MORALITY AND THE ELEPHANT
Prosocial Behaviour, Normativity and Fluctuating Allegiances

Jim Moore

Human morality is composed of three elements: prosocial behaviour, a normative imperative, and the tendency to adjust the boundaries of the social network to which these apply in a flexible, self-interested fashion. A credible case for human unique-ness can be made for the last element only. Because defining social boundaries can be done rationally (though rational thought is not required), the intersection of this tac-tical approach with the psychological bases (i.e., emotions) underlying the first two elements can help resolve the conflict between emotion and Kant cited by Flack and de Waal. They make a solid case for prosociality, though their discussion of recipro-cal sharing has some problems. The perspectives of Boehm and of Sober and Wilson are needed to understand our boundary-adjusting (though Sober and Wilson need-lessly cloud the issue by over-extending group selection). A satisfying theory of morality's evolution should integrate, not distinguish amongst, the three elements.

My daughter and I are reading *Ivanhoe* — a tale of a very moral world, in which men brag of making Saracen widows, anti-Semitism is right and proper, killing for honour is not a necessary evil but a career choice, and the 'Queen of Love and Beauty' pre-sides over a sporting event at Ashby in which the mortality rate is about four per cent. This is a very different morality than that to which I am accustomed. What is moral-ity; what are morals? Is it immoral to dump a wastebasket full of trash into the street? The answer probably depends on whether one is in rural India or downtown Singa-pore. If one were to take a small dog to the beach at Santa Cruz and slaughter and bar-becue it, would one be acting immorally or simply unwisely?

Flack and de Waal cite a nice analogy with language: we are born with the capacity to develop a moral sense, but what that is composed of is learned. They do not adhere to this analogy, though, for they conclude by talking about which earth species an alien observer would consider 'the most moral'; a bit like asking whether English is 'more language' than Hawaiian because it has more phonemes.[11] According to Flack

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[11] One *could* operationalize the term 'morality' appropriately, but that has not been done. A useful start-ing point for such an effort would be Altmann's discussion of what it means to ask which sex is 'more aggressive'(1974).

and de Waal, morality is based on 'the human sense of right and wrong used by society to promote pro-social behaviour'. This is evidently close to the sense of Sober and Wilson (1998, pp. 237–40), in which morality is close to (but not isomorphic with) altruism. For them, causing harm to a third party, or great harm to many targets (e.g., the actions of many Nazi camp guards) would be examples of morally wrong behaviour.[12] Of course, causing harm is not necessarily immoral — cf. moralistic aggression. Or *is* moralistic aggression immoral? How do you feel about the death penalty, and is it morally salient whether the executioner feels (moral) outrage while carrying out his job? Ah — his *job*, as an arm of the State: this brings us to Boehm's usage of morality as the outcome of shared values determining what is right and wrong, and those shared values being imposed by the group (aka society) against deviants (Boehm, this volume). This last is closer to my dictionary's definition of moral: 'Conforming to a standard of what is good and right; virtuous' (*Webster's New Collegiate Dictionary*, 1951). Morality seems to be more about conforming than about the standard to which one conforms; Wilfred of Ivanhoe is moral, even if his behaviour is not always pro-social.

I belabour the point not with any hope of defining good and evil, but because I think we will need to be very careful about the definition of 'morality' before we can understand the evolution of the phenomenon, and none of these three articles give much rigorous and consistent attention to distinguishing morality from being nice according to UN-sanctioned principles of behaviour. The authors make (varyingly) strong arguments that we can search for evolutionary antecedents of both phenomena among non-humans, but I think it quite likely that the underlying psychological mechanisms are distinct, or at least arose via distinct pathways. Flack and de Waal make an important contribution to this problem with their separation of tendencies and capacities into 'the four ingredients of morality' (p. 22). We need to be careful to avoid thinking we understand a trait because we've named it ('docility' comes immediately to mind), and similarly be cautious of slipping from conceptually distinct putative traits to discrete mental modules (see Elman *et al.*, 1996 for an alternative approach).

Flack and de Waal distinguish three hypotheses to account for food sharing and reciprocal exchange; to the degree that mine (Moore, 1984) can be identified with one or another of these three, my original discussion must have been confusing and I thank them for the opportunity to try again. I believe that not only are these three hypotheses non-exclusive, but all three are *required* to explain the evolution of reciprocal sharing in our species.

'Sharing to enhance status' (or 'showing off'; the category into which my paper is placed) is inadequate to explain the origin of sharing behaviour because it does not (itself) address the problem of how the behaviour began: a flash of insight ('Gee, I bet everyone will defer to me if I give away part of this monkey') seems implausible. Status had to be enhanced by sharing before sharing could be engaged in to enhance status.

'Sharing under pressure' (or 'tolerated theft') readily can explain sharing by appeal to simple self-interest: to quote Calvin and Hobbes, one is merely to 'give before it hurts'. It doesn't go anywhere, though: one is left with a nasty, brutish system of

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[12] Note that this involves an implicit moral metric that should be made explicit when we try to sort out evolutionary antecedents, since, as Flack and de Waal point out, sometimes causing 'harm to a target' is an inevitable component of social life; see footnote 11.

extortion by the powerful, not a system of reciprocity such as we observe in humans (yes, the irony is deliberate and, I believe, important).

Reciprocity (no quotes needed here?) describes well what humans, chimpanzees and capuchins actually do, but is vague about the process by which the behaviour evolved. (Technically of course all these hypotheses are vague about the actual process — we have not found 'reciprocity genes' and any adaptationist story needs to keep that in mind.) A full accounting for a trait should include a plausible scenario for how it came to arise from an ancestor in which it was absent. As I read it, the scenario offered here for reciprocity is that increased cognitive complexity made possible calculated reciprocity based upon expectations concerning the behaviour of others plus a sense of fair play, a sense that one should not only 'keep mental note of favours given and received' but should act on those notes . . . well, reciprocally. I am not sure that this circularity is inevitable, and invite Flack and de Waal to put together an explicit model based on desire for predictability plus emergent properties of theory of mind (TOM).

In my 1984 paper, I tried to offer an *evolutionary* account — i.e., a diachronic model — for the evolution of reciprocal altruism by way of (first) sharing under pressure, which fostered (via developmental psychology) sharing to enhance status, which established conditions favouring calculated reciprocal sharing, thus providing the basis for the evolution of the capacity for generalized reciprocity. It is worth noting that such a model incorporates non-reciprocity (e.g. extortion) as part of the same integrated system, rather than a psychologically unrelated simple selfishness.

Now that I've established (I hope) what I was trying to say, the question remains, was I correct? I'm not sure. If, as Kummer (1978) argues, predictability is a necessary feature of complex sociality, and if TOM arises inevitably from cognitive complexity, then I believe Flack and de Waal's reciprocity model predicts widespread reciprocity amongst cognitively complex social animals. In contrast, the model I proposed situates the evolution of reciprocal altruism (exclusive of close kin and mates) in a narrower set of antecedent conditions that apply to chimpanzees, humans, probably some dolphins, and not too many other organisms. I am not sure yet whether capuchins decide the case in favour of Flack and de Waal or not, but they are problematic for my hypothesis; on the other hand, the recent conclusion of Pusey and Packer (1997) that there are no solid examples of reciprocal altruism among non-humans (not even baboons?) somewhat supports my view. We shall see.

In the meantime, a minor quibble: contra de Waal, I do not believe that the tolerated theft model predicts that most aggression among food-holding chimpanzees be directed against the possessors of the food. The model simply predicts that possessors be at high enough risk of attack that they cannot eat in peace; it is a logical error to assume that 'beggar should attack holder' implies 'holder should not attack beggar'. Indeed, it is central to the tolerated theft model that the possessor may be ambivalent about sharing, and thus inclined to try mild aggression to discourage any but the most persistent beggars. The important thing to remember is that the respect for possession noted by Flack and de Waal is neither absolute nor invariable (Moore, 1984; e.g., Kummer and Cords, 1991).

So, what of morality? I believe there are three more-or-less distinct elements to the trait these authors are discussing (as the proverbial elephant has trunk, legs and tail).

1. Prosocial behaviour, which can arise for various reasons (kin selection, tactical sharing, mutualism; perhaps group selection in a few taxa). Flack and de Waal focus here and have established a valuable framework from which to work.

2. A sense of normativity and the importance of predictability, as outlined by Kummer (1978). In a sense, evolution has committed the naturalistic fallacy: what is, ought to be. This is a powerful element of morality that is not necessarily prosocial. It remains to be seen whether this 'trait' has been favoured by natural selection (cf. Kummer) or derives epiphenomenally from Hebbian learning processes in complex brains (see Elman *et al.*, 1996).

3. A higher-level, cognitively based propensity to adjust the social context in which elements 1 and 2 operate, according to tactical expediency (i.e., politically).

Unlike the first two elements, which as Flack and de Waal show seem fairly widespread among non-humans, this flexibility may be unique to ourselves. It makes possible the extension of the moral community to apes (e.g., Cavalieri and Singer, 1993) as well as its withdrawal from humans (e.g., Hochschild, 1998). This is where Boehm and much of Sober and Wilson have made real contributions. See Moore (1994) for a discussion of how their work when combined can suggest a scenario for the origin of the genus *Homo*, and Alexander (1989) for an extremely valuable discussion of the role of intergroup processes in the evolution of the human psyche.

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