is analogous to “what *feels* hot to us” as we do in the analysis of *heat*, but rather with a categorical claim such as what we find in nutritional science: “what *is* nutritious for us”. “Nutritional value” is not fit for a secondary quality analysis of value. We can see a conceptual connection between what is nutritious for us and the Lockean real essence of the plant/animal matter we track and ingest as food. The claims of our senses as to how this ingestible stuff tastes and smells give us the “nominal essence” of the substance, how it appears to us, but there is only a contingent connection between how things taste and how nutritious they are—and this contingency is very different than the necessity we find with secondary qualities: given our biology, it is not contingent that red things appear red as it is contingent that tasty things are nutritious. We are much better at tracking heat by attending to what feels warm than we are at tracking nutritional value by attending to what tastes pleasing. With regard to how nutritious a substance is, we cannot rely on first impressions: sometimes subtle feedback mechanisms are required. The color of the gold, the warmth of the fire, and the taste of the food all yield nominal essences; while atomic weight, the thermodynamic nature of heat, and nutritional value are all real.

So, we can reliably but fallibly track facts about what is nutritious even though nutrition is not necessarily linked to taste as the facts about what is hot are necessarily linked to what feels warm. Moving the analogy to morality is now in the offing: we can track what *is* good for us despite this not being necessarily linked to how much we desire it or how pleasurable or satisfying it is or appears. We can reliably but fallibly track goodness, or the fitness of action, despite the contingency between how good or fit something is and how it seems to us or how

²⁸Thanks to Jamie Dreier for conversation leading me to formulate this argument.

it strikes us. We cannot rely on first impressions. This is (one reason) why the present view is robustly realist: for members of our particular species, the reasons for eating turnips for dinner and not poisonous mushrooms, even though the mushrooms may taste better, are categorical. So, we have categorical reasons in both nutrition and morality. They apply to all human beings: given human nature, certain actions—parents loving their children—are necessarily good just as, in human nutrition, certain substances are necessarily nutritious. We can learn that courage and justice are good for us just as we can learn that vitamins and proteins are nutritious for us.²⁹

8

As much as the view defended here is similar to, and indeed owes much to, the metaethical position defended by Philippa Foot (1958–9, 2001), it is important to note how the present account diverges from hers. Strictly speaking, Foot abandons the biological sciences because she thinks that human goodness is discontinuous with that of other species, focusing on claims from biology entailing that an organism cannot flourish if it does not procreate, which she rightly sees as absurd.³⁰ In other words, Foot thinks that, from biological point of view, a claim similar to the following is true:

(Fit) A token organism which fails to reproduce has a fitness of zero.³¹

As a result, and in order to ground the goodness of the moral life, she appeals to a non-Darwinian conception of *function* which departs from received scientific theory; for this, she has been criticized.³² Foot's rejection of biological function as a basis of morality was not necessary, however. What she needed was a better understanding of how evolutionary theory treats the concept of *fitness*. There are currently two dominant views of "fitness" in the literature, and on neither does (Fit) come out true.

Unsurprisingly, *fitness* is a central concept in the philosophy of evolution and there is debate over how best to understand it. A "statisticalist" view emerges from population genetics and is defended in Matthen and Ariew (2002) and Walsh, Ariew, and Matthen (2017), who argue that there is no scientifically respectable conception of "fitness" which can be predicated over individual organisms. If true, then on such a view (Fit) would either be false or meaningless, similar to claiming that "the present king of France is bald": there is no such thing as the king

²⁹Bogardus (2016) raises criticisms of naturalistic accounts of moral tracking based on familiar criticisms from epistemology involving sensitivity, safety, and symmetry. Defenders of naturalistic accounts of moral knowledge can respond, however, by making use of all the ways that epistemologists have handled contingency and luck in their post-Gettier analyses of knowledge. So, the concerns about sensitivity and safety can be answered in familiar ways, developed in, for example, Pritchard (2012). There is further discussion below on Bogardus's concern with symmetry.

³⁰For Foot's (2001) comments about lack of capacity to have children being a "defect" and the discontinuous nature of human goodness vs. the goodness of plants and animals, 42ff. While it is true that Foot sees the difference between human flourishing and that of other animals as involving our ability for rational choice, she focuses on our ability to make choices, like to not have children, that go "against" biology. If, however, biology and morality are consistent in the ways sketched here, no such exceptionalism for human *eudaimonia* is necessary. See also Hacker-Wright (2009) for discussion of how Foot sees human flourishing as exceptional. Kraut (2009) also distinguishes human flourishing from the flourishing of other species.

³¹I do not mean to suggest that Foot is alone in accepting this claim, which is in fact quite common. The following is from the SEOP entry on "Biological Altruism" with regard to bees, "sterile workers obviously do not leave any offspring of their own—so have personal fitness of zero—but their actions greatly assist the reproductive efforts of the queen" (Okasha 2013).

³²In particular, Foot appeals to Thompson's work on "life-forms" (1995). See Kitcher (2006) for a critique of Foot on these grounds.

of France nor is there individual fitness. On this view, individual fitness, while important for Darwin's work, "disappears" on a proper understanding of natural selection as a purely statistical phenomenon, without causal import. The reason given for the empirical "disappearance" of individual fitness is the impossibility of measuring it in a way that operationally differentiates it from the effects of luck or other contingencies in the environment. If we view natural selection statistically, then the only biologically meaningful notion of "fitness" is found in "the fitness of traits", or how statistically probable organisms are to survive and procreate given the presence of these traits or those traits. In this way, the processes of evolution or natural selection (these become indistinguishable) only emerge from statistical aggregates. So, on such a view, (Fit) is not true.

If the statisticalists are correct about the concept of *fitness*, then the question follows regarding what the empirical basis for *eudaimonia* is. The answer is that it will have to come from a theory of proper ontogenetic development. There are three research programs which could, in theory, substantiate the empirical *bona fides* of the view. This first would involve a successful model for moral development based on an empirically informed, roughly-Chomskian understanding of linguistic development and universal grammar. The idea was first proposed by John Rawls (1971), where moral cognition is modeled in this way. One of theoretically many ways this suggestion could be developed is John Mikhail's *Elements of Moral Cognition* (2011), which might be true in spirit if not in letter. (Mikhail does not mention teleosemantics, so there are other viable variations on the theme.) The thought is that are biologically grounded constraints on human morality as there are on human grammaticality.³³ The evolution of human communication might go hand in hand with the evolution of morality. On such a view, immorality would be understood in analogous ways to senselessness, meaninglessness, or perhaps simply irrationality: "how we ought not to behave" would be rule-governed as "how we ought not to speak" is rule-governed, where these rules are ultimately grounded in biology. Morality, on this view, is learned by or develops in the individual in ways which are modeled on how language arises; morality provides constraints on "correct" or "fitting" behavior much in the way that grammar and/or pragmatics constraints "correct" or "fitting" speech.

The second research program points back to earlier references to positive psychology: the goal of this research program being the discernment of an empirically respectable understanding of "healthy human psychology", given the presumed reality of psychological pathologies, such as psychosis and schizophrenia (cf. footnotes 15 and 19; see esp. Seligman 2000). A sense of "psychological healthiness" which goes beyond a mere absence of disease (Boorse 1977), grounded in terms of proper function, would then be identified with *eudaimonia* through the virtues. Early results here do in fact point to the possession of many "traditional" moral virtues as at least partly constitutive of psychological health.

The third more biologically grounded research program which could, theoretically, yield

³³Such a view is roughly in the same ballpark as a view of morality defended by Ruse and Wilson (1986), which bases morality on what they call "epigenetic rules". They do not discuss the metaphysical grounding of these rules, so they are hard to assess. Nevertheless, Ruse and Wilson see their grounding of morality in biology as rendering moral realism "redundant" (187). The problem, however, is how they understand the requirements of moral realism. They write, "Furthermore, morality is taken to transcend mere personal wishes or desires. 'Killing is wrong' conveys more than merely 'I don't like killing'. For this reason, moral statements are thought to have an objective referent, whether the Will of a Supreme Being or eternal verities perceptible through intuition" (178) and "It is thus entirely correct to say that ethical laws can be changed, at the deepest level, by genetic evolution. This is obviously quite inconsistent with the notion of morality as a set of objective, eternal verities" (186). Of course, it is not necessary to conceive of *morality* in these "eternal" non-natural terms (Bloomfield, 2013). Even the moral non-realists discussed in §1, who challenge naturalistic moral realists to give an empirically respectable account of their view, would see this move of Wilson and Ruse as begging the question against naturalistic moral realism. On a eudaimonist conception of *morality*, their idea of "epigenetic rules" actually lends credence to it.

similar results is evolutionary developmental biology or “evo-devo” (Laubichler 2009; Müller 2007; see Moosavi, forthcoming, for a start on the application of this thought to defend “neo-Aristotelian naturalism”). Evo-devo is centrally concerned with reinstating *the organism* back into a central place in biology, in accounting for both its biological form and function, and the relations between these as found in evolution. The issues are taken to be informed by how ontogenetic and phylogenetic development are themselves related. Given this, the hypothesis would be that we should theoretically be able to understand the role of evolution in the ontogenetic development of an individual’s psychology. If this is plausible, then the flourishing of human psychology (*eudaimonia*) would be given in terms of a mind being properly developed and hence properly formed, and therefore functioning as it ought to function. Conceptually, if “individual fitness” is biologically bankrupt, as the statisticalists’ claim, then these three research programs would be the avenues by which human *eudaimonia* could most likely be grounded in empirically respectable terms.

Less radical is the *propensity* view of fitness in which, contra the statisticalists, it does make sense to speak of “individual fitness”. This view of the concept of *fitness* was developed by Mills and Beatty (1979; see also Brandon 1978) and developed further by Sober (1984, 2001, 2013). Here, fitness plays a dual role in evolutionary theory. To use Matthen and Ariew’s (2002) terms, there is “vernacular fitness” and “predictive fitness”, while Sober (2001) distinguishes between fitness as an “ecological descriptor” and a “mathematical predictor”. These correspond to the difference between an individual organism’s fitness and the fitness value of particular traits, where these are linked “by a simple formula: the fitness of a trait is the average fitness of the individuals that have that trait”. (Sober 2013, 336)

Our present concern is an individual’s fitness, and given this and what Sober says, it is quite clear that Foot’s (Fit) above is false. A token organism’s fitness is understood as its propensities for survival and procreation, not its actual success. Why? Sober explains:

there is the important insight that individuals of identical fitness can differ in how successful they are at surviving and reproducing. The individuals have the same *abilities*, but good luck for some and bad luck for others can lead to unequal outcomes. (2013, 336)

Up until the point where one identical twin is struck by lightning while the other is not, there is no reason to think they differed with regard to how fit they were as individuals. This point is also made by Mills and Beatty (1979, 268) and earlier by Scriven (1959, 478).

Sober acknowledges the issues with the idea of an individual’s fitness that lead the statisticalists to reject it. He acknowledges that “individual fitnesses are useless” because they are “typically inaccessible” (2013, 337).³⁴ He attributes the reason for this to be the fact that “organisms taste of life but once” (2013, 337): individual organisms are each unique, unrepeatable experiments in living and for any of us, it becomes impossible to measure the difference between our propensities and the “luck” of our environments. The modality of this impossibility involves what is “biologically feasible” and not strictly logical possibility since, as Sober (2013) writes, with enough “carbon copies” of an organism, we could make our calculations based on the frequencies of their survival.³⁵ As it stands, we cannot do repeated double-blind experiments on

³⁴The “typically” is needed, since there are cases in which, e.g., an organism is born with a trait lethal in childhood, which would give the organism a known fitness of zero.

³⁵The immeasurability of individual fitness is what leads the statisticalists to reject it, while Sober and other propensity theorists retain it so as to ground natural selection in casual interactions between an organism and its environment. Pursuing this matter here is beyond the purview of this paper, given that (Fit) is not true on either the statistical or the propensity accounts of “fitness”.

a single organism to determine its fitness. The problems with doing so, however, are purely epistemic: omniscient beings would know the fitness levels of individuals. Admittedly, this is no help to the empirical study of biology, but remember our interest is metaethics, and while the epistemology of individual fitness is beyond us, the metaphysics are soundly deserving of a realist's treatment. We began by supposing that there are moral properties out there and the challenge was to explain what they are and how we learn about them. We have been looking for a naturalistic grounding for *eudaimonia* and an epistemology that meets a realist's standard, and we have found them.

If individual fitness is the sum total of the propensities of an organism, the sense of "*eudaimonia*" defined above involves a proper subset of those propensities: namely that subset which accounts for an organism's ability to solve, in normal circumstances, the life problems characteristic of the species to which the organism belongs (cf. the discussion of Burge above).³⁶ One might have bad luck in a variety of ways: by being struck by lightning, or by being born in the middle of a natural drought or a cultural war, or by being born infertile, or to neglectful parents, or orphaned. Individual fitness distinguishes, in theory, endogenous propensities from exogenous bad luck: between dying from bad eyesight and dying by lightning bolt. *Eudaimonia* distinguishes further between those endogenous propensities for which an organism is responsible, such as character traits determining how it manages or responds to threats or danger, from the complement of endogenous propensities over which an organism has no control, such as being born infertile or as a runt compared to its peer group (cf. footnote 18 on character traits). *Eudaimonia* involves those propensities which determine an organism's responses to the favorable or unfavorable life circumstances in which it finds itself: if a token individual is, with regard to its species-specific capabilities, a well-developed member of its kind, and thereby responds with a high reliability to its circumstances in a fitting way, or as it ought to, or in the best way possible for it, then it will flourish and be a *eudaimon*. For human beings, this requires the development of the cardinal virtues, as discussed above. This result substantiates the subject matter of normative moral discourse while being consistent with evolutionary theory.

Individual levels of *eudaimonia* will not be empirically measurable in practice for the same reasons that make individual fitness resist measurement. (Plus, there would be ethical problems in doing experiments that impact an individual's flourishing.) Recall, however, we are assuming in this dialectic that moral realism is true and we are trying to make sense of these supposed moral facts and how we might learn about them from the point of view of evolutionary theory. The present account does so, showing that Foot was too quick to reject the grounding of *eudaimonia* in evolutionary theory: Foot's (Fit) is false.³⁷

Some will still balk at the very idea of grounding morality in biology. They rightly note that the natural history of humanity is obviously rife with immorality involving dishonesty, cheating on commitments, violence, sexism, racism, etc., and they infer that it is a mistake to try to read morality off of a biologically grounded view of human nature.³⁸ This worry, however, does not

³⁶For simple forms of life, there may be no difference between individual fitness and *eudaimonia*.

³⁷This also indicates a response to William FitzPatrick's (2000) criticism of naturalistic moral realism based on an account of biological function cashed out in terms of successful gene replication. Even if we assume that FitzPatrick is correct about biological function, assuming that genetic replication is the only goal or standard of natural selection, flourishing or *eudaimonia* does not reduce to an organism's success or failure to replicate its genes. Rather, *eudaimonia* is grounded in a theory of fitness determined by the development of traits that yield a high *propensity* for gene replication. Whether or not genes are actually replicated will involve contingencies of circumstance which cannot be selected for. Rather, organisms develop traits which make it highly likely that their genes will successfully replicate. So, their fitness is not determined by whether or not they actually do replicate.

³⁸This is the correlate to the criticism of Foot known as the Pollyanna objection, see Millgram (2009), Woodcock (2006), and Andreou (2006).

take into account the evolutionary reasons for these behaviors and the fact that, while some of them may have had adaptive value in the past, they are now best seen as traits that are maladaptive in circumstances other than those in which they evolved. We evolved to find various sugars and salt tasty because they are needed nutritionally for survival, but now, given their abundance in our contemporary environment, our proclivity for liking sweet and salty foods can be dangerous to our health. Violence between conspecifics was often necessary before the rise of civil society, but now it is most likely to lead one away from flourishing and into the hospital; what was once a necessary evil is no longer necessary yet is still evil.

Now, explaining the existence or prevalence of violence, sexism, and racism in a manner consistent with the proposed theory requires theorizing about the origins of these traits, which naturally leads one to the literature of evolutionary psychology. While this literature does have widespread credibility, it is often criticized (see, for example, Buller 2005). The most trenchant criticism is that its results are actually no more than “just-so” stories with no empirical evidence to back them up. Of course, adjudicating the credentials of evolutionary psychology goes far beyond the remit of this paper, but luckily, in this case, there is data from developmental psychology to back up the results of the evolutionary psychology.

So, consider how evolutionary psychologists explain racism (Kurzban, Tooby, and Cosmides 2001). Given how difficult solitary life is for creatures such as us, we should expect the formation of alliances to be important for survival, and that, given that territory and resources are limited, not all conspecifics will belong to every alliance. So, we evolve mechanisms to quickly detect friend from foe, and for a great part of human history, people who looked superficially different were more likely to be foe than friend. Thus, racism was a way for these biological mechanisms to reliably detect in-group/out-group alliances, though these mechanisms did not evolve to detect race *per se* at all. When the world was radically more dangerous than it is currently is, when it was often truly “kill or be killed”, racism and various forms of prejudice (prejudgment) may have had adaptive value, but in contemporary life, they represent cognitive malfunction. When someone’s race, all by itself, is a reliable indicator of a mortal enemy, like the uniform of an enemy soldier, then using race to detect enemies is apt. But absent the presence of such enemies, classifying people by their race ceases to have an evolutionary purpose.

The conclusion is not to claim with Pollyanna that human nature is inherently morally good, but rather, to agree again with Aristotle, “the virtues are neither engendered in us by nature nor yet in violation of nature; nature gives us the capacity to receive them, and this capacity is brought to maturity by habit” (1934, 1103a24–5).³⁹

So, far so good. The data that gives further support to this view from evolutionary psychology comes from developmental psychology. It gives evidence of how early the tracking of obvious traits as markers of affiliation shows up in children and how they prioritize these traits. The research was done by Kinzler et al. (2009) and it is explicitly intended to support the evolutionary hypothesis concerning the origins of in-group/out-group distinctions (632). The work involves a series of experiments on how 5-year olds would choose friends. In one experiment, when presented with photos and voice recordings of native speakers of their language versus those who spoke the native language with a foreign accent, children were more likely to choose those without the accent to be their friend. In another experiment, children chose same-race children to be friends with over other-race children when the potential friends were silent, but they chose other-race children over same-race children when the other-race children had a native accent and the same-race children had a foreign accent. So, there is some reason to think that accent (language) trumps race in affiliation forming behavior, which is consistent with the

³⁹For defenses of the even stronger claim that morality is to some degree innate, see Bloom (2004); Vaish et al. (2010).

predictions of evolutionary psychology, and the present view of the relation between *eudaimonia* and morality.

9

But why, a prominent objection intercedes, should anyone care about what we ought to do given these facts about human nature and flourishing? Gary Watson, in his (1990) article “On The Primacy of Character”, writes:

Even if we grant that we can derive determinate appraisals of conduct from an objective description of what is characteristic of the species, why should we care about those appraisals? Why should we care about living distinctively human lives rather than living like pigs or gangsters? Why is it worthwhile for us to have those particular virtues at the cost of alternative lives they preclude? (469)⁴⁰

The quickest answer comes by asking what would happen to one of the bacteria discussed above if it had the power to disregard the information from its magnetosomes and did so? Obviously, it would die fairly quickly, just as any human who genuinely tried to live the life of a pig, naked in the filth and eating garbage, would quickly die. A flaunting disregard of one’s nature leads away from flourishing and the more we hone in on what makes a human life go well, the more likely we are to live lives that go well.

As for Watson’s gangster, the possibility should be acknowledged that he, or Hume’s Sensible Knave, or a free rider has the right answer to the question of how to live best. Moral realists should not beg normative questions about what we have reason to do. Following Foot (1958–59) on this point, she is quite right to say that, “if justice is not a good to the just man, moralists who recommend it as a virtue are perpetrating a fraud” (100). Given that moral reasons are based on what leads to flourishing, if it turns out that there really is no good reason to avoid what is conventionally called “immorality”, then the virtues (in particular justice) are not what we have thought. The present point is not to adjudicate what the substantive moral truths are, but only rather to substantiate the idea that we are capable of tracking them.⁴¹ Maybe Sensible Knaves are right about what the best kind of human life is. If so, then it is the Knaves who are reliably tracking the truth about morality, again understood broadly as “the way of life which leads to the greatest flourishing”. Let’s let the normative chips fall where they may and follow the argument and the empirical data, wherever they take us.

As a final objection, one might worry that the proposed view leads to a reprehensible form of relativism. After all, if the virtues are what enhances fitness, then when it is obvious that owning slaves enhances fitness, it must be virtuous to own slaves. If this is the case, something clearly has gone wrong from the moral point of view. The correct response begins by again pointing to the flexibility of virtue, and how case sensitive and context sensitive practical rationality (*phronesis*) and the rest of the virtues are: there is no reason to deny that culture can influence how the virtues are manifested. Again, courage for the medieval samurai and the inner-city nurse may require very different kinds of behavior, while still setting significant constraints on how agents manage fear and danger: for all human agents and at all times, abandoning one’s post out of fear, and leaving one’s comrades in the lurch is cowardly vice.

This flexibility holds true for justice, which is probably the source of most of the worry about relativism. But it is not too uncommon to note that in times of great scarcity, or danger,

⁴⁰For similar concerns see FitzPatrick (2000).

⁴¹For various reasons to think that the gangsters, Knaves, and free riders are wrong about what makes for a flourishing life, see Bloomfield (2014) and (2017); Badhwar (2014); Brink (1990).

or immorality, what is normally unjust, or unjust in other circumstances, can be just. A fuller discussion of these themes can be found in Tessman (2005). As two examples: Socrates, normally a stickler for obeying the law, refused to arrest Leon of Salamis on the order of the Thirty tyrants, on the grounds that the orders were unjust (*Apology*, 32c–d); Robin Hood stole from the rich, and yet this might well be justice despite the fact that stealing is normally unjust (von Platz 2016). If the world genuinely devolved into a “kill or be killed” place, then we would have a right to kill insofar as we always have a right to self-defense.

And what are we to say of people throughout history who, by the lights of most, have been clearly virtuous “on the whole” despite accepting immoral practices, such as slavery, that were endemic to their time and place in history? The answer involves a distinction similar to that between ideal and non-ideal theory in political philosophy. Yes, it is possible for there to be times when taking part in unjust practices is the only way to survive, where this would allow one to do better than were one to strictly adhere to the principles of justice. Let’s assume such a situation obtains for some who hold slaves, but that the slave-owners do not abandon justice in all aspects of their lives, only with regard to their owning of slaves. The non-relativistic claim is that the injustice with which slave-owners treat their slaves, their failure to recognize these human beings as human beings and as something more than property, keeps the slave-owners from flourishing as much as humans are capable of flourishing. While there might be times when the world requires us to engage in vicious behavior as a necessary evil, this does not imply that everyone would be better off were they vicious instead of virtuous, nor does it turn a necessary evil into something which is morally good or right.

In other words, just because everyone is doing it, that does not make it right. To think it does make it right is to accept (one form of) moral relativism. To insist that everyone can be wrong is realism, and this is moral realism.

The non-relativistic thesis that is consistent with the above views is that bloody, violent societies with lots of injustice lead to people living worse lives than they might otherwise live, even if they are perpetrators and not victims of immorality. Being inhumane and vicious is harmful to the flourishing of human beings, however common it might be. It is, of course, better to live in a world in which no one is bought and sold like chattel property. If one lives in a morally corrupt world, one’s very survival may require participating in unjust institutions, but the claim is that the members of that society as a whole would benefit by not being unjust were it possible for them to do so. And of course, under no circumstances would otherwise virtuous slave-owners exhibit wanton cruelty and vice just for fun. To change examples, virtuous people living in a Stasi-style state, similar to the former East Germany, will not cooperate and tell tales (true or false) about their neighbors, but will live carefully and work for justice in surreptitious ways. If, in fact, one *can* abandon the virtue of justice without this harming one’s well-lived life, as Foot’s comment suggests (the comment about justice not being a virtue if it is without benefit to those who practice it), then we are back with Watson’s gangster, where it might turn out that what we often think of as justice is not really a virtue. Again, we should let these chips fall where they may and follow the argument where it leads (cf. note 41).

10 Conclusion

Undoubtedly, there will be other objections and problems. But given the amount of skepticism heaped upon even the remote plausibility of naturalistic moral realism, the sketch above points the way toward how one may maintain such a metaethics by adopting a virtue-centric eudaimonism as a normative moral theory. A fitting moral epistemology is in the offing by attending to the current rise in prominence of virtue epistemology. The beginnings of an empir-

ical verification for eudaimonism can be found in the burgeoning field of positive psychology, as referenced above. These allow one to generate a viable conception of a representationalist or correspondence view of moral truth, such that the moral truth, constituted by eudaimonism, may be tracked.

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