

What Rationality Adds to Animal Morality

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Abstract. Philosophical tradition demands rational reflection as a condition for genuine moral acts. But the grounds for that requirement are untenable, and when the requirement is dropped morality comes into clearer view as a naturally developing phenomenon that is not confined to human beings and does not require higher-level rational reflective processes. Rational consideration of rules and duties can enhance and extend moral behavior, but rationality is not necessary for morality and (contrary to the Kantian tradition represented by Thomas Nagel) morality cannot transcend its biological roots. Recognizing this helps forge a complementary rather than competitive relation between feminist care-based ethics and rationalistic duty-based ethics.

Key words: care ethics, evolutionary ethics, sociobiology

Moral behavior requires rational reflection. Philosophers regard that as a common starting point for examinations of morality, a textbook truth that defines moral inquiry. Behavior without moral reflection does not qualify as morally good. A virtuous act must be done deliberately for the right reasons, and a virtuous life requires reflective development of a virtuous character.

Whatever its philosophical charms, this standard position is misguided. Rational reflection is not necessary for moral behavior. True enough, moral behavior requires a deeper level. If one saves a child from toppling over the ledge, we require further investigation before judging the act virtuous. If a clumsy would-be murderer was attempting to shove the child off the ledge, the act was vicious. If the rescuer's hand stretched out due to a sudden seizure the motion is fortunate but not morally significant. If the rescuer was motivated solely by hope of rich reward, then the act loses its positive moral worth. So we must look deeper than the rescuer's extended hand to determine moral worth; but it is motives – rather than reasons – that must be examined, and those motives need not stem from deliberation. If I am a vicious and mercurial but clumsy killer, my spontaneous *nondeliberative* attempt to shove you from a ledge is morally vicious though it accidentally saves your life. The spontaneous loving *unreflective* rescue of a child is morally virtuous: if the act is motivated by affection for the child the absence of deliberation does not imply absence of moral worth.¹

The intent required for moral behavior need not be based on reasons and rules, but neither is it an involuntary reflex. Alan Gewirth ridicules “evolutionary ethics” as based on behavior too crude to be classified as ethical:

If to be ethical involves intending to act in certain ways that not only benefit other persons besides or in addition to oneself, but also are subject to knowledge, voluntary control, and reasoned choice on the part of the agent, then what evolutionary ethics presents as the content of what it calls ethical behavior is not, in fact, ethical. It is closer to a tropism than to a human action (Gewirth, 1993, p. 245).

This criticism turns on a false dichotomy: acts must be reasoned choices or sink near the level of tropism. But cases of nonrational and nonreflective moral behavior – such as the rescue of a child or friend – are far from being tropistic. They involve intentional behavior that adjusts to changes in circumstances. The nonreflective rescue may involve swimming to the endangered, reaching with a stick, or making an aggressive display to frighten predators; and if the friend should betray trust (or fail to reciprocate), then rather than tropistic repetitions of the rescue behavior there may be indifference or even attack. The vast space between rational rule-guided reflective behavior and tropism leaves ample room for nonreflective (and nontropistic) *intentional* moral behavior.

Moral acts – such as the rescue of children or friends – require the right intent, the proper motive. As we might commonly say, acting virtuously requires acting for the right *reasons*. Unfortunately, that common usage leads into rationalistic temptation. In this context, acting for the right reasons just means acting with the right intentions, and reasoning may have nothing to do with those intentions. To act morally I must genuinely intend to rescue my child (rather than intend to push it from a ledge or intend to preserve the lottery ticket clutched in its grubby little fist). Giving a verbal account of that intent is a complicated process; having the intent is comparatively simple. Many animals – human and nonhuman – can form and act upon intentions that they cannot conceptually order and explain. Ethologists report observing a hyena intending to feed upon an animal carcass, being threatened by a lion (a lion that intends to chase it away), and then revising its intentions in favor of safety. They describe a male chimp carefully searching out heavy stones, weighing each in his hand, selecting the heaviest before carrying it some distance to his rival, where – holding the stone as a potential weapon – the chimp begins the long *intended* intimidation display (de Waal, 1989, p. 39). A subordinate male chimp intends to mate with a female, sees the dominant male in the vicinity, and abruptly changes his intentions. Indeed, there are reports of chimps finding their amorous intentions thwarted by the presence

of a dominant male and then intentionally feigning the intent to forage in another area in order to draw the desired mate out of the dominant's view (de Waal, 1982, pp. 48ff.). Such intentional deception is not rare: a subordinate chimp amidst dominants may continue to "search" for food after he has found it, then later return alone to claim the treat (de Waal, 1982, 73–74). It is one thing to question the chimp's conceptual apparatus for distinguishing truth from deception; it is quite another – and much simpler – to conclude that the chimp intends to deceive; simpler still to note that the chimp intends to find food, seek cover, threaten a rival, or rescue a friend.

Limits to the complex conceptualization of intentions are not confined to nonhuman species, of course. The defendant in a breaking and entering trial may rightly insist that he did not intend to commit a felony (a necessary condition for being guilty of breaking and entering); all he intended was to break the window and steal the television set. The defendant may lack the conceptual sophistication to intend the commission of a *felony*, yet be fully capable of intending and committing one: by intentionally and knowingly stealing another's property. Likewise, a chimp that is incapable of "intending to act morally" may be quite capable of intending a rescue and thereby *intentionally* performing a morally good act.

Michael Bradie states that "Animals can act on the basis of altruistic motives but they do not and cannot form intentions to so act" (Bradie, p. 136). But animals can act, and intend to act, on altruistic motives as well as hunger and thirst and concupiscence motives: just as humans can. Other animals may not conceptualize their motives quite as elegantly: they may not *know* they are intending to act altruistically, just as the hapless defendant may not know that he intends to commit a felony. That does not bar them from forming and acting on such intentions. Proper intent – "acting for the right reasons" – is essential for moral behavior; reason and deliberation is not.

If a mother caresses a distressed and crying infant, she (most commonly) intends to comfort it. One might of course disparage such comforting – a move made popular by aggressive ethical egoists – as merely relieving oneself of the discomfort caused by the infant's crying. For example:

Chimpanzees show patterns of behavior that appear, from a psychological perspective, only weakly altruistic. Much of what might qualify as chimpanzee altruism may be based on the arousal of feelings of emotional distress in the helper, perhaps through emotional contagion, and the role of social attribution is unclear when helping is prompted by emotional contagion (Povinelli and Godfrey, 1993, p. 310).

But while "feelings of distress" may certainly be aroused in the mother, it is still generally the case that the mother genuinely intends to relieve the infant's distress. Were her motive only the relief of distress prompted by "emotional

contagion”, the purpose might be achieved more readily by moving out of earshot or tossing the infant from a high branch.

If one still insists that the human parent’s spontaneous rescues are deliberative and thus categorically – and morally – different from those of other species, then the burden of establishing that difference will not be a small one. One might claim that the apparently similar acts of the human parent are significantly different because the human deliberates: not consciously, but subconsciously. But since the evidence for such subconscious deliberation is merely the human status of the actor, the claim seems no better than question-begging. No doubt we have a richer conceptual range for considering our friends and rivals and offspring, a conceptual map that outstrips that enjoyed by chimp, lion, and mouse. But in the case of nondeliberative spontaneous rescue those conceptual differences do not come into play. Nor will it help to suggest that the moral individual’s spontaneous acts must be in *accord* with a morality she has reflectively approved. In Jonathan Bennett’s example (Bennett, 1974) Huck Finn’s affection for Jim moves him to act morally by hiding Jim from the slavers, but Huck does not follow any previously approved moral code. To the contrary, Huck’s morally good act is in direct conflict with the only moral code he considers and recognizes.

Imagine a hungry individual who can secure food by inflicting pain on one of her fellows. If she refrains from taking the desired food then she is acting morally. Or so we would say, if she were a member of our species. When we discover that she is a rhesus monkey, the behavior is pushed out of the moral realm.² Such implausible categorizations tie our understanding of morality in knots. The rhesus monkey does not act from rational reflection on the demands of duty, but such a standard excludes a broad range of almost paradigmatic moral behavior. By that standard, the mother who risks her life to save her child – spontaneously and without hesitation or deliberation – does not act morally. But clearly such nondeliberative spontaneous acts of altruistic care are moral; indeed, in many instances the moral lustre is tarnished if deliberation intervenes. If after deliberative consideration of your duty you rescue me from my precarious place on the cliff’s edge, then I shall be glad of your moral character and acts. But I shall be more impressed by your virtue if you spontaneously throw yourself into my rescue. Consider two respondents to the question “Why did you risk your life to save the children from the burning building?” First, “I heard the screams, considered what I should do, and decided that it was my duty to attempt a rescue.” Second, “I heard the screams, and immediately felt I had to rescue the children. Reflections on duty had nothing to do with it.” The former may be virtuous, but not more virtuous than the latter.

Rational reflection is not necessary for morality, and biological inquiry into the development of moral behavior supports that conclusion. Rather than higher intelligence being a condition of morality it is more likely that the conditions are reversed. Our rational faculties developed to enhance extensions of moral altruistic behavior, rather than moral concern and moral behavior emerging from higher intellectual (social-contract following) capacities.

The biological roots of other-regarding behavior are in kin altruism. The solicitous care a parent bestows upon its offspring, the concern shown for a sibling: these are easily explained by their survival enhancement of the individual's genes. Animals that protect and nurture their offspring are more likely to preserve replicas of their genes, including any genetic tendency toward kin altruism. To move beyond regard for close kin requires the resources of reciprocal altruism. Reciprocal altruism – in which generous behavior is given and reciprocated – can be found in a number of species, including humans. A monkey removes parasites from the back of another, and the kindness is reciprocated. A human rubs suntan lotion on a companion's back, and the favor is returned. Reciprocal altruism is certainly advantageous, but it is not obvious how it might have been initiated. As James Rachels (following Darwin's suggestions) describes the process:

This might at first be a simple thing: A and B both have parasites that are hard to reach, and they both want them removed; in casting about for a way to accomplish this, A removes B's parasite and then presents himself, in a suggestive posture, to B; B 'catches on' to the game, and sees that his own welfare is being served by playing this game of tit-for-tat, so B then removes A's parasite (1990, p. 157).

As Rachels notes, this process requires considerable intelligence:

It is significant that all the most impressive examples of non-kin altruism are from the so-called 'higher' animals – humans, monkeys, baboons, and so on – animals in which the power of reasoning is well developed. In the 'lower' animals we find only kin altruism. This seems to confirm Darwin's speculation that the development of general altruism might go hand-in-hand with the development of intelligence (1990, p. 157).

This is a plausible account, but we should not exaggerate the intelligence required. Such reciprocal altruism does not require the drawing up of contracts, nor even a full conceptualization of the nature of the relationship. Basically it requires the capacity to distinguish among individuals and recognize and remember requests and bequests of reciprocal kindness.

For reciprocal altruism to flourish animals had to make increasingly subtle distinctions: Will she reciprocate my altruistic acts? Is this an individual to whom I "owe a favor"? Is he sincere or only feigning good will? The

extension of reciprocal altruism – and the extension of cooperative morality – encourages the development of intelligence, rather than higher intelligence clearing the way for morality. Or they develop together. Either way, morality does not await the prerequisite development of higher intelligence.

There are good reasons, both biological and philosophical, for denying that specific moral acts require rational reflection. But there remains a deeper objection to answer: Does moral *character* require rational reflection? Joyce gives bread to a hungry child, acting from generous motives. It still does not follow – so this objection goes – that Joyce is acting virtuously. Before her behavior and character can be morally evaluated it must be scrutinized more closely, with attention to its causal history.

Joyce is generous and compassionate, true enough; but how did she become so? Was she merely lucky to be born with a generous and compassionate nature? If so – the objection continues – that calls her apparently virtuous acts into question, since they do not stem from a genuinely virtuous character. Joyce's happen-chance generosity is the result of her fortunate disposition, and that is too shallow a foundation for moral character. If she is merely acting from inclination then we may be pleased that she acts generously, but she is no more virtuous than is the capricious wind virtuous when it blows a crust toward a hungry child. Or perhaps Joyce is generous because she had the good fortune to be shaped by a generous and well-ordered society. Joyce now acts generously, and does so from her own generous inclination; but that is not enough for genuine virtue, since (on this line of objection) her character is just the conditioned product of the society in which she fortunately was born. A vicious culture would have yielded vicious character and vicious behavior. Joyce is good-hearted and generous, but she is morally lucky rather than morally good.

This line of argument claims that genuine moral character requires something deeper than mere acquiescence to inclinations or culture. It requires the deliberate reflective considered choice of the character one favors, the higher-level approval of one's inclinations and commitments. Without such reflective commitment one may, like the wind, blow well or ill; but one cannot be moral nor act morally. Thus (to summarize this line of objection) even if it is possible for a particular spontaneous act to be genuinely moral, that can only occur when the act is the product of a reflective moral life. Morality may not require constant rational reflection, but rational reflection is a necessary foundation.

Or so the argument goes. But on closer examination, this deeper claim that morality requires reflection also fails. In a particular case – Joyce gives bread to a hungry child, or extends her hand in rescue – Joyce's motive may be generous and her act virtuous though she has not reflected upon it; and

in like manner, Joyce's character may encompass a profound and steadfast commitment to feeding the hungry and rescuing the endangered even though she has never reflectively examined nor deliberately adopted it. Profound commitments and enduring characters are not exclusively (nor even typically) the product of rational reflection. To suppose that such nonreflective commitments must be superficial or transitory or spurious is to grossly over-intellectualize the development of character. Joyce's profound love for her children may be resolute and enduring and *nonreflective*. And just as there might be grounds for questioning the moral virtue of someone who must call duty to mind before acting to rescue an endangered child, likewise one might be less confident of the steadfast virtuous character of an individual who requires reflection to reach such basic moral commitments as care for the unfortunate. One who concludes after rational reflection that she must commit to caring for the unfortunate may be virtuous; but it is doubtful that she is more virtuous – or more reliably and deeply virtuous – than is one who regards caring for the unfortunate as an immediate and basic value requiring neither rational reflection nor justification.

Still, there is concern that the profoundly virtuous individual isn't really virtuous: she is only lucky to have good deep durable inclinations, and she cannot be really virtuous since she did not reflectively choose her character. This objection to any biological or evolutionary contribution to morality is voiced by Patricia Williams, who claims that it is impossible to develop "theories of prescriptive evolved ethics which do not suffer from internal, logical contradictions" (Williams, 1993, p. 238). The reason for such inescapable incoherence is that "the minimum requirement for beings to be ethical is that they can legitimately be blamed, praised, and held responsible for their actions", and "in order to deserve praise or blame or to be held responsible for their actions" beings "must be able to self-reflect", they "must be able to weigh and deliberate among various options", and they must be able to make and act on choices based on such deliberations (Williams, 1993, p. 234). Obviously this leaves those incapable of higher-order rational reflection outside the moral realm, and calls into question the virtuous character of nonreflective Joyce. But Williams' argument turns on a basic confusion between requirements for being *moral* and requirements for being morally *responsible*. Joyce is generous and compassionate. She cares for the hungry, rescues the imperilled, and struggles against injustice; and she does so from pure motives – she is concerned for the unfortunate and wants their suffering to end, and she seeks neither fame nor fortune nor even treasure in heaven. But why is Joyce so compassionate and generous and virtuous? That is a different and difficult question. Perhaps she is genetically predisposed to generosity, or enjoyed a good moral upbringing, or some combination of the

two. Or maybe philosophical study and reflection led her to a deep rational commitment to principles of duty toward the unfortunate. Possibly it was a religious conversion experience, the gift of God's grace and not of Joyce's work. It doesn't matter. Whether the causes are God, nature, or nurture, Joyce is genuinely virtuous: she acts virtuously, from virtuous motives, through a virtuous character.

But it does affect our judgment of whether she is morally *responsible* for being profoundly virtuous. If Joyce is virtuous because she has generous genes, then she is virtuous by genetic luck; if because of a good social upbringing, she is lucky in her early environment, but again she is not morally responsible for her fortunate virtue. If Joyce is to be not only virtuous, but also morally responsible for her good character and acts, then something more is needed. A favorite philosophical candidate (as adopted by Williams) is rational reflection and deliberative choice. According to Harry G. Frankfurt (1969, 1971) and Gerald Dworkin (1988), Joyce is not morally responsible for her desire to feed the hungry nor her desire to take drugs; she is, however, morally responsible for reflecting upon those desires and for her reflective decision concerning her higher-order evaluations: is this a desire I wish to have, the person I wish to be. Whatever the verdict on whether such higher-order reflection is either necessary or sufficient for moral responsibility, that question is a different one from the question of whether rational reflection is necessary for moral behavior and moral character. In short, even if one supposes that rational higher-order reflection is essential for moral responsibility, it does not follow that morality requires rational reflection.

Morality does not require reason, but reason is not cast out of morality. Higher intelligence offers special capacities for the enhancement of morality. Consider Huck Finn. As Jonathan Bennett notes, even in the absence of aid from moral principle – indeed, when his moral principles are a moral impediment – Huck manages to act morally, motivated by sympathy for his friend Jim. Huck without sound moral principles is morally good, but Huck with sound moral principles would be morally better. To see why, we need only imagine a less appealing Jim: short-tempered, arrogant, and selfish. It would have been morally wrong to betray such a repellent person to the slavers, but it is doubtful that Huck's sympathies would have done the trick. In such circumstances – when sympathies have worn thin, the going is rougher, and affection fails in force or range – deliberative efforts and rational reflection on rules can enhance and sustain moral behavior.

Our inclinations to altruism and kindness are natural and deep, but they are hardly boundless. Love and concern prompt me to awaken and calm my child's nightmarish fears, and the dictates of duty do not enter into it. Of course I wish to stay in my warm bed, but not nearly so much as I wish to

rush to the side of my terrified child. One who must be prodded by duty to act generously toward a child is morally deficient rather than morally exemplary. I rush with almost equal inclination to the aid of my neices and nephews, and to a lesser but still considerable degree to the aid of distressed members of my community. But there are limits: my desire to help those across the sea is still weaker, and I may need to reflect upon rules of duty to extend my concern. Also, if my child “exhausts my patience” then duty may reinforce my failing sympathies. But rather than a break from inclinations, this use of duty extends and strengthens them.

What can a rule-system of duties do that natural inclination cannot? Most dramatic is the extension of concern – through demands of rational consistency and universalization – beyond our immediate inclinations to help family and friends. But the benefits of rule-based sympathy enhancement begin at home. When (through exhaustion or extinction or frustration) my warm sympathies for family and friends run low, I can turn to duties and rules to reaffirm my commitments and thus take steps to restore my natural inclinations of care and concern. Use of such rules is a special enhancement and strengthener; but it is not unlike other special acts made possible by greater intelligence, such as reflecting upon past kindnesses to rekindle warm feelings of kinship and affection. When despondent Diana returns Carmen’s kindness with sullen indifference, Carmen can consider principles – “Love is not love which alters when it alteration finds” – that she has learned to treasure, and that may sustain her generosity through periods when it is not immediately advantageous. And Carmen can reflect with satisfaction upon her own generous behavior to preserve and strengthen it. Or Carmen may recall an especially kind and consoling letter received from Diana after a misfortune. Thus Carmen has special reflective resources (including but not limited to reflections on rules of duty) to strengthen and enlarge sympathies as well as sustain reciprocal and indirect altruism, resources that animals of lesser intelligence cannot employ. Reasoned adherence to rules of duty is a special enhancement of inclinations, but the enhancements are built on basic moral sympathies that retain their moral status.

Carmen can reflect upon rules to sustain her affection, and she can also employ rules and reflection to strengthen the character she wants and values. Carmen is strongly inclined toward trusting and supportive relations with others: she values such cooperative friendship. But she is also pulled toward greed, which threatens her friendly relations. If she values friendship more than acquisitiveness then Carmen may avoid situations in which her greed dominates and maximize situations in which friendship keeps greed in check. This process may happen without Carmen being aware of it, and certainly without any reflection or deliberation; but it may also occur by design: Carmen

might decide that she values friendship over greed and deliberately choose to strengthen her cooperative nonselfish behavior, perhaps by adopting a rule to “share good fortune with friends and resist the temptations of greed”. Such rule-following and second-order reflection is often an effective means of strengthening valued behavior, and its utility should be appreciated and perhaps celebrated; but it need not (the more common philosophical danger) be exaggerated. Second-order reflection is only one means of moral development, and probably not the most effective (though it may well take the prize as the most sophisticated). If moral behavior enhanced by second-order reflectiveness is granted exclusive title to morality, then the full rich range of moral development and functioning will be obscured.

There is not a forced choice between the sympathetic biological roots and the deliberative enhancement of ethics. The deliberative enhancement (including second-order reflection) is important; but it is no more a transcending of the sympathetic roots than enhanced eyesight is a transcending of the other senses. The use of social contracts – the use of rules and duties and deliberations – does not emerge from a cruel war of all against all, but rather from a foundation of significant but limited altruism on which rules and reflection build. Huck with affection for Jim is morally good. Huck with principled duty but no affection is an implausible philosophical fantasy, and at best a fast track to moral burnout. Huck with affection *and* principle is ideal. Not affection ruled by principle, nor reason the slave of passion, but affection extended and strengthened through rational reflection and rule-following.

Rational reflection concerning moral principles enlarges and enhances moral inclinations that stem from our biological history. That is an important moral role for rational reflection, but it is not the exalted role that many prefer, and there are objections to consider. Thomas Nagel – in response to E. O. Wilson’s suggestion that “the time has come for ethics to be removed temporarily from the hands of the philosophers and biologized” (1975, p. 562) – argues that biology has nothing to teach us about ethics, because ethics (like mathematics) is an autonomous subject³ with its own rules and standards:

... ethics is a subject. It is pursued by methods that are continually being developed in response to the problems that arise within it. Obviously the creatures who engage in this activity are organisms about whom we can learn a great deal from biology. Moreover their capacity to perform the reflective and critical tasks involved is presumably somehow a function of their organic structure. But it would be as foolish to seek a biological explanation of ethics as it would be to seek such an explanation of the development of physics (Nagel, 1978, p. 229).

Nagel is partially correct. Rational reflection can push human morality and ethical theorizing beyond the reach of complete biological explanation. But Nagel goes further. Ethics, Nagel argues:

... is the result of a human capacity to subject innate or conditioned pre-reflective motivational and behavioral patterns to criticism and revision, and to create new forms of conduct. The capacity to do this presumably has some biological foundation. ... But the history of the exercise of this capacity and its continual reapplication in criticism and revision of its own products is not part of biology. Biology may tell us about perceptual and motivational starting points, but in its present state it has little bearing on the thinking process by which these starting points are transcended (Nagel, 1978, p. 230).

Thus biology is tangential to ethics. There may have been some early connection, but ethics has long since transcended such mundane influences and formed its own independent realm of deliberative inquiry, neither driven by nor fettered to biology.

This gives ethics a secure place, where thief cannot rob nor moth corrupt nor sociobiologist trouble; but a price is exacted for that security. The attempt to isolate ethics from biology produces an implausible and ineffectual morality. Kant's ethics is the extreme of such isolation, and it pays the most obvious price. Spontaneous acts of affection, generous works of kindness, immediate heroic efforts to save a friend or loved one: all are pushed out of the transcendent ethereal world of pure ethical duty in which sympathies and affections are superseded.

It is true that like physics and mathematics, human morality – enhanced by rational reflection – cannot be “biologized”: cannot be reduced to or explained away by biology. Biology nonetheless provides important basic material for our understanding of morality, and not just an explanation of some remote starting point long-since transcended by the powers of human reflection. In human (and nonhuman) morality the biological foundations form basic commitments that have no analog in math or physics.

It is difficult to imagine another species with a radically different math or physics from our own: adopting theirs might require a paradigm shift, but it would be a paradigm shift motivated by common metascientific-mathematical goals. In contrast, it is easy to think of competing moral systems that – though we might understand their origins – we could not share. H. L. A. Hart (1961, pages 189ff.) claimed that if humans were protected by bony exoskeletons then our central moral notions of harm and benefit and our strong prohibition against harming and killing would be very different. But we needn't speculate about scaly humans, for there are clear examples of animals having very different basic motives. Konrad Lorenz (1952) describes

the behavior of caged doves and roe deer: the stronger will slowly slaughter the weaker, without inhibition, since in their natural unrestricted environment the weaker simply escapes and there is no need of the stronger's inhibition. By contrast, the lethally-equipped social carnivores have strong inhibitions against harming or killing a submissive member of their own group.⁴

When we compare ourselves to our more distant relatives there are even more dramatic differences. E. O. Wilson contrasts our moral system with that of highly intelligent ants:

Our societies are based on the mammalian plan: the individual strives for personal reproductive success foremost and that of his immediate kin secondarily; further grudging cooperation represents a compromise struck in order to enjoy the benefits of group membership. A rational ant – let us imagine for a moment that ants and other social insects had succeeded in evolving high intelligence – would find such an arrangement biologically unsound and the very concept of individual freedom intrinsically evil (1978, p. 198).

This difference is hardly surprising. Since we share many of our genes with our community and more with our family, willingness to risk one's self for community and family enhances the survival chances of the shared genes; however, any genetic tendency to be completely self-sacrificing for genetically non-identical others would be unlikely to spread and survive. But among genetically identical ants a tendency to sacrifice one's self to promote the survival and welfare of the community would become entrenched. Thus if intelligent ants were constructing a code to extend and enhance their moral behavior, the result would be a code quite different from our own. Kant's imperative that every individual must be treated as an end and never as a means would strike intelligent ants as morally loathsome.⁵

Fanciful as that story may be, the moral is a simple one: biology is fundamentally important to ethics, and ethical theory cannot transcend those roots and reduce them to ethical irrelevance. Ethical theorizing, like mathematics, involves higher-order reflective and deliberative activities (and social structures and influences) that cannot be plausibly reduced to their biological foundation. But even at the most sublime (or possibly ridiculous) reaches of ethical theorizing there remain basic biological motives *within* the ethical system that are much more than merely the enabling conditions for such theorizing.⁶ Unless we wish to relegate such motives to mystical intuition or pure rationality or divine inspiration, their examination will be in terms of social learning and, ultimately, our genetically-shaped inclinations.

Biology plays a part in morality that is more basic and pivotal than a mathematics analogy allows. This is not to suggest that ethics (or even actual human morality) can be biologicized. Something would be lost, including the

special rule-following moral extension and strengthening that is a uniquely human contribution. And in some instances – for example, in codifications of procedures for protecting the informed consent of patients – the rule-following does have special specific influences on behavior. But recognizing the rational enhancement of morality does not imply that morality transcends biology. Ethics cannot be biologicized, but biology contributes a great deal to the basic development and workings of morality. Humans enhance and expand our morality through complex combinations of rationality and culture, but there remain moral roots and moral acts that do not require rationality.

Viewing human moral systems as enhancements of animal nonrational morality resolves some vexing tensions in moral philosophy. The capacity to act from duty – even in the absence of sympathy or affection – is a remarkable capacity. It moves morality beyond immediate personal attachments, and holds moral behavior on a steadier course than could be charted solely by our emotions and affections. But for all its majesty, we may regard duty with ambivalence. If a friend must be prodded by duty to offer a present, the gift has little appeal. If I care for my children from obligation rather than love, the effects may be more detrimental than beneficial. And the greater my suspicion that your hospital call was motivated by duty rather than affection, the less cheer I take from your visit. The duty-affection split is deep, and reconciliation seems difficult. Emphasizing one at the expense of the other leaves a gap in morality; trying to have both creates a tension.

The tension dissolves when duty-based moral systems are viewed as enhancements of animal morality. Duty keeps indirect reciprocity in place during periods when affection weakens, and can broaden and strengthen our commitment to indirect reciprocity beyond the limits of personal relations and affections. But precisely those features that make duty effective in moral enhancement limit its use with friends and family. Rather than two opposed parts of morality, the morality of affection and the morality of duty serve different but complementary functions. Rule-following morality can sustain and extend moral behavior, but it cannot supplant the fundamental moral acts stemming from care and affection.

This explains why the emphasis by some feminists on the sorely neglected care and trust and affection aspects of morality is so important; and why care-based morality is not a threat to replace more impersonal duty ethics. The care-based ethic is fundamentally right: affection, caring, trusting,⁷ and generous impulses are the moral foundation. And the tendency of reason-oriented ethical systems – whether Kantian or utilitarian⁸ – to ignore that foundation has left an artificial ethics: a rationalist ethics that is well-suited for moral enhancement but crumbles underfoot when used as a moral foundation. Reason-based ethics reinforces rather than replaces care-based morality. The

rules-reasons approach is an important means of extending and enhancing and sustaining moral behavior when affection has reached its limits; but the moral foundation (on which duty morality must build) remains the immediate nonreflective inclinations of care and affection: inclinations rooted in biology, nurtured by direct and indirect reciprocity, and existing prior to rationality.

Rational-duty morality is an adaptive complement – rather than a competitor – to inclinations-caring morality, but their functions and niches must still be distinguished. Michael Ruse (1986, pp. 241–242) suggests fixed limits beyond which our moral rules and reasoning cannot take us: for example, impassable biological limits on the utilitarian requirement to treat all persons equally, showing no favoritism to kin. Perhaps there are such limits. But because rules-duty morality (including such elaborate systems as utilitarianism) developed to *extend* the limits of affection and sympathy, it is impossible to predict the scope of such development on the basis of biological inclinations. Such rule systems are a special enhancement of animal morality, and it remains an empirical question how far they can push morality. Not very far, it may appear; but we’ve only started trying. And here data from animal studies is of limited help, since this is a special adaptation not available to nonrational morality. But however far such rational rule-following enhancement propels morality, human morality remains rooted in moral sentiments we share with many other animals. Rational morality enhances rather than transcends biology, and nonreflective generous caring behavior remains the vital center of animal moral life.

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Notes

¹ Of course there is a “deeper” cause for such solicitude: the preservation of one’s genetic legacy. But though that may be the ultimate cause of such solicitude, it does not alter or diminish the genuine selfless concern for the child. Genetic preservation may cause my love; but the rush to rescue is no less motivated by genuine love for the child. (Genetic preservation also fuels my sex drive, but my passion is not directed at the preservation of my genes.)

² James Rachels (1990, pp. 149–152) discusses this case. The original research reports are in Masserman, Wechkin, and Terris, 1964; and Wechkin, Masserman, and Terris, 1964.

³ For a similar view (with greater emphasis on culture as the source of the autonomy of human ethical systems) see Ayala, 1987.

⁴ Frans de Waal (1982, p. 112) notes that adult male chimpanzees often live together in groups, reconcile their conflicts, and “see themselves as comrades”. In contrast, adult male gorillas and orang-utans tolerate no rivals “and their fights will end in a bloodbath”. As de Waal comments: “it is of course this aspect of chimpanzee society which makes it so much more readily understandable to us than the social structures of other great ape societies”. Along similar lines, while the morality of gorillas may not be totally beyond our comprehension, chimpanzee morality is much more accessible.

⁵ A more dramatic example is offered by Michael Ruse:

We are what we are because we are recently evolved from savannah-dwelling primates. Suppose that we had evolved from cave-dwellers, or some such thing. We might have as our highest principle of moral obligation the imperative to eat each others’ faeces. Not simply the desire, but the obligation (1986, p. 263).

⁶ Jeffrie G. Murphy (1982, pp. 99, 109) suggests a similar role for basic biologically grounded value commitments.

⁷ See Baier, 1985.

⁸ As Virginia Held (1990) has noted, the usually contrasted Kantian and utilitarian approaches to ethics share an assumption that reason must be given priority in morality.

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