Getting On in a Varied World

1. Introduction

Are greed and ruthlessness contrary to reason? Is immorality a form of irrationality? Much of contemporary ethical theory is a debate between Kantians, who argue that the dictates of morality are dictates of reason, and Humeans, who argue that reason is neutral between morality and immorality. The Kantian and Humean positions assume that the above questions can be answered uniformly for all possible rational agents. Recently, however, the Aristotelian view that the dictates of reason can vary depending on the agent's species has gained some ground. If such variation is possible, then it might be that greed and ruthlessness are contrary to reason for agents of a certain species, rationally required for agents of another species, and rationally optional for agents of yet a third species.

The idea that the dictates of reason can vary depending on the agent's species is related to Aristotle's view that whether something counts as a defect for a certain individual depends on what natural kind the individual belongs to. This position concerning evaluation makes room for the idea that immorality can be a defect of the will for one kind of reflective creature without being a defect of the will for another kind of reflective creature, just as flexibility can be a physical defect for one kind of plant without being a physical defect for another kind of plant.

The nature of species-based evaluation has been elaborated on by Michael Thompson. Based on this elaboration and on some observations

One of Thompson's aims is to show that the Aristotelian picture is not committed to complete empiricism when it comes to our knowledge of natural-kind facts. He maintains that "human beings are characteristically in possession of *some* general substantive knowledge of the human life form which is not founded empirically on observation of members of their kind" (Michael Thompson, "Apprehending Human Form," in Anthony O'Hear (ed.), *Modern Moral Philosophy* (Cambridge: Cambridge University Press, 2004), pp. 47-74, at pp. 57-58; my emphasis). We have, he claims, "knowledge by reflection of some of the powers characteristic of the form we bear" (p. 72). For example, "of Martians I may perhaps recognize by empirical study, through my telescope, that they possess the powers of conceptual thought and concept-governed action ... But it seems I, as a human, may reach the same general facts about the specifically human form without a telescope" (p. 71).

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concerning the human predicament that are familiar from the work of Elizabeth Anscombe, Philippa Foot has developed the first sustained contemporary defense of the view that immorality is a "natural defect" of the will for human beings.² There is, as Foot would agree, no denying that examples of immorality abound and that it is only the lucky among us that get away with merely hearing about, rather than experiencing firsthand, some of the worst that human life has to offer. Still, according to Foot, there is a sense in which immorality is not part of human nature, but is rather a (perhaps widespread) deviation from it—a sort of nonphysical deformity. Foot's position, in a nutshell, is that the dictates of reason are determined by the workings of a properly functioning will, which in the case of human beings is a morally good will. This position combines a theoretical point about practical reason in general-namely, that the dictates of reason are species-relative—with a substantive point concerning human nature in particular—namely, that for human beings natural goodness implies moral goodness. My focus will be on the latter point (though my arguments in section 3 will also address the more general idea that the standards for a properly functioning will—and so the dictates of practical reason—are uniform within a single rational species).

The core argument in favor of the view that immorality is a "natural defect" of the will for human beings, which I will examine shortly, is, I will argue, defective. It ignores certain possibilities concerning human nature that cannot, given nature's ingenuity, reasonably be ignored. Note that I will not harp on how immoral people can be, or even how common immorality is. That, as both Thompson and Foot would stress, is not necessarily to the point when it comes to the question of whether immorality is part of human nature or a deviation from it, since defects can be quite common.

²For a version of "ethical naturalism" that is inspired by but also differs from Foot's, see Rosalind Hursthouse, On Virtue Ethics (Oxford: Oxford University Press, 1999), part III). A crucial difference between Foot's position and Hursthouse's position is that, unlike Foot, Hursthouse defends the view that human nature is "harmonious" in that natural goodness and eudaimonia go hand in hand. (A view along these lines is also defended by Martha Nussbaum, "Aristotle on Human Nature and the Foundations of Ethics," in J.E.J. Altham and Ross Harrison (eds.), World, Mind, and Ethics (Cambridge: Cambridge University Press, 1995), pp. 86-131.) For a critique of the view, see Bernard Williams, "Evolution, Ethics, and the Representation Problem" (1983), reprinted in Making Sense of Humanity (Cambridge: Cambridge University Press, 1995), chap. 9; Ethics and the Limits of Philosophy (Cambridge, Mass.: Harvard University Press, 1985), chap. 3; "Replies" in Altham and Harrison (eds.), World, Mind, and Ethics, pp. 183-224. Though there are important differences between Foot's position and Hursthouse's position, Hursthouse's positive argument in favor of the view that immorality is a natural defect of the will for human beings is essentially the same as Foot's. The argument will be described in section 2.

2. Species-Based Evaluation

In describing species-based evaluation, Foot relies on Thompson's claim that when it comes to living things, we can make general judgments that are not properly understood as statistical judgments. Examples of such judgments, which Thompson labels Aristotelian categoricals, can be found in field guides. Take, for example, the judgment "Bobcats have four legs," which can also be expressed in the form "The bobcat has four legs." If one found the judgment "Bobcats have four legs" in a field guide, it would clearly be a mistake to interpret the judgment as equivalent to the universal "All bobcats have four legs." It would also be a mistake to interpret the judgment as equivalent to the judgment "Most bobcats have four legs." To see this last point, notice that the following inference rule holds for Aristotelian categoricals: It follows from "Ss are F" and "Ss are G" that "Ss are F and G." And, as Thompson points out. by "repeated application" of the above inference rule "we will presumably always be able to produce a true [Aristotelian categorical] involving a complex conjunctive predicate that is not true of any member of the kind denoted by its subject, living or dead." Thompson's succinct follow-up remark, "I mean: nobody's perfect," points to the feature of Aristotelian categoricals that is crucial for Foot's purposes, namely, that they ground species-relative evaluative judgments. For example, given that bobcats have four legs, where this is to be interpreted as an Aristotelian categorical, bobcats with three legs count as defective.

But how do we arrive at Aristotelian categoricals? Foot's answer is that Aristotelian categoricals "have to do with the teleology of living things of [the relevant] kind." Suppose, for example, that one is wondering whether the proposition "Humans have chins" is an Aristotelian categorical. For Foot, to figure this out one must figure out whether chins have a "purpose" or "function" in human life, particularly with respect to the survival and reproduction of human beings. And, as is clear from Foot's discussion, the human chin might have a purpose, in the relevant sense, without this purpose having been assigned to the human chin by someone.

As Foot and Thompson point out, a feature's current function in the survival and reproduction of a certain kind of living thing may differ from the function it was selected to serve; and it is current functions that determine Aristotelian categoricals. Aristotelian categoricals are not, in other words, "hypotheses about the past." So a feature's function, in the

³Michael Thompson, "The Representation of Life," in Rosalind Hursthouse, Gavin Lawrence, and Warren Quinn (eds.), *Virtues and Reasons: Philippa Foot and Moral Theory* (Oxford: Clarendon Press, 1995), pp. 247-95, at p. 288.

⁴Philippa Foot, *Natural Goodness* (Oxford: Clarendon Press, 2001), p. 31. ⁵See ibid., p. 40 n. 1; and Thompson, "The Representation of Life," p. 294.

sense that is relevant here, need not coincide with what one might label as its *evolutionary function*. Still, current function and evolutionary function will often coincide.

The idea that some evaluative judgments are species-based evaluations is fairly familiar. It is, for example, standard to view judgments about the adequacy of an individual's vision as species-relative. What is less familiar is Foot's suggestion that reason-judgments are species-based evaluations. For Foot, reason-judgments are of the same logical type as evaluations of sight. Just as evaluations of sight rely on natural norms concerning what makes for properly functioning eyes within a species, reason-judgments rely on natural norms concerning what makes for a properly functioning will within a species.

Moreover, for Foot, just as nearsightedness is a natural defect in human beings—a defect of the eyes—injustice is a natural defect in human beings—a defect of the will. And just as nearsightedness counts as a defect in human beings because of the function of sight in human life, injustice counts as a defect in human beings because of the function of cooperation in human life. According to Foot, "we are social animals, we depend on each other as do wolves that hunt in packs." So for human beings, at least in their current state of evolution, justice is "necessary"—"we can't get on without it." Foot maintains that the same is true of morality in general. Propositions such as "Humans are cooperative" and "Humans are compassionate" count, therefore, as genuine Aristotelian categoricals. This, in short, is the core argument in favor of the view that immorality is a natural defect for human beings.

There are two very different ways of challenging the picture developed by Foot, even if one is willing to accept the existence of natural norms. At the theoretical level, one can resist Foot's equation of a rational will with a naturally good will. If one's purposes are well-served by one's having a defective will, why think that having a defective will is

⁷As Foot points out, her approach involves looking at "stills" in the "moving picture of the evolution of species" (ibid., p. 29).

⁶Foot, Natural Goodness, p. 16.

⁸Ibid., pp. 16-17. It is this move in Foot's reasoning that is most clearly influenced by Anscombe's work, especially G.E.M. Anscombe, "On Promising and its Justice" (1969), reprinted in *Collected Philosophical Papers: Metaphysics and the Philosophy of Mind* (Minneapolis: University of Minnesota Press, 1981), pp. 10-21.

⁹Hursthouse makes essentially the same point in *On Virtue Ethics*, where she says that "if to be a good, non-defective human being is to be endowed with those character traits that manifest themselves in seizing and enjoying whatever one wants, unconstrained by law and morality, and one's desires have not been enriched and amended by any of the training that begins the inculcation of the (real) virtues, then a collection of good human beings do not have any law or morality, do not give their children any kind of moral training—and indeed, clearly do not bother about children at all, who, we must suppose, all die of neglect shortly after they are born" (p. 252).

something that a rational human being must avoid? Perhaps human beings, taken as a group, cannot get on without justice; but an individual human being can get on without being just, and it might serve her purposes quite well to do so. At the substantive level, one can resist Foot's picture of the role of morality in human life. One might be sympathetic, for instance, with the Calliclean view that the morally good will is naturally defective. Perhaps it is hierarchical power structures, rather than cooperation, that we humans cannot get on without.

My concern here is with the substantive claim that immorality is a natural defect for human beings. I am skeptical not because I find the Calliclean picture of the human predicament more plausible than the Footian picture, but because the Footian picture, like the Calliclean picture, results from ignoring certain possibilities that cannot reasonably be ignored, namely, the possibility of multiple naturally sound types and the possibility of mixed naturally sound types. In the following sections, I will consider the possibility of multiple and mixed naturally sound types, drawing primarily on Sarah Blaffer Hrdy's work, which brings together a variety of research that shows that multiple and mixed naturally sound types are not only possible, but actually occur in nature. Given the possibility of multiple and mixed naturally sound types, it may be that neither the moral individual nor the immoral individual is, to use an image from Thompson's work, "a human bonsai."

3. The Possibility of Multiple Naturally Sound Types

Suppose there is a species of flying insect, call it the species of bleekers, that is divided into two types: the far-seeing and the near-seeing. Though they differ in their visual abilities, neither far-seeing bleekers nor near-seeing bleekers are naturally defective. Whether a bleeker is far-seeing or near-seeing depends on what developmental path is triggered by early environmental cues. These cues prompt each bleeker to develop in a way

¹⁰Michael Thompson stresses this point in "Apprehending Human Form," though he places himself on the side of Foot, Hursthouse, and Anscombe. (One clarificatory point: Suppose one conceives of moral judgments as reason-judgments and reason-judgments as species-based evaluations. Suppose further that the Calliclean view is on the right track and that cooperativeness and compassion are natural defects while cruelty and ruthlessness are natural virtues. Then, though we can say, loosely speaking, that the morally good will is naturally defective, it is more accurate to say that any plausible candidate for a morally good will is naturally defective, and so terms like (un)just and (im)moral should be discarded because they implicitly presuppose (by hypothesis falsely) that cooperativeness and compassion are rationally endorsed virtues. For expository convenience and compactness, I will put this complication aside and allow for the loose way of speaking found above.)

¹¹Thompson, "Apprehending Human Form," p. 60.

that is appropriate given its circumstances. This developmental flexibility is essential to bleeker survival and reproduction. So neither of the following statements is true:

- (1) All naturally sound bleekers are far-seeing.
- (2) All naturally sound bleekers are near-seeing.

Still, it might be true that all naturally sound bleekers can see, just as it is true that all naturally sound bleekers can fly.

Next suppose there is a species of two-legged mammal, call it the species of shumans, that is divided into two types: the just and the unjust. Though they differ in their psychologies and habits, neither just shumans nor unjust shumans are naturally defective. Whether a shuman is just or unjust depends on what developmental path is triggered by early cues. These cues prompt each shuman to develop in a way that is appropriate given its circumstances. (This is not to say that responsiveness to early cues is sufficient for appropriate development. Conditions or reinforcements necessary for progress along the developmental path must also be met.) This developmental flexibility is essential to shuman survival and reproduction. So neither of the following statements is true:

- (1) All naturally sound shumans are just.
- (2) All naturally sound shumans are unjust.

Now consider the following possibility: perhaps injustice in humans is like injustice in shumans, which is perfectly sound, as are both near-vision and far-vision in bleekers. Even if justice plays a crucial role in human survival and reproduction, it does not follow that injustice is a defect in humans. For injustice may also play a crucial role in human survival and reproduction, in which case both justice and injustice are naturally sound in humans. It is hasty to assume that the injustice we find in the human world has no function in human life. Both justice and injustice may figure as "ways of making out that are in [the human] repertoire," to use a phrase of Foot's. And it may be that both ways of making out were selected for in humans, both *continue* to play important roles in human life, and the *current* functions served by justice and injustice match the functions they were selected to serve, which they continue to serve well.

The complication I have attempted to bring out can be summarized as follows: there may be multiple naturally sound character types. Consider, relatedly, the following real case of *polyphenism*, "the phenomenon of environmentally cued alternative phenotypes within the same population":

¹²Foot, Natural Goodness, p. 15.

In the case of geometric moths, mothers hatch two broods of caterpillars each year. In nature, spring broods feed on the protein-rich pollen of the oak's drooping flowers, called catkins. Long after these [flowers] have dropped from the trees, the second ... brood of caterpillars hatches. Since the catkins are gone, all that is left for summer caterpillars are tough mature oak leaves ...

Whereas pollen-eating grubs metamorphose into knobby, wrinkled caterpillars that resemble ... catkins, later-born [caterpillars] are ... utterly twiglike, blending in with their leafy dinner and once again fooling predators ...

Experiments [have shown] that the pathway taken by the genetically coded developmental program is triggered by what the caterpillar eats in the first three days.¹³

The moral is that

in varied and unpredictable worlds there will be more than one way to survive and reproduce. Through the course of development, individuals adopt alternative strategies, manifested either in their morphology and physical appearance or in their behavior. Resulting phenotypes depend on circumstances ...¹⁴

Reflection on the phenomenon of polyphenism has led to interesting new hypotheses concerning certain purportedly pathological human types. Hrdy, for example, has boldly suggested that the traits that characterize what we now call sociopaths may be naturally sound given certain conditions during infant development.¹⁵ With the help of environmental cues, an infant might come to "recognize" that the path of the sociopathic loner is the developmental path that is most "appropriate" given his situation. These cues will trigger the "appropriate" development.

Now it might be suggested that the cues that trigger sociopathic development are cues indicating an abnormal environment. Perhaps the infant has no one to rely on but a neglectful mother. If it is only in abnormal situations that sociopathic development is triggered, this might be enough to warrant classifying sociopathic development as pathological, even if it is a naturally sound response. But what makes for an abnormal environment? Is an environment containing a neglectful mother necessarily abnormal? What if the mother's neglect is prompted by a psychological mechanism that plays a crucial role in human survival and reproduction? (I will return to this possibility later on.)

But my aim is not to show that the type *sociopathic loner* is a naturally sound human type. Maybe it is; maybe it is not. My aim is to stress that the phenomenon of polyphenism makes room for the possibility that *both* the just individual *and* the unjust individual are following paths appropriate to their different conditions.

It is a mistake to disregard the possibility of multiple naturally sound character types, just as it was a mistake for Aristotle to disregard the pos-

¹³Sarah Blaffer Hrdy, *Mother Nature* (New York: Ballantine Books, 1999), p. 73.

¹⁴Ibid., p. 74.

¹⁵See ibid., part III, section 23.

sibility of multiple naturally sound physical types in his work concerning reproduction and the "proper [human] form." Aristotle's mistake is hard to miss, given his biologically absurd conclusion that women are defective men. Foot clearly wants no part of this position. And yet, in disregarding the possibility of multiple naturally sound character types, the core argument in favor of the view that immorality is a natural defect for human beings incorporates essentially the same sort of mistake as the one Aristotle makes.

4. The Possibility of Mixed Naturally Sound Types

Things might be even more complicated than I have so far suggested. Suppose there is a species of two-legged mammal, call it the species of chumans, for which it is true that all naturally sound chumans care for their healthy-seeming newborns but neglect or abuse their weak-seeming newborns. (These attitudes do not result from conscious calculation, but from the unconscious processing of cues that chumans have evolved to be emotionally responsive to.) Chumans can thus move between being maternal (or, more precisely, nurturing and protective) and being unmaternal. They are, relative to a contrast that Foot plausibly casts as central in behavioral ecology, mixed naturally sound types.¹⁷ (Here and throughout this paper, I mean by a *mixed type* a type that is mixed relative to the familiar contrasting types with which Foot is concerned, such as maternal versus unmaternal and just versus unjust.)

That mixed naturally sound types occur in nature is quite clear. Take maternal and unmaternal responses. Well-established research by David Lack on swallows, robins, and other birds suggests that naturally sound birds are neither purely maternal nor purely unmaternal. The idea that a purely unmaternal bird is not naturally sound seems right. After all, a purely unmaternal bird is not likely to have many surviving offspring. But why wouldn't pure maternality be naturally sound? The answer is that the bird who "attempt[s] to rear every egg she produce[s], d[oes] not necessarily fledge the most chicks." As such, survival and reproduction in many bird species calls for discrimination when it comes to maternal commitment. This explains why

¹⁶See Aristotle, *Generation of Animals*, in Jonathan Barnes (ed.), *The Complete Works of Aristotle*, The Revised Oxford Translation, vol. 1 (Princeton: Princeton University Press, 1984), pp. 1111-218, at p. 1185.

 ¹⁷See Foot, *Natural Goodness*, pp. 15, 29, where she considers the "neglectful parent."
 ¹⁸See David Lack, *The Life of the Robin* (London: H.F. and G. Witherby, Ltd., 1941);
 "The Significance of Clutch Size," *Ibis* 89 (1947): 302-52; *Ecological Adaptations for Breeding Birds* (London: Chapman and Hall, 1968).

¹⁹Hrdy, Mother Nature, p. 30.

the same mother who bravely drove away a predator from her nest would not intervene to protect the last-hatched chick from a less ferocious but more lethal enemy, its own older sib. This was a highly discriminating mother, whose commitment to her young was contingent on circumstances.²⁰

And it does not seem to be just birds that are discriminating. Hrdy convincingly argues that "there is probably no mammal in which maternal commitment does not emerge piecemeal and chronically sensitive to external cues." In our varied world, pure maternality is, for many kinds, including kinds whose young need care to survive, naturally unsound. (Foot is therefore going out on a limb when she asserts, in passing, that if a lioness is a neglectful parent—if, for example, she fails to feed her cub or teach it to hunt—she is thereby naturally defective. ²²)

Now the question is: Given that mixed naturally sound types can and do occur in nature, what reason is there to assume, as Foot does, that a naturally sound human cannot be both just and unjust? Perhaps both just responses and unjust responses fulfill important functions in human life, just as maternal responses and unmaternal responses fulfill important functions in chuman life.

It might be suggested, in defense of Foot's picture and of the core argument in favor of the view that immorality is a natural defect for human beings, that morality and immorality are not the sorts of things one can move back and forth between. This suggestion is, however, implausible. Human beings are not consistent when it comes to being moral. We hardly need experiments to tell us that a single person can be compassionate in one situation but indifferent or even cruel in another. We have all had bad days and bad moods leading to bad behavior. What is surprising is just how little it takes to affect our responsiveness to others. As an experiment by A.M. Isen and P.F. Levin shows, something as trivial as finding a dime in a phone coin return slot can greatly impact how likely it is that a person will stop to help another. In Isen and Levin's experiment, dime-finders helped paper-droppers at a rate of 87.5%, whereas non-finders helped at a rate of only 4%.23 Of course, the contrast between (overly-)enthusiastic solicitousness and minding one's own affairs is not nearly as dramatic or morally charged as the contrast between being compassionate and being cruel. Still, Isen and Levin's experiment is

²⁰Ibid., p. 31.

²¹Ibid., p. 174.

²²See Foot, *Natural Goodness*, pp. 15, 29. Hursthouse relies on the same problematic example in her discussion of naturalism (*On Virtue Ethics*, p. 199). And as Hursthouse explicitly recognizes, the position she shares with Foot is in trouble if it does not cohere with empirical facts (p. 240).

²³See A.M. Isen and P.F. Levin, "Effect of Feeling Good on Helping: Cookies and Kindness," *Journal of Personality and Social Psychology* 21 (1972): 384-88.

suggestive with respect to the impact of mood on responsiveness to others.

According to John M. Doris, this and similar experiments suggest that contingent circumstances play a huge role in determining behavior, and so the attribution of robust traits to individuals is problematic (at least given familiar trait taxonomies). Doris argues that "people will typically behave inconsistently with respect to the attributive standards associated with a trait, and whatever behavioral consistency is displayed may be readily disrupted by situational variation." Whether or not Doris is right about the extent to which people exhibit cross-situational inconsistency, even those who see Doris as exaggerating grant the existence of some cross-situational inconsistency.

Notice that Doris's position allows that "individuals may exhibit behavioral regularity over iterated trials of substantially similar situations." It thus leaves room for "temporally stable, situation-particular 'local' traits that are associated with important individual differences in behavior." But local traits can be very fine-grained. Just as a mother bird might be fiercely protective in certain situations while being completely indifferent in others,

a person might be repeatedly helpful in iterated trials of the same situation and repeatedly unhelpful in trials of another, surprisingly similar, situation ... Even seemingly inconsequential situational variations may "tap" different dispositions, eventuating in inconsistent behavior ...²⁷

Among the more extreme experiments that Doris appeals to in reinforcing the importance of situation is the Stanford Prison experiment. In this experiment, twenty-one well-adjusted male college students were confined in a simulated penitentiary and randomly assigned the role of prisoner or guard. Though the experiment was scheduled to last two weeks, it was terminated after six days. Things just got too ugly, as the following excerpts from the diary of a participant assigned to the role of guard make apparent:

Prior to start of experiment

As I am a pacifist and non-aggressive individual, I cannot see a time when I might maltreat other living things.

On day five

This new prisoner, 416, refuses to eat. That is a violation of Rule Two: "Prisoners must eat at mealtimes," and we are not going to have any of that kind of shit ... Obviously we

²⁴John M. Doris, *Lack of Character* (Cambridge: Cambridge University Press, 2002), p. 24.

²⁵See, for example, Gopal Sreenivasan, "Errors about Errors: Virtue Theory and Trait Attribution," *Mind* 111 (2002): 47-68.

²⁶Doris, Lack of Character, p. 25.

²⁷Ibid.

have a troublemaker on our hands. If that's the way he wants it, that's the way he gets it. We throw him into the Hole [a small closet for solitary confinement] ordering him to hold greasy sausages in each hand. After an hour, he still refuses ... I decide to force feed him, but he won't eat. I let the food slide down his face. I don't believe it is me doing it. I just hate him more for not eating.²⁸

Obviously, a bad situation can elicit not just negligent unresponsiveness to the plight of another, but cruelty, even on the part of a seemingly typical individual. This variability can take even the individual himself by surprise, since, if he assumes consistency with respect to familiar traits, his limited prior experiences may well lead him to an oversimplified picture of himself.

Notice that variability alone does not reinforce the possibility of mixed moral types. Presumably even the perfectly moral individual will, for instance, sometimes keep his promises and sometimes break them, since the virtue of fidelity does not call for *invariably* keeping one's promises. What reinforces the possibility of mixed moral types is variability that cannot plausibly be interpreted as invariably reflecting moral goodness, such as shifts between clear cases of compassion and clear cases of cruelty.

Now it might be objected that even if mixed moral types occur in nature, this is not a problem for Foot. For Foot allows, recall, that defects can be widespread. She can thus allow that most of us are mixed moral types without giving up on the idea that mixed moral types are naturally defective. While this may suffice to show that Foot is not committed to an empirically inadequate moral psychology—and so suffice to save her from the objection Doris sees as undermining a big chunk of contemporary ethical theory—Foot is still in trouble. For it cannot just be assumed that mixed moral types are naturally defective. There is, indeed, no reason to accept that human survival and reproduction calls for pure moral types. Quite the contrary; given our varied world, the reasonable default view is that being a mixed moral type is naturally sound (not just typical) for humans, just as being a mixed parental type is naturally sound (not just typical) for at least some birds. This view is reinforced by the fact that we find sociobiologists seeking and finding plausible survival-andreproduction-related functions not only for "nice" phenomena, like maternal love, but also for "nasty" phenomena like sex-selective infanticide by mothers.

The phenomenon of infanticide by mothers is examined in depth by Hrdy. Her work suggests that sex-selective infanticide is the product of

²⁸C. Haney and P. Zimbardo, "The Socialization into Criminality: On Becoming a Prisoner and a Guard," in J. Tapp and F. Levine (eds.), *Law, Justice, and the Individual in Society* (New York: Holt, Rinehart and Winston, 1977), pp. 207-9 (quoted by Doris, *Lack of Character*, p. 51).

selection, and there is no reason to doubt that the current function of sexselective infanticide with respect to human survival and reproduction is the same as the function that it was selected to serve—and that it serves well—namely, promoting efficient parental investment. Human mothers usually give birth to a single baby at a time, which is born after a lengthy gestation, and so a human mother cannot afford to be as discriminating as a bird with a large brood when it comes to deciding which of her young she will care for. Still there are ecological conditions in which it pays, in evolutionary terms, for a mother to vary her commitment to her infant on the basis of important physical attributes, or to avoid commitment altogether.²⁹ When, for example, an infant's contribution to a mother's reproductive success varies a great deal depending on whether the infant is male or female (as is often the case), it pays, other things equal, for the mother to vary commitment and care on the basis of sex. 30 Sex-selective infanticide is, according to Hrdy, just an extreme form of differential investment based on differential contribution to reproductive success.³¹ And such differential investment seems like a paradigmatic example of a naturally sound, though often immoral, strategy.³²

²⁹In some animals, selection seems to be at the heart of strategies even more extreme than infanticide. Hrdy points to golden hamsters, which prune their litters to fit with prevailing conditions via the "time-honored maternal tactic" of investment-recouping cannibalism (*Mother Nature*, p. 46).

³⁰The reason an infant's contribution to a mother's reproductive success often depends on the infant's sex is that the variance in reproductive success of males and females differs.

³¹This natural selection explanation of sex-selective infanticide demystifies the existence of this form of infanticide in a way that the suggestion that sex-selective infanticide is the result of social pressure does not, for the former explanation, unlike the latter, holds promise with respect to the task of accounting for the existence of social pressure favoring sex-selective infanticide. For horrible details and images of "efficient" sex-selective infanticide or neglect by parents or grandparents, see Hrdy, *Mother Nature*, chaps. 12, 13. The image of an emaciated five-month-old female dying of malnutrition next to her plump and healthy twin brother is especially striking.

Notice that the practice of infanticide can be fitness-promoting not only at the individual level but also at the group level—given the right ecological conditions, groups that practice infanticide may fare better than groups that do not. So infanticide might be the result of selection both at the individual level and at the group level. For discussion concerning the possibility and nature of group selection, see, for example, Robert Boyd and Peter J. Richerson, *Culture and the Evolutionary Process* (Chicago: University of Chicago Press, 1985), chap. 7; "Group Selection among Alternative Evolutionarily Stable Strategies," *Journal of Theoretical Biology* 145 (1990): 331-42; Elliott Sober and David Sloan Wilson, "Reintroducing Group Selection to the Human Behavioral Sciences," *Behavioral and Brain Sciences* 17 (1994): 585-654; *Unto Others* (Cambridge, Mass.: Harvard University Press, 1998), chaps. 3-5; Kim Sterelny, *Thought in a Hostile World* (Oxford: Blackwell Publishing, 2003), chap. 7.

³²Note that where differential investment is not just naturally permissible but naturally required, there may well be particular cases in which there is *no* overlap between the

5. Conclusion

The core argument in favor of the view that immorality is a natural defect for human beings, which has been developed by Foot, assumes that if justice and compassion have important functions in human survival and reproduction, then injustice and cruelty are natural defects in human beings. But this ignores possibilities and results that cannot reasonably be ignored. Multiple and mixed naturally sound types can and do occur in nature. Moreover, research in the life sciences suggests that at least some bad human behaviors, traits, or strategies are selected for and *continue* to have important survival-and-reproduction-related functions in human life. All this fits poorly with the position that immorality is a natural defect for human beings. Emerging as much more plausible is the competing view that, for human beings, natural soundness sometimes supports behaviors, traits, or strategies that conflict with (any ideal that can plausibly be called) moral goodness.³³

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set of naturally sound options and the set of morally sound options available to an agent. We could still avoid the conclusion that immoral behavior is sometimes rationally required by rejecting the equation of a rational will with a naturally good will. More importantly, we could also work to eliminate situations in which there is no overlap between the set of naturally sound options and the set of morally sound options available to an agent. See n. 10 above for a clarificatory point concerning the idea that one might be rationally required to behave immorally.

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