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Conflict and the Evolution of Social Control

With an interest in origins, it is proposed that conflict within the group can be taken as a natural focus for exploring the evolutionary development of human moral communities. Morality today involves social control but also the management of conflicts within the group. It is hypothesized that early manifestations of morality involved the identification and collective suppression of behaviours likely to cause such conflict. By triangulation the mutual ancestor of humans and the two Pan *species lived in pronounced social dominance hierarchies, and made largely individualized efforts to damp conflict within the group, exhibiting consolation, reconciliation, and active pacifying intervention behaviour. It is particularly the active interventions that can be linked with social control as we know it. It is proposed that when this process became collectivized, and when language permitted the definition and tracking of proscribed behaviour, full-blown morality was on its way. Because early humans lived in egalitarian bands, a likely candidate for the first behaviour to be labelled as morally deviant is not the incest taboo but bullying behaviour, of the type that egalitarian humans today universally proscribe and suppress.*

Morality as Politics

All humans live in moral communities of the type discussed by Durkheim (1933), in which public opinion decisively shapes the behaviour of individuals. Shared values define specific rights and wrongs of behaviour, and the group decides which individuals are deviant and sanctions them accordingly. These are constants of human social life, and on this basis a moral community engages actively in social control. It has been chiefly sociologists (see Black, 1998) who have taken responsibility for explanations in this area, and their theories are regularly couched in terms of social forces that result in 'deviance and social control'. Substantial insights have derived from this approach — which has been borrowed heavily by anthropologists (e.g., Selby, 1974).

A number of attempts have been made to explain moral origins. Unfortunately, scholars have been slow to recognize protomoral behaviours in other species (e.g., Stent, 1981), and not a great deal has been accomplished specifically with respect to origins since the work of Darwin (1859; 1865; 1871) and Westermarck (1894). This is

the case even though the relation of certain aspects of moral behaviour to natural selection has been explored by a number of social biologists (e.g., Wilson, 1978; Fox, 1983; Alexander, 1987; Wright, 1994; Ridley, 1996) and others (e.g., Campbell, 1965; 1972; Wilson, 1993; Wilson and Sober, 1994; Sober and Wilson, 1998). Here, in explaining the evolutionary development of moral behaviour, the analysis will be more 'political' than 'sociological'. Indeed, I shall suggest that moral systems are driven very heavily by considerations of power (Weber, 1947; see also Black, 1998). In effect, a large, *ad hoc*, community-wide political coalition serves as watchdog over individual behaviours that could lead to victimization of others, or to conflict within the group (see Boehm, 1982, 1999b). This macro-coalition is prepared to use coercive force, if it must, to protect individual group members from predatory exploitation or other harm, and to protect the entire group from disruption and stress brought on by disputes.

Social control is about the power of deviants to harm or distress others, but it is also about the power of a vigilant, assertive group that is bent upon manipulating or eliminating its deviants. In even the smallest band or tribe, the price of deviance can be assassination: capital punishment is one of the sanctions used against those who become seriously out of line (e.g., Boehm, 1985; 1993). This universal pattern of group vigilance is based on behavioural dispositions that are quite ancient, for in effect moral communities amount to political coalitions and power coalitions are found in many of the higher primates. In fact, they also are found in other social mammals (see Harcourt and de Waal, 1992), and coalitions sometimes grow very large as entire communities defend themselves against external predators, sometimes unite against neighbouring groups, and, rarely but significantly, sometimes turn against individuals in the same group.

There is far more to morality than a group's momentarily uniting against a deviant individual: morality involves common agreement as to which behaviours are unacceptable, and it also involves a group's overall conception of a satisfactory quality of social and political life. There also has to be a precise exchange of information among group members as they carefully track the behaviours of other individuals, and a capacity to manipulate deviants strategically in order to satisfy this pattern. Thus, some major further developments had to take place, and in their definitive form they probably arrived in the Late Palaeolithic, as modern humans emerged (Boehm, 1999b).

If we could hypothesize what other pre-adaptations existed, and how those developments evolved, we would be on the road to an evolutionary explanation of moral behaviour. A first task, however, is to determine what the overall social life of Late Palaeolithic foragers was like. Fortunately, there are some important shreds of direct archaeological evidence (see Mithen, 1990; Tattersall, 1993). Anatomically Modern Humans foraged as nomads as they hunted and gathered in smallish bands, and it seems likely that bands were composed of at least thirty persons (Dunbar, 1996) and therefore were larger than nuclear families. There is no evidence of humans being sedentary 100,000 years ago, or even 25,000 years ago, so presumably their bands moved around within familiar home ranges. However, radical changes of climate (see Potts, 1996) led them periodically to undertake migrations (see Tattersall, 1993) that eventually led to major geographic radiations of this species. These people sometimes seem to have cared for the injured, and they sometimes buried their dead — an

act also performed by Neanderthals. However, aside from group size there is little evidence that can be related directly to social control.

This very minimal social portrait fits with extant foragers who remain nomadic, and the similarities of band size, local migration pattern, and subsistence strategy at least provide an anchor for analysis-by-triangulation. We may now consider central behavioural tendencies of extant bands, and ask whether they might be projected back into the Late Palaeolithic. Such bands are highly variable in their social organization and subsistence pattern (Ember, 1978; Kelly, 1995), but so long as they remain mobile — rather than sedentary — they are remarkably uniform in their social, moral, and political makeup. Band size fits nicely with the range suggested by Dunbar, while bands are composed of some related and some unrelated families (Kelly, 1995). Families tend to move back and forth from band to band (see Palmer *et al*., 1998), but in spite of this the members of a band co-operate intensively, particularly in sharing their large-game meat (Kelly, 1995). Bands invariably are moralistic, for they practice sanctioning according to established values that assist in identifying deviants. The lists of deviant behaviour are remarkably uniform from one continent to another, and these mobile bands are uniformly egalitarian (see Cashdan, 1980; Gardner, 1991) with respect to relations among adult males. By this I mean that they suppress undue competition, and head off attempts of individuals to exert domination or control; as a result, they tolerate very little leadership (see Furer-Haimendorf, 1967). It is very likely that all of these features of extant bands pertain to the Late Palaeolithic (see Mithen, 1990; Boehm, 1999b).

There is another avenue for drawing some *general* inferences about that earlier epoch. Cladistic analysis (e.g., Wrangham, 1987) enables us to compare the two *Pan* species with our own, and see which social and political features all three share. The assumption is that any feature shared by all three is likely to have been present in the ancestor shared by *Homo* and *Pan,* who lived five million years ago by molecular reckoning. In the area of social and political behaviour, our beginning list of shared features is impressive (see Boehm, 1999b). All three species forage for a living and live in territorially-oriented communities that are subject to internal fission and fusion. All three are prone to status rivalry and competition based on flexible innate dispositions to dominate and submit, and all three work in political coalitions that often are dyadic but can become triadic or larger. Therefore, all three experience conflict. All three also engage in deliberate conflict resolution. These basic socio-political factors pertain to the Mutual Ancestor of *Pan* and *Homo*, and to any intermediate lineage that connects directly with one of the three extant species. They will figure very importantly in the analysis of moral communities and their origins, and I shall provide greater detail as we proceed.

To outline the key factors that helped to shape the evolutionary transition from protomorality to full morality as we know it, I shall be drawing together a number of hypotheses developed previously (Boehm, 1982; 1989; 1993; 1997a; 1997b; 1999a; 1999b; 1999c). I shall not be considering highly refined theories of ethics developed by philosophers and others, for my aim is to identify what I would call the basics of morality: the antisocial predatory behaviours of individual group members that result in exploitation or conflict, and the group's response to such behaviour. The group responses involve the operation of large, cohesive political coalitions, and these assertive moral communities are best known for their capacity to punish (see Black,

1976; 1998). To this end, they engage in identification of deviants through gossiping and they actively apply social sanctions to manipulate or eliminate such individuals. Such acts are accompanied by anger, and sometimes by fear. However, because their overall orientation is heavily prosocial (Boehm, 1999c; see also Hinde and Groebel, 1991), they also praise individuals who are worthy and — this is important — they try to manage conflicts that arise within the group with the aim of restoring social harmony.

Morality is based heavily on social pressure, punishment, and other kinds of direct social manipulation by which the hostilely aroused majority use their power over individuals in a band. To understand such use of power in nomadic bands, one must focus on the fact that extant hunter-gatherers are politically egalitarian (Boehm, 1993), and that Late Palaeolithic bands surely assumed a similar political form (Boehm, 1999b). This means that members of Late Palaeolithic band communities formed broad coalitions of subordinates which severely limited the potential of any male (or female) to attain ascendancy over other adults in the band. In focusing on egalitarian politics, I set aside the question of domination behaviour within families, which is evident both in apes and in humans, including those who subscribe to egalitarianism. It is the group that interests us here, and I shall focus just on the behaviour of adults.

This suppression of dominance behaviour among family heads enabled the local group, as a large political coalition, to control the actions of all its members. These included individuals endowed with great physical strength or aggressiveness, those chosen to lead, those who produced strongly as hunters, and shamans connected with unusual supernatural powers. It did so as a local moral community that held commonly established views about which behaviours were likely to threaten members individually, or spoil the group's quality of life. It was prepared to deal with antisocial deviants, and, as with extant foragers who make their livings as nomads, a major focus was on the proscription of bullying behaviour at the level of band politics. But moral pressures were also focused on other problems that I shall list presently, problems of antisociality that are regularly experienced by hunter-gatherers today.

Ultimately, the moral sanctioning I am speaking of would appear to stem heavily from individual self interest (see Alexander, 1987), for many types of socially-defined deviance (for example, rape, theft, deception, adultery, and murder) are predatory behaviours that directly threaten such interests. But I emphasize that social control cannot be reduced entirely to individual interests; indeed, collective interests appear to be very important in guiding both moral sanctioning and the management of conflict (see Boehm, 1997b; 1999b; see also Sober and Wilson, 1998).

A wholly individualistic response to predatory antisocial behaviour would be self-help (e.g., Black, 1998), by which an aggrieved individual and possibly his close relatives retaliate against an aggressor independently of any reaction from the larger group. Among hunter-gatherers, this is likely to happen after a homicide. Also 'individualistic' is a response by which the members of a band act together because they sense a direct threat to themselves as individuals: they may band together in immediate (and sometimes desperate) self-defence. They also may try to control a certain type of behaviour pre-emptively because it could end up victimizing them personally in the future.

It also makes sense to view moral communities as groups of people who have common concerns that go well beyond such individual interests. Hunter-gatherers are concerned with the overall quality of socio-political life they share, and they realize that if the entire group works together, it can improve the quality of that life. In short, they have social ideals (Boehm, 1999b; see also Nader, 1990), and they are able to speak about what is good or bad for the group. In this context, they identify any serious dyadic conflict as the entire group's social problem, no matter who is involved individually, because life is disrupted for the entire group. Usually, they see this as a problem that must be resolved, or 'managed', collectively.

Both individualistic and collectivistic methodologies (see Sober and Wilson, 1998) can be useful in explaining social control, and they may also be appropriate for considering how natural selection has helped to produce this type of behaviour. In this analysis, I shall try to find a balance between 'methodological individualism' (a habit that seems to be entrenched in evolutionary biology) and the kind of 'methodological collectivism' that has characterized many social analyses by sociologists and anthropologists, some worthy and some unduly biased.

When humans act as moral communities, in many respects they can be very astute as non-literate social engineers. In matters of deviance and social conflict, they understand intuitively both the immediate social and political dynamics of their own groups, and the ultimate effects of conflict. Often, as they all but unanimously manipulate individual behaviour in desired directions, they consciously understand the social strategies they engage in (e.g. Boehm, 1993). Often the strategies are directed squarely at the deviant, who they try to control, reform, or eliminate from the group. But sometimes they seem to be more interested in dealing with the conflict in its own right: they focus just on resolving the dispute — rather than on addressing the individual deviance involved — and this type of behaviour cannot easily be reduced to individual interests alone.

To the degree that extant humans are evolved to take a special interest in their group's overall welfare, an interest that probably goes beyond selfishness or nepotism (see Boehm, 1997b), it may be necessary to invoke group selection arguments to explain such evolution (see Eibl-Eibesfeldt, 1982; Wilson and Sober, 1994; Boehm, 1997a; 1999b; Sober and Wilson, 1998). It is beyond the scope of the paper to consider this controversial and complicated issue, but a more complete treatment of the evolution of moral behaviour would have to explore it; I have done so elsewhere (Boehm, 1997a; 1997b; 1999a; 1999b; 1999c), and the problem is further addressed by Sober and Wilson (2000) in this volume.

Conflict as a Stimulus for Moral Behaviour

All human groups experience competition and conflict, and one major type of within-group conflict is *political,* in the sense that humans are innately disposed to vie for power and position (Masters, 1989). This is something we share with many species, including chickens: when their innate tendencies to status rivalry are expressed at the dyadic level, the result is a highly predictable social hierarchy (Schjelderup-Ebbe, 1922). This applies to humans after the Neolithic, for our larger societies exhibit a social order that an ethologist would call despotic (see Vehrencamp, 1983). There is substantial social competition with a limited number of

positions at the top (Fried, 1967) and leaders have either substantial legitimate authority or coercive force at their disposal (Service, 1975). However, an older type of human society is the politically-equalized group I have described above. Vehrencamp (1983) would designate this ethologically as an egalitarian society, for the expression of tendencies to dominance and submission is not pronounced. This is because individual rank is not a major factor in reproductive success, and because leaders are not very dominant.

Normally, in discussions of ethological despotism or egalitarianism, the characterizations are specific to a species. But it would appear that humans, with their noteworthy cultural flexibility, are all over the map. When people live in chiefdoms, primitive kingdoms, or nation states, political life can be ethologically defined as despotic. When they live in mobile bands, small tribes, or tribal confederations, their political life is ethologically egalitarian. People in the latter type of society also are called 'egalitarian' by cultural anthropologists like Service (1962) and Fried (1967), whereas the contrastive *cultural* term is 'hierarchical'. The fact that human groups reach both of these extremes, and land at various intermediate points as well, raises an important question. As a species, are we innately given to ethological egalitarianism, to ethological despotism, or to neither?

To resolve this question, we must consider the fact that innately egalitarian primates like squirrel monkeys (see Boinski, 1994) lack any very strong genetic preparations to dominate or submit. In this they are very different from chickens, or chimpanzees. Because the original humans were egalitarian for scores of millennia, we must ask if our species might be innately egalitarian — but that under Post-Palaeolithic conditions we somehow managed to 'hierarchize' ourselves on a cultural basis. These important questions were raised by Knauft (1991), and subsequently (Boehm, 1993) I made the case that humans can remain egalitarian only if they consciously suppress innate tendencies that otherwise would make for a pronounced social dominance hierarchy. In effect, it is necessary for a large power-coalition (the rank and file of a band) to dominate the group's would-be 'bullies' if egalitarianism is to prevail — otherwise, the group will become hierarchical with marked status differences and strong leadership.

On this basis, it can be argued that humans are innately disposed to despotism in Vehrencamp's ethological sense of the word. My point is that humans are not just naturally egalitarian: if we wish to keep social hierarchy at a low level, we must act as intentional groups that vigilantly curtail alpha-type behaviours. This curtailment is accomplished through the cultural agency of social sanctioning (Boehm, 1993), so political egalitarianism is the product of morality.

In this connection, I think that as moral communities began to form, the first type of behaviour to be dubbed 'deviant' could have been alpha-male type behaviour (Boehm, 1997a). There were two good reasons to suppress such behaviour. One was based on innate political dispositions: in a despotic species given to strong status rivalry there is a natural propensity for adults to behave dominantly. This results in a dislike of being dominated oneself, and it makes for subordinate rebellion against superiors (Boehm, 1999b). If resentful subordinates manage to collectivize and institutionalize their rebellion, you have a human type of politically egalitarian society, in which there is a major tension between the group and its more rivalrous individuals. The other reason was economic. Anatomically Modern Humans obtained an

important part of their diet from large-game hunting, and this provided a practical reason to outlaw alpha males (see Erdal & Whiten, 1994; 1996). In prehistoric bands that depended significantly on meat, the need for equalized distribution of food was great. People needed to reduce variation in their intake of rarely or sporadically acquired high-quality foods, notably large-game meat, and as brains grew larger humans gained enough actuarial acumen to set up uncentralized systems for *equalized* food redistribution, and also other kinds of co-operative security nets (see Boehm, 1999c). The basic idea was to average out risks of individuals and families (Smith and Boyd, 1990; see also Cashdan, 1990) by collectivizing the products of hunting, and outlawing alpha domination behaviour was critical to satisfying these aims. This eliminated bullies who would seek a lion's share, and thereby disrupt such a delicately-equalized system of give and take (see Boehm, 1999c).

Extant hunter-gatherers uniformly insist on egalitarianism — at least until they settle in one place. If they do sedentarize, either as hunters or horticulturists, they often continue to be suspicious of authority — and politically egalitarian (e.g., Gould, 1982). But as people lose their obsession with staying equalized, they develop a substantial degree of hierarchy that is consistent with what anthropologists describe as 'chiefdoms' (see Service, 1975). In terms of culture change, hierarchy can assert itself quickly because of the innate political dispositions discussed above, and because, as they govern larger groups, strong, responsible leaders (the good ones) provide obvious benefits to all. This is so even though they also gain personal economic privileges and social status never seen in bands or tribes.

For human prehistory, this raises an important question. How did an innately despotic species manage to become phenotypically egalitarian in the first place? I have suggested, already, that the moral community might have developed originally as a collective means of eliminating the political, social, and economic problems that go with alpha domination (Boehm, 1982; 1999b). However, an alternative hypothesis would be that the moral community first developed for some other reason, but was put to use in the service of political egalitarianism once the subordinates realized they had collective power sufficient to eliminate the alpha role (see Boehm, 1997a). Either way, there developed a full-blown egalitarian moral community that was in firm command of its own social life.

Here, I shall be developing a more general hypothesis that helps to account for either of these possibilities. Today, typical behaviours that are reasonably well-controlled by the egalitarian band would seem to be: bullying behaviours; cheating or shirking in the context of co-operative efforts; serious degrees of deception or theft; and 'sexual crimes' like adultery, incest, and rape. If we examine this list of negatively sanctioned actions, these also are the behaviours that account for many of the serious conflicts in bands. Assuming that moral sanctioning is intentional, and this seems indisputable, this means that humans are singling out competitive or predatory behaviours that are likely to cause conflict, and, by suppressing them, they are, in effect, damping conflicts pre-emptively (Boehm, 1982). On this basis, a formal hypothesis is possible. Moral communities arose out of group efforts to reduce levels of internecine conflict, as well as to avoid undue competition, domination, and victimization.

The striking anomaly for this hypothesis is murder. Hunter-gatherer homicide is quite frequent, and it usually takes place because of problems with male competition

over women (Knauft, 1991). While wholeheartedly condemned, internecine killing is not well controlled by the group; it is coped with more on a personal, self-help basis, and through avoidance (see Knauft, 1991; Kelly, 1995). Adultery is a major cause of serious disputes, and, while in general it is condemned, adultery seems to be insusceptible of definitive control. For one thing, its genetic basis is firmly grounded in sexual selection, and the motives would appear to be powerful. For another, it involves careful collusion between the offenders so it is difficult to detect adultery in a definitive way — even in a gossiping hunter-gatherer band that engages in constant social surveillance. Thus, this major cause of homicide is difficult to detect, and therefore difficult to suppress. In other areas of deviance, hunter-gatherers do quite nicely with their deliberate and often pre-emptive approach to social control.

By contrast, among chimpanzees and bonobos we have seen that routine competition over food (and mating) is patterned by a self-organizing despotic social system that is based upon a social dominance hierarchy: the dominant individual (or the dominant dyadic-coalition) usually wins, so conflict is moderate. By establishing and maintaining a politically egalitarian order, human foragers obviously have rid themselves of this type of hierarchical system. In freeing themselves from domination by powerful individuals, they have lost the functional benefits of a typical primate linear dominance hierarchy — notably, a self-organizing social hierarchy with an alpha individual in the control role. In the absence of any authoritative central leadership on the part of strong, responsible individuals, they handle their social problems as well as they can. They do so on a collective and *deliberate* basis, through social control, and their main problem seems to be homicide involving male sexual competition.

I am suggesting that egalitarian societies are 'intentional communities' (Boehm, 1993), societies whose members have a certain type of social order in mind. As individuals they have decided to give up on climbing to the alpha level, and have settled, instead, for personal autonomy without either dominance or submission. They must work together *collectively* to accomplish this, and this same type of intentionality is applied to other spheres. It sometimes becomes quite reflective, for hunter-gatherers seem always to emphasize social harmony in philosophizing about their own social life. This normative emphasis is something that anthropologists have noted about non-literate people in general (see Sober and Wilson, 1998), and it is aimed at improving the quality of social life. Foragers' standard lists of deviant behaviour are lists of behaviours that are likely to cause conflict within the group, and degrade the overall quality of social life — for everyone.

I must make a special point, here, about hunter-gatherer disputes and how they are handled once pre-emptive sanctioning has failed and conflict becomes conspicuous and troubling. People do not necessarily become moralistic in dealing with the conflict. For one thing, squabbles and serious disputes often develop without any moral rules being broken. Two individuals, driven by self-interest, may simply hold differing interpretations of a situation — or a clash of personalities may be involved. Such conflicts tend to be taken simply as social problems that require 'management' by the group and its best peacemakers, rather than as instances of deviance that require sanctioning. However, even if the conflict clearly was initiated by some kind of deviant aggression, the group may choose to treat the problem neutrally from a moral perspective. Once a conflict has become heated, often the obvious and pressing social problem is to restore order, rather than identify and punish a deviant. This is common

in egalitarian societies, be they bands or tribes, and it stems from the fact that the best way to manage a conflict — even if its provenance involves moral malfeasance by one party — is to split the differences. This reduces the chance that the same problem will arise in the future, with the dissatisfied party as instigator (e.g., Boehm, 1986).

At stake is the band's ability to live together in a not too stressful way, and to co-operate in ways that may be critical to health and survival. Having set aside hierarchical living except for within the family, hunter-gatherers have used their very large brains *collectively*, to diagnose and actively treat a wide variety of social problems at the band level. The pre-emptive side of conflict resolution involves suppressing deviant behaviours that lead to conflict. This helps to account for the peaceful, co-operative side of band life. When foragers do see conflicts developing, they are quite good at heading them off — so long as they do not reach the homicidal level (see Knauft, 1991). It is this corporate, highly deliberate, and basically *pre-emptive* approach to the avoidance of conflict that distinguishes human moral communities from largely self-organizing communities of other highly social animals, which actively control conflicts only when they become active. This will be discussed further.

Is Aversiveness to Conflict Innate?

Egalitarian moral communities work in a variety of ways, using praise and persuasion as well as negative social pressure, ostracism, and coercion. But one reason that 'social pressure' works so well is that deviants know the community can take things further, by seriously distancing them socially or by ejecting them from the group, occasionally by administering beatings, and, apparently everywhere if rarely, by putting them to death. Thus, the negative side of social sanctioning is ultimately *political*.

The implications of political power are pervasive in social control. First, problems of deviance often involve relations of power and domination, and second, social control is based on the group's power over individuals who are abusing power or are acting in some other predatory or otherwise antisocial capacity. Because the standard proscription-list of aggressive, self-interested behaviours is also a list of behaviours that cause conflict within the group, one must ask if there might be some innate aversion to conflict that helps to 'motivate' sanctioning strategies. An alternative hypothesis would be that the active social force is provided by the intelligence of non-literate humans, as social engineers who have rationally discerned the costs of conflict and therefore have invented ways to manipulate their own social environments in an anticipatory fashion.

The obvious intentionality of social control suggests that the latter hypothesis holds, but are these two hypotheses contradictory? I believe that human nature may be shaping human intentions rather decisively in this case. A specific prehistoric hypothesis would be that Anatomically Modern Humans were innately aversive to social conflict in their immediate social environments, that is, within their bands, and that precursors for such an aversion should be identifiable in the ape ancestral to both of *Homo* and *Pan*.

To explore this important question, we must return to the type of cladistic analysis that was employed earlier. Humans living in bands consistently try to mediate

conflicts between individuals, with varying success depending on the nature of the conflict. Non-human primates seem to manage aggression in a variety of ways (Cords, 1997), which involve reconciliation, consolation, and active intervention by third-parties. With chimpanzees, high-ranking individuals and particularly the alpha males act in a control role (see Erhardt and Bernstein, 1994; Boehm, 1994) to stop fights, often before they escalate very far. Bonobos are generally less prone to agonism but they, too, intervene in conflicts (Parish, personal communication). This means that our Mutual Ancestor was likely to have intervened in conflicts, but what was the motivation?

It is difficult to discuss motives for an animal species five million years ago, but it helps to have worked with the very rich long-term data set at the Gombe Stream Research Centre, which spans decades. I also have spent more than a year watching and videotaping members of the same wild chimpanzee group, with an interest in disputes and conflict interventions. It might seem far-fetched to suggest that chimpanzees actually have the intention to pacify a conflict when they engage in an intervention, but when a highly intelligent animal utilizes a wide variety of tactics to accomplish the same strategic end, the manipulative behaviour would appear to be deliberate (see Boehm, 1992; 1994).

Tactics I observed at Gombe did vary widely. Usually, a male or female dominant chimpanzee would display at the (subordinate) adult protagonists and scatter them, or a male would charge right between them with the same effect. But I also have watched the Gombe alpha male successively herding two females in opposite directions to stop a serious fight up in a tree, and once I saw a high-ranking male pry apart two adolescent males after his charging at them had no effect. (Also, at Gombe, a subordinate female was also seen once to remove a stone from a male's hand when he was about to display at another group member.) In all of these cases, the dispute was ameliorated. In captivity, the same variegated tactical patterns prevail, but the prying-apart and removal-of-object behaviours are common, rather than rare (de Waal, 1982). The argument for intentionality is further supported by the fact that a dominant animal trying to control a fight often will sit down for a time between the protagonists after having separated them (see Goodall, 1986; Boehm, 1994), rather than immediately returning to feeding, resting, mating, grooming, or whatever the prior activity may have been. The fact that he has just decisively intimidated them makes this an effective means of forestalling further conflict.

In sum, these behaviours add up to a strategy of deliberate pacification that is present in a variety of chimpanzee environments. But what are the *specific* motives involved? It makes sense that chimpanzees could be protecting kin or coalition partners from injury, but in that case one would expect them to intervene on a partisan basis, directing their effort at one protagonist rather than both, and for them to intervene only when fights involved kin or partners. What is distinctive, with most of the intervention strategies I have described, is that they appear to be *impartial* — rather than partial. Interventions only occur in a fraction of the total disputes observed at Gombe, so one still might posit that high-ranking animals acting in the impartial control role were intervening mainly to afford protection to kin or allies. However, in the long-term database there was no such trend (Boehm, 1994).

If protection is at issue motivationally, it is afforded to both parties — and I should point out that victims sometimes wound aggressors (see Goodall, 1986). With

protection being provided randomly to other group members, these impartial interventions in adult disputes would appear to be 'altruistic' in the genetic sense of the word (see Boehm, 1981) — whatever the immediate motives. Some degree of a chimpanzee version of empathy does seem possible, however, insofar as the control individual himself has experienced the stress of being attacked, or of getting into a bad fight.

Another innately-prepared motivation could be operating. It is possible that these controlling third parties are reacting to the intensely-agonistic behaviours of others as an environmental irritant, and simply wish to remove this perturbation as a selfish act. This explanation alone could account for interventions that are impartial and pacifying. One might also argue that interventions are simply a means of reinforcing one's high status. All of these motivations are possible, and there may be others, as well. But one thing is clear. *Pacifying interventions* surely are motivated differently from those that stem from a desire to assist a relative or well-bonded coalition partner in winning a contest. Indeed, such interventions are quite different tactically, for the bluff or attack is directed at just one individual, not both of them. Partisan interventions tend to escalate, rather than damp, the original conflict.

Because the conflict itself seems to be a major focus, I suggest that chimpanzees are innately aversive to conflict. If one compares the two *Pan* species (see Boehm, 1999b), evidence for generalized conflict aversiveness is far more evident in the one that actually exhibits more conflict, *Pan troglodytes*. Although bonobos do interfere sometimes in conflicts to pacify them, with chimpanzees this is a regular and prominent pattern, both in the wild and in captivity.

Active power-intervention is not the only tool that these apes have for reducing the effects of conflict. De Waal's (1982; 1989;1996) work with a variety of primates demonstrates that reconciliation behaviour can be prominent, and functionally important at the level of social life. With *Pan troglodytes* and *Pan paniscus*, reconciliation is often dyadic. But after altercations there are also instances in which third parties assist in the reconciliation process that calms down the protagonists and consoles the victims in particular (de Waal, 1989; 1996). Humans, too, 'make up' after many of their within-group fights (e.g., Turnbull, 1961), and sometimes tribal people who feud intensively devise elaborate rituals that involve asking for and granting forgiveness (e.g., Boehm, 1986).

Knauft (1991) has emphasized that hunter-gatherers who are nomadic are relatively adept at heading off or resolving lesser conflicts, but at the same time are quite ineffective in dealing with heated conflicts that are likely to involve homicide. This impotency stems from the lack of a strong control role. Indeed, a would-be mediator, whose authority is guaranteed to be little in a band that insists upon egalitarianism, may himself be a casualty of a serious conflict with which he attempts to interfere (e.g. Lee, 1979). With respect to resolving conflicts *before* they become hot, extant hunter-gatherers have devised a variety of rituals that serve to ameliorate tensions within the band. These include not only talking things over, but also many different types of verbal or physical duelling which have the function of discharging social tensions before homicide occurs (see Hoebel, 1954). As with chimpanzees, a number of manipulative tactics are being directed at precisely the same end. My suggestion, then, is that conflict management has an innate basis, but it also is a form of intelligent problem solving.

Scholars tend to treat ethics, social control, and conflict management as separate spheres. However, I view them as being closely related (Boehm, 1982; 1999b). We have seen that one good reason to crack down on socially-defined deviants is that many are predators who potentially or directly threaten other group members as individual victims. This personal sense of being threatened motivates people to unite as a moral community. However, another reason is that deviants create disturbing conflicts that degrade the immediate quality of social life and impair group functions. Thus, even if one is not being singled out as a victim, one's social environment will be disturbed, and a useful web of co-operation that everyone profits from can be seriously disrupted. Both are good reasons to crack down on deviant behaviour preemptively, rather than permitting it to lead to active conflict. However, once a conflict becomes a threat to group welfare, and creates a high degree of social stress, it is significant that moral considerations may be set aside as the resolution of the conflict takes precedence over the dislike of the group for deviants. The conclusion for humans is that aversion to conflict has an innate basis, and that this helps to draw people together as moral communities that are interested in addressing social problems.

How close was the Mutual Ancestor to humans? We have seen that pacifying interventions can be both impartial and effective, in both wild and captive chimpanzees whose conflict interventions are well studied. These interventions tend to be individual, rather than collective. But the potential for collective interventions is there: at Gombe there have been rare instances of several males simultaneously intervening in a control role (Boehm, 1994), and in captivity a large coalition of females did the same (de Waal, 1996). This potential can be taken as a pre-adaptation that made humans more likely to invent the moral community as we know it.

In addition, we must consider the fact that humans take a highly pre-emptive approach to social problem-solving. The Pan species have no conspicuous behaviour that suggests any systematic suppression of deviant behaviour by an entire group. However, with respect to pre-emptiveness it may be significant that most of the chimpanzee third-party interventions I have witnessed take place before the conflict becomes very developed.

Pre-adaptations for Moral Behaviour

Let us focus, now, on the entire range of pre-adaptations for moral life. First, there are the basics of group size and social composition, and the adaptations to physical and political environments with which they evolved. This ancestral ape lived in multifamily foraging communities that were subject to fusion and fission: this is a pattern clearly shared by chimpanzees, bonobos, and human hunter-gatherers. These groups were at least moderately 'territorial' (Wrangham and Peterson, 1996; see also Boehm, 1999b), and they may have approached a chimpanzee degree of territoriality, with patrolling by large coalitions of males and lethal attacks on individual neighbours. I suggest this because humans also engage in perimeter defence (Cashdan, 1983; see also Dyson-Hudson and Smith, 1978) — but bonobos are not fully studied in this respect (see Stanford, 1998). At present, we know that the adult male bonobos sometimes behave as hostile large-coalitions when two groups meet (Wrangham and Peterson, 1996) — but so far they have not been seen to engage in lethal behaviour.

All three species do unite against neighbouring groups, then, and it seems likely that all three unite to mob predators that threaten them and possibly to hunt larger game (Boehm, 1999b). There also are solid data that document small male or female coalitions in all three species, so in ancestral communities small coalitions of males or females surely worked together in vying for political status within the group. In doing so, they mitigated (but came far from neutralizing) the social dominance hierarchy that saw high-ranking individuals (male or female) decisively dominating those of lower rank (see Boehm, 1999b). If we put together all the large and small coalition behaviours of all three species, it seems likely that the Mutual Ancestor at least had the potential to form large coalitions *within* its communities, and to direct political force at individuals who aroused the ire of the rest of the group.

What about morality as I have discussed it? Goodall (1982) has characterized the social life of extant chimpanzees as involving 'order without law'. Her point is that the linear dominance hierarchies of chimpanzees mediate and pattern the natural competitiveness of individuals, and keep conflict within tolerable limits. Chimpanzee social life may be noisy and agonistic, and sometimes it is troubled by pronounced dominance instabilities as the alpha role changes hands, but basically it is orderly and stable. She emphasizes that the overall system is self-organizing: chimpanzees are not partially 'creating' their societies as humans do — by gearing deliberate social control to the betterment of individual and group life. Hence, 'order without law', which means order without morality.

Essentially Goodall is correct, but she may not be entirely correct. Recently, de Waal (1996) has considered the possibilities of proto-moral behaviour in both apes and monkeys, and has made a persuasive case for moral-like behaviours in certain restricted areas (see also Flack and de Waal, 2000). Some of his insights relate to sympathy that extends beyond the confines of parental nurturance or kinship, a response well documented in the wild by Goodall (1986) in her discussion of chimpanzee altruism (see also Eibl-Eibesfeldt, 1989). But other insights relate more directly to the raw materials of morality — taken as social control of commonly disapproved antisocial behaviour by a concerned local community.

Captive chimpanzee colonies are particularly interesting in this respect. Spatial constriction and easy availability of food provide advantages of power to the adult females: they now have time to devote to 'politics' because their lives are no longer devoted to largely solitary foraging, and in captivity these females form much larger coalitions than the males. In the sizeable groups at Arnhem Zoo in Holland and at Yerkes Regional Primate Research Centre in Atlanta, captive female allies have been able to control certain behaviours of males who are individually dominant over them, and do so in ways that are striking. They usually manage to play 'kingmaker', and they always seem to control which male will be involved with peacemaking; that is, if they fail to get their choice of alpha male they may at least divest him of his control role (that of peacemaker) and permit his rival to perform those valuable services for them (see de Waal, 1982). The females do this on a manipulative basis that appears to be intentional, and the process is similar to social control in that a large, well-unified, rank-and-file political coalition is successfully manipulating key behaviours of individuals that are threatening to other individuals.

Such behaviour is routine in large captive groups, and it can lead to rare behaviours that become startlingly similar to human social control. At Yerkes, it is recorded that

the alpha male was chasing a sexual rival with the intention to do him damage, and the females reacted by collectively issuing hostile waa-barks, directed at the alpha. As the intensity and unanimity of the calls built, this signalled an impending attack by all of them — and the alpha male desisted (see de Waal, 1996). It was the size and cohesiveness of the female coalition that made the difference in controlling his behaviour, for in the wild the strongly defiant individual waa-barks of a few disapproving females will be ignored by high-ranking males that are engaged in making attacks.

Large-coalition political behaviour is not unknown in the wild. At Gombe, males regularly form large coalitions to go on patrol or cope with predators (see Nishida, 1979; Goodall, 1986; Byrne and Byrne, 1988; Boehm, 1992), but when they compete for power within the group normally they operate dyadically, as pairs of close allies. However, after over thirty years of field observation the following male behaviour was observed at Gombe (Goodall, 1992). The alpha male had been defeated in a fight with a rival, and then he tried to make a comeback. Uncharacteristically, the males of the group threatened him *collectively*, and forced him to leave the group. He remained socially peripheralized until he was willing to return in a submissive role. Similar episodes, involving smaller coalitions that nonetheless surpass the dyadic level, have been recorded at Mahale, the one other long-term African field site at which social data are well-recorded and well-published (e.g. Uehara, Hiraiwa-Hasegawa, Hosaka, and Hamai, 1994; Nishida, Hosaka, Nakamura and Hamai, 1995).

In these rare wild episodes and well-routinized captive ones, it would appear that among members of large coalitions there is some kind of consensus that develops — as to what kind of behaviour they are taking issue with, what their political objectives are, and whether they are in a position to exert control. I do not believe I am engaging in a fantasy about 'intentions at work'. Chimpanzees have the waa vocalization that is closely associated with hostile defiance (Goodall, 1986; see also Boehm, 1999b), and when they hear the waa-barks of others they can decide individually whether to join in. The overall pattern would appear to involve something like 'public opinion' (see de Waal, 1996), and in its dynamics this political process can be likened to social control because the same macro-coalition that arrives at a consensus may decide to intervene physically. Although male bonobos do appear to stick together politically when they encounter groups of strangers, as with chimpanzees, within the community the females operate in small coalitions of two or more all the time, whereas the males do not join in small coalitions. For this reason, the females are in a position to engage in status rivalry with males — essentially on an equalized basis (see Kano, 1992; Wrangham and Peterson, 1996).

With chimpanzees, the collective reactions by large male or female coalitions are, respectively, of great interest in terms of protomorality. But with humans an important difference is that both males *and* females unite into one very large, community-wide political coalition, which manipulates or eliminates deviants. It does so on the basis of explicitly shared opinions about what is deviant, this in the context of long-term social objectives that are formally articulated. Another difference is that humans are constantly engaged in a vigilant search for deviance: this is accomplished quite systematically, by gossiping, and even predatory behaviour that takes place one-on-one becomes known to the entire group (see Boehm, 1999b). Another difference stems from the egalitarian nature of human bands. Ethologically speaking, with an egalitarian as opposed to a despotic social order, it is far easier for the human group to

unite against its higher-ranking deviants because they already have been placed in a relatively weak political position. Chimpanzees, being despotic, put down their leaders only partially, or episodically, and they always have strong leaders. Humans, as egalitarians, are in a position to do so continuously, routinely, and decisively.

The formation of major coalitions that deliberately suppress unwanted individual behaviours is basic to human morality. Chimpanzees have the potential to form male or female coalitions on a large scale, and bonobo female coalitions at least rise above the dyadic level as females unite to hold their own politically against the more physically powerful males. This means that such a potential was likely to be present in the Mutual Ancestor of *Pan* and *Homo*, and that therefore a major political pre-adaptation was already in place when human communities moved toward practising social control as we know it today.

The Full Blown Moral Community

By the later Late Palaeolithic, when Anatomically Modern Humans were becoming widely established, it is likely that the fully developed human moral community also was well established in the form we discover in extant hunting groups (see Boehm, 1999a; 1999b). People lived in similarly egalitarian bands, and their routinized curtailment of excessive individual assertiveness placed them in a position to exert effective social control when other types of deviance arose. They manipulated group members in their own selfish interest, to protect themselves from the types of social deviance discussed earlier. However, because they had an eye to group dynamics and to maintaining a good quality of social life in the group, they also worked to reduce disruptive conflicts that did not arise out of moral deviancy. These might arise simply through differences of personality or an individual's state of emotional irritation, and sometimes they arose because someone mentally ill was out of control. Because of an innate aversiveness to conflict, and because people were able to calculate the damage rationally and in advance, such conflicts were 'managed' as much as possible in the direction of resolution.

My best hypothesis is as follows. A signal and fundamental accomplishment of early moral communities was to define domination behaviours as morally deviant, and then to back this up with sanctioning by the entire group. Because dominance tendencies operating at the community level are strongly innate (see Tiger and Fox, 1971; Masters, 1989), they are difficult to control. A vigilant egalitarian response became universal in the Late Palaeolithic, and the result was an egalitarian political order, one in which the band's main political actors — possibly just the adult males — enjoyed an essential political parity. Parity applied when it came to personal autonomy in the band, and also in the making of group decisions (see Knauft, 1991; Boehm, 1996). There were, of course, definite differences of prestige, rank, and status (see Flanagan, 1989); but tendencies of individuals to carry such differences too far were held in check, and the definition of 'too far' was quite restrictive.

In suppressing deviant behaviours likely to damage individuals and breed conflict within the group, a noteworthy failure that I have mentioned in passing came in the realm of sexual competition among males for females: it would appear that our species is motivated so strongly in this area that even our inquisitive and manipulative moral communities cannot control this aspect of social life very well. They do

understand its implications, in terms of disruptive conflict and as a leading cause of homicide, but their efforts are less than totally effective. What hunter-gatherers do know, in addition to the fact that male sexual competition is likely to cause conflict and homicide beyond their control, is that once a homicide takes place usually the killer will remove himself from the band — either permanently, or until tempers cool. Thus, in a sense this kind of dire conflict 'takes care of itself': a homicide within the band is intensely disruptive, but the conflict will quickly cease unless a feud ensues.

By contrast, other types of conflict were coped with quite efficiently much of the time. Indeed, mobile hunter-gatherer communities are regularly commended by anthropologists with respect to how well people seem to get along (see Knauft, 1991), and most of the commendation is valid even though certain groups seem to be unusually conflict-prone when it comes to sharing their large-game meat (e.g., Holmberg 1950; Blurton-Jones, 1984; Peterson, 1993).

I have chosen the Late Palaeolithic as the epoch during which this type of egalitarian moral community was likely to have reached its full development. In theory, such development was possible before the advent of Anatomically Moderns. We have seen that important pre-adaptations were in place five million years ago: the capacity to form coalitions larger than dyadic ones; the individual preference to dominate with a concomitant dislike of being subordinated that leads to egalitarianism (Boehm, 1999b), and the tendency to actively control conflicts within the group. But there was another pre-adaptation that probably was critical to the appearance of the fully modern moral community. This was the development of rapid-fire, phonemically-based communication (Lieberman, 1998) that was referential and involved displacement (Hockett, 1963) — displacement involves the planning of future activities, or the description of events that took place elsewhere. Abstract communication, mostly verbal, permitted the articulation and refinement of group values having to do with morality, and it also facilitated the kind of highly specific gossiping (with displacement) that is universal in human groups (Boehm, 1999b). Gossiping serves as a means of building social networks (see Dunbar, 1996); but, perhaps more importantly, it also enables group members to arrive privately and safely at a negative consensus about dangerous deviants. Language also makes it possible for groups to conspire, and ambush even the most fearsome dominator to execute him. Language probably was important to the establishment of egalitarian political orders. It definitely was critical to the invention of moral communities as we know them.

Both language ability and the capacity to devise and enforce moral codes are good candidates for gradual evolution at the genetic level, with genetic evolution interacting with cultural patterns. The advent of full linguistic communication (as we know it) is thought to have arrived, at latest, with Anatomically Modern Humans something over 100,000 years ago (Lieberman, 1998; see also Marshak, 1992), and it would be difficult to argue that such an acumen arrived more recently. However, let us consider what was happening with communication five million years ago. It is clear that today chimpanzees and bonobos have many and subtle ways of communication (e.g., Goodall, 1986; de Waal, 1996) even though apparently they have no meaningless building-blocks like phonemes, and even though their communication system does not facilitate displacement.

Thus, the Mutual Ancestor was likely to have had a rather strong communication capacity — but language as we know it was absent. So was the capacity to develop

anything like a modern moral community, which not only names and discusses different types of deviance but is capable of discussing the immediate and longer-term social future of the group. One selection pressure that might have acted on language evolution in its later phases could have been human tendencies to form moral communities that were egalitarian. I have in mind the attempts of subordinates to control more aggressive group members. This can be a risky enterprise, but it is one by which the allied subordinates individually gain reproductive success at the expense of their political superiors. Effective communication is important to their work as a large political coalition, for this enables them to track individual behaviours that may be deviant, including predatory acts that are perpetrated away from the group. If necessary, it also enables them to chart a precise course of action before the deviant is confronted by the group — as with assassination of a dominator too powerful to control otherwise (see Boehm, 1999b).

A final detailed summary is in order. As they began to form moral communities, the pre-adaptive ingredients available to prehistoric humans included the capacity to form very large coalitions within the group, an increasingly potent communication capacity, and, of course, a developed capacity to transmit cultural traditions over generations — something we share with *Pan* (see McGrew, 1992). In the Late Palaeolithic, a full-blown moral community took the following form. It was nomadic and smallish, it was composed of related and unrelated families, and it was politically egalitarian: while males may have dominated their female partners within the family, group life was equalized with respect to relations among the heads of households and with respect to making decisions as a group. People had a high degree of what I have called 'actuarial intelligence' (Boehm, 1999c), which helped them to set up cooperative systems of sharing and to calculate the damage that uncontrolled conflict might do to the group. While active conflicts were 'managed' as much as possible, as with Pan, the group also was able to *anticipate* conflict on a long-range basis and to manipulate the behaviours that were likely to produce it. These were basics of moral life. In addition, these people surely were capable of moral philosophizing — just as more gifted non-literate egalitarian individuals are today (see Radin, 1927). This enabled people to fine-tune their moral systems.

Conclusions

In explaining the evolutionary origins of morality, I have focused on what I deem to be fundamental aspects of moral behaviour: the group's culturally-transmitted definitions of deviance, group sanctions that manipulate or eliminate deviant behaviour, and a deep concern with social harmony as an ideal that is largely realized. The analysis has been decidedly political, and I justify this on three bases. One is that much of deviance involves force: included are murder, rape, non-consensual incest, and bullying behaviour in general. Another is that the group must have strong counter-force at its disposal in order to control such deviance. Third, it is particularly the *political* aspects of morality that lend themselves to the kind of three-species cladistic triangulation I have relied upon, in looking for pre-adaptations.

Morality surely did not emerge on an all-at-once basis. As de Waal (1996) has shown, protomoral behaviours are identifiable in extant non-human primates. The stronger the case for protomorality, the better the support for the idea that the moral

community arrived in stages, and not as a saltation that definitively set aside humans from all other species. With *Pan troglodytes* the best instances of protomoral behaviour are found with captive female chimpanzees. At two different sites, they live in large groups and form permanent large coalitions that routinely target and decisively manipulate *certain* bullying behaviours of males (see de Waal, 1982; 1996). Because this routinization of sanctioning resembles the regularized ways in which humans in moral communities manipulate deviance, I place this behaviour of female chimpanzees ahead of the rare rebellions of adult males in the wild. It is female chimpanzees, at Arnhem Zoo and Yerkes, who have advanced the furthest in collectively exploiting their political potential to *routinely* suppress and manipulate behaviours they do not approve of.

I have emphasized heading off and managing conflicts as an important, overarching aim of humans acting as moral communities. All three species exhibit an active concern for social harmony, intervening in disputes. This concern also manifests itself in reconciliation and consolation behaviours that are dyadic, or triadic. But in both of the Pan species, the response is to manage conflicts as they actually develop — if often early in their development — but not to systematically suppress the behaviours that predictably lead to conflict, as humans do very systematically.

In *Pan,* there also are some altruistic behaviours (see de Waal, 1989, 1996; Goodall, 1986) that might be deemed relevant to morality. Altruism is intimately involved with human moral codes, particularly as groups call on their members to set aside self-interest and co-operate (Campbell, 1972; see also Boehm, 1999c). That is a positive approach to managing conflict. But here the focus has been on conflict and its management through social pressure or force — as a basic *political* dynamic that underlies every moral system in its fundamental workings.

My conclusion is that morality is essentially a political phenomenon as well as a social one, and that this political aspect lends itself rather nicely to evolutionary analysis. There is more to morality than politics, of course, and there is far more to deviance and social control than an innate aversiveness to conflict within the group. But in concentrating on these political basics I have been able to single out features of extant moral behaviour that not only are universal among humans living in bands, but can be linked to the behavioural repertoires of the two *Pan* species. The more widespread a human behaviour is, the greater the probability that it is receiving help from human nature (see Kluckhohn, 1953; Brown, 1991). The general conflict-management features I have worked with are universal not only among mobile hunter-gatherers, but among all humans wherever they live autonomously in local groups. They also are highly probable in the ancestral ape I have modelled by triangulation, which makes innate propensities to conflict resolution quite likely for humans.

We may never create a perfect approximation of how morality evolved, as an adaptively useful form of cultural problem-solving by which entire groups routinely shape their socio-political life on the basis of clearly designated goals. We may never know which behaviours were first defined, moralistically, as sins that the entire group must react to. But if we look to our ancestral precursor, five million years ago, in all probability there existed some limited 'social control' of certain individual group members by the rest of the group. This involved subordinate rebelliousness which led to manipulation of powerful individuals at the top of the hierarchy, but basically the

groups remained ethologically despotic — with a prominent role for alpha individuals.

The hypothesis is that the first behaviour to be decisively outlawed and controlled by a human group may well have been the expression of dominance — dominance of the type that occurs all the time in chimpanzee and bonobo groups in the wild, and which occurs rather predictably in our own post-Neolithic societies whenever scale increases dramatically. I favour this theory for several reasons. For one thing, dominance and submission seem to be firmly established in our nature (Tiger, 1969; Tiger and Fox, 1971; Masters, 1989; Wrangham and Peterson, 1996). For another, we, like other primates, prefer usually to dominate rather than to be dominated (see Boehm, 1999b). Thus, we tend to become rebellious in a subordinate role. It is institutionalized subordinate rebellion that leads to an egalitarian polity, in which individuals agree implicitly to eschew domination so that they may remain autonomous and uncontrolled. And it is the same united rank and file who crack down on deviance in a wide variety of other forms.

Anthropologists interested in moral origins have tended to focus upon incest, as a universal taboo that is negatively sanctioned everywhere (e.g. Westermarck, 1894; Fox, 1983; Durham, 1991). In many instances incest is likely to create conflict, and therefore within the above evolutionary framework it would be a perfectly logical candidate for the first 'sin'. However, I think the better candidate is alpha-type bullying behavior, which requires a powerful coalition of the entire band if it is to be declared deviant and outlawed.

Whatever the evolutionary Original Sin may be, I offer the above analysis as a starting point for the explanation of moral origins. We remain an ethologically despotic species, one in which competitive dispositions to dominance remain strong in spite of scores of millennia under egalitarianism, and our economic, social, sexual, and political rivalries make for a group life that is prone to conflict. Morality is the human invention that addresses such problems, and it is based very heavily upon ancestral dispositions. These were the raw materials, out of which moral communities were forged.

The evolution of moral communities could have been very gradual, with bands slowly improving their capacity to cope with the aggressive deviants in their midst. The ability to fit into such a community could have become increasingly useful to individual fitness, for strong social sanctioning can be extremely punishing reproductively. However, if the first behaviour to be routinely and systematically sanctioned by the group was bullying behaviour, the human moral community might have arrived rather quickly. I engage in this final speculation because a group's taking over power from an alpha-male despot is something of an all-or-nothing enterprise, and something that was behaviourally in reach for our ancestors as they began to acquire language. In effect, I am saying that once humans had acquired a sophisticated system of communication, they were ready to start acting as a community-wide coalition with a political goal of living without domination. The rest was up to culture.

Once a prehistoric hunting band institutionalized a successful and decisive rebellion, and did away with the alpha-male role *permanently*, at least a proto-moral community came into existence — as a cultural entity. It is easy to see how this institution would have spread, for its advantages were perceptually obvious. Members of bands dominated by alpha despots would have visited with egalitarian groups, and they

would have seen entire bands routinely keeping down their strongest individuals — with the rank and file enjoying personal autonomy previously inconceivable. This could have served as a stimulus to rapid cultural diffusion — but here I am moving from careful triangulation to speculation.

This paper has been based on many speculative assumptions, but hopefully the triangulation has been systematic. Hypotheses about an evolutionary Original Sin need not dilute the basic analysis. Five million years ago, an ancestral ape was in a position to engage in protomoral behaviours as it dealt with its dislike of alpha bullying, and as it coped with its distaste for internecine conflict. 100,000 years ago, humans, aided by much larger brains and by an advanced form of communication, created communities that could hold down not only domination behaviours by alpha individuals, but any other behaviour they identified as being directly or potentially deleterious to members of the group — or deleterious to the group's functioning as they saw it. This is a specific hypothesis that can be tested against other formulations about moral origins.

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