

PSYCHOLOGICAL REALISM, MORALITY, AND CHIMPANZEES

by *David Harnden-Warwick*

Abstract. The parsimonious consideration of research into food sharing among chimpanzees suggests that the type of social regulation found among our closest genetic relatives can best be understood as a form of morality. *Morality* is here defined from a naturalistic perspective as a system in which self-aware individuals interact through socially prescribed, psychologically realistic rules of conduct which provide these individuals with an awareness of how one *ought* to behave. The empirical markers of morality within chimpanzee communities and the traditional moral traits to which they correspond are (1) self-awareness/agency; (2) calculated reciprocity/obligation; (3) moralistic aggression/blame; and (4) consolation/empathy.

Keywords: moral selfhood; naturalism; primatology; reciprocity; sociobiology.

Is morality a characteristic of any primate societies besides our own?¹ It is obvious that no nonhuman primates engage in the sort of scholarly discussion that most academics would recognize as ethical debate. But this understanding of what morality is sets an impossibly high standard for most human primates. Within the human context of social living, our everyday moral life is for the most part a collection of rather simple rules and understandings, buttressed by the approbation or censure of our fellows. Morality so understood rarely, if ever, requires fourth- and fifth-order reflection in order to work. It is my contention that when attempting to assess the possible existence of morality within social groups, either intraspecifically or interspecifically, the focus should be placed on a sociofunctional understanding of morality, where order is kept by adherence to commonsense prescriptions and prohibitions. Broadly conceived, morality does not require moral philosophy.

David Harnden-Warwick is a doctoral student in Emory University's Graduate Division of Religion. He can be reached via E-mail at dwarwic@emory.edu or through the Ethics and Society Department of the Graduate Division of Religion, Emory University, Atlanta, GA 30322.

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If we are fully to appreciate the meaning of a sociofunctional understanding of morality, it is necessary to place that function within an evolutionary context. Defined in this context, morality is found among cognitively advanced, socially complex organisms, with its adaptive significance being the social ordering, maintenance, and preservation of the community. As Colin McGinn puts it:

Morality is an inevitable corollary of evolutionarily useful intelligence: in becoming rational animals human beings, *eo ipso*, became creatures endowed with moral sense. It is important to this explanation that practical rationality be *inseparable* from susceptibility to moral requirements; for if it were possible to possess the one faculty without the other, then evolution could afford to dispense with morality while retaining reason. But I think that the Kantian thesis is right that rationality implies moral sense. If they are thus inseparable, then the price of eliminating morality from a species would be elimination of (advanced) rationality from it; and, given the advantages of the latter, the price is too great. (McGinn 1979, 93)

Although it is unclear precisely what McGinn means by “advanced” rationality, it is clear that rudimentary forms of practical rationality do exist in other primate species, examples being coalition formation (de Waal [1982] 1989a), toolmaking (McGrew 1992), and intentional deception (de Waal 1992). But in our context McGinn’s point need not be so elaborate. Situations where practical rationality helps an individual to navigate through social encounters, or where social intelligence aids in solving technical problems, illustrate what is meant by *practical rationality*. All we need to notice is an intimate linkage between the practical social intelligence of a species and the adaptive function of morality within such an advanced context; thus McGinn’s point that rationality and moral sense are inseparable. On the subject of moral sense, Charles Darwin wrote, “The following proposition seems to me in a high degree probable—namely, that any animal whatever, endowed with well-marked social instincts, the parental and filial affections being here included, would inevitably acquire a moral sense or conscience, as soon as its intellectual powers had become as well, or nearly as well developed, as in man” (Darwin [1871] 1981, 71–2). Where would one go to find confirmation of this parsimonious speculation? I believe that in the practice of food sharing among chimpanzees we find a social practice bounded within a moral context of sharing, reciprocity, and equality. This ideal food situation reflects the putting into practice, the realization, of a moral system of regulation among chimpanzees.

But before considering food sharing, we need to look at the general framework in which morality may be said to exist. I turn to the work of philosopher Owen Flanagan.

EMPIRICAL MARKERS OF MORALITY?

Owen Flanagan, in his book *Varieties of Moral Personality*, explores the minimal criteria necessary for the moral possibilities for human selves to be evaluated. Such possibilities must, Flanagan believes, be informed by scientific psychology and cognitive science. Flanagan contends that “almost all traditions of ethical thought are committed to a minimal sort of psychological realism” (Flanagan 1991, 32). Summarized as a “metaethical principle,” this “Principle of Minimal Psychological Realism” (PMPR) is defined as follows: “Make sure when constructing a moral theory or projecting a moral ideal that the character, decision processing, and behavior prescribed are possible, or are perceived to be possible, for creatures like us” (Flanagan 1991, 32). Although it is not intended to be able to establish the detailed content of a correct moral theory, Flanagan claims that the PMPR can set the minimal criteria for evaluating the potentialities of a moral system in light of the material and cognitive realities of human psychology. This enables the philosopher to begin to think about the sorts of moral systems that might accommodate what is known empirically about human nature; theories that clash with such knowledge need to be reconsidered or rejected.

One may ask: how does this principle help us to think about the possibility of extrahuman morality? Let us consider the principle again, this time with a slight alteration in wording: Make sure when constructing a moral theory or projecting a moral ideal that the character, decision processing, and behavior prescribed are possible, or are perceived to be possible, for creatures like *chimpanzees*. Admittedly, this may at first sound peculiar or outrageous. How do we go about assessing theories and ideals relevant to a nonhuman species, even one as closely related to us as chimpanzees? And what warrant do we have to call these *moral*? I believe that Flanagan’s principle allows us to consider, without passing final judgment on their existence, what moral systems appropriate to a chimpanzee’s cognitive and social setting might be feasible. It allows us to think about what empirical characteristics of chimpanzees and their social systems might help to establish the basic guidelines for a minimal morality within those systems. We need not begin by answering the question, Do chimpanzee societies possess morality? Rather, we can first establish the empirically verifiable, psychologically realistic constraints of the species and then ask, (1) Are these constraints sufficient for morality? and (2) If so, what sort of morality might they imply?

This principle of minimal psychological realism does not require that the chimpanzee moral sense be identical to ours, nor does it require that they pursue the same goods as humans do within *their* moral systems. Darwin himself wrote that he did not “wish to maintain that any strictly

social animal, if its intellectual faculties were to become as active and as highly developed as in man, would acquire exactly the same moral sense as ours" (Darwin [1871] 1981, 73). And Flanagan maintains, with regard to human moral communities, that the idea of human moral sense is widely divergent and even problematic when examined cross-culturally (Flanagan 1991, 17). Replication of human moral precepts need not be a defining characteristic of the moral sense in different species. What, then, is required in order to consider the parameters of morality in other species? With regard to chimpanzees, I want to suggest that the following four traits are available to, and realistic for, their cognitive and social setting: (1) agency; (2) obligation; (3) blame; and (4) empathy. I have chosen these four traits for two reasons. First, I believe that they constitute the basis of any potential morality encountered in advanced primates, including humans, and their moral systems. Agency implies recognition of others' mental states (empathy) so as to ascertain the correct social course to take relative to one's obligations for help, support, or sharing of resources. If the proper course is not taken, then blame may be affixed to the agent, and negative sanctions may be incurred. This arrangement is a simple, yet complete, set of required components for morality.² Second, there exist equivalent empirical markers of each trait. These markers are (1) self-awareness, (2) calculated reciprocity, (3) moralistic aggression, and (4) consolation. The correlation is shown more clearly in table 1.

TABLE 1
Components of Morality and Their Empirical Markers

Trait	Empirical Marker
Agency	Self-awareness
Obligation	Calculated Reciprocity
Blame	Moralistic Aggression
Empathy	Consolation

The elements of chimpanzee life shown in the table point to the possibility of describing the form, if not the content, of a hypothetical chimpanzee morality. These four traits, taken in conjunction with Flanagan's PMPR, reflect the building blocks, the limitations and the structure, of any chimpanzee social arrangement that might be called moral. I shall briefly discuss each trait and then move toward the concrete example of food sharing, which illustrates these traits in action in a social setting.

SELF-AWARENESS

If we define morality as a conception of how an individual or society ought to live, then we must consider what kind of organisms are capable of such a life. First and most important, an organism needs to be self-aware in the sense of being able to differentiate between itself and others, to distinguish its own actions from those of others *and be aware of the difference*. Self-awareness makes possible a degree of elemental agency whereby actions and their consequences can be remembered over time and future behavior adjusted accordingly. In one very real sense, an organism cannot escape agency once it has become self-aware. This is why self-awareness is the basic requirement for any hypothetical morality, chimpanzee or human. Furthermore, beyond the Cartesian formulation of *cogito ergo sum*, which establishes the sure basis for knowledge about self and others, self-awareness implies something else vitally important for moral systems, namely, a sense of personhood on the part of the self-aware organism.

In what sense might *personhood* apply to a chimpanzee? I will use the term *personal integrity* to denote the sense of inviolability which is logically inherent in any being that demonstrates awareness of self according to Gordon Gallup's mirror self-recognition test (Gallup 1982, 237–48). In this experiment, Gallup was able to show that chimpanzees with no prior exposure to mirrors would within two to three days demonstrate behaviors suggesting self-recognition, for example, grooming parts of the body not available to direct sight. To confirm this discovery, Gallup anesthetized the chimpanzees and dabbed an odorless, nonirritating spot of red dye above each chimpanzee's eyebrow ridge and on the opposite ear. Upon recovery, the chimpanzees all demonstrated what Gallup called "mark-directed responses," or attempts, while looking in the mirror, to touch, inspect, and even taste fingers which had touched the spots of dye (Gallup 1982, 238). From these results, Gallup concluded that chimpanzees exhibit a sophisticated knowledge of themselves *qua selves*.

Self-awareness is the foundational empirical marker of moral (re)cognition, for any creature with mental representations sufficiently advanced to divide the flow of consciousness between self and other must also be assumed to possess a sense of when the boundaries of that self are transgressed in such a way as to cause curiosity, distress, or pain. Gallup's chimpanzees took note of the spots of red dye because they stood out as being different from the self they had previously encountered in the mirror; their personal bodily integrity had been violated, albeit very minimally. Self-knowledge opens up possibilities whereby conditions or situations may arise that are in fundamental conflict with the goods necessary to the flourishing of the self. Such conflicts may range from something as minimal as a chimpanzee's

wondering how it got red spots on its face to the failure of others to aid you in agonistic encounters when you have aided them (de Waal [1982] 1989a) or maldistribution of food resources in settings of food sharing (de Waal 1989b).

Flanagan proposes the term *intrapersonal moral sense* for the type of self-understanding that individuals demonstrate over the course of their lives. He argues that the “subjective sense that one is a distinctive person—a future-oriented self” is both a universal experience (in his work, for humans), and relevant to the moral reflection of “creatures like us” (Flanagan 1991, 210). It is the possession of an intrapersonal moral sense that makes this future-oriented self possible. Flanagan considers this sense to be a universal experience of human beings (Flanagan 1991, 210). However, based on Gallup’s experiments, it would seem logical to apply it to chimpanzees as well. The idea that self-aware beings do in fact perceive themselves as a unitary entity across time seems to be a universal psychological experience of any creature endowed with the necessary cognitive sophistication. The relevance of the conception of a future-oriented self for our reflection resides in what Flanagan claims this sense of self offers to the organism. Such a conception “might ground the concern for self-completion, for wholeness, for personal fulfillment and equilibrium” (Flanagan 1991, 210) on the part of the organism. Again, I am not claiming that chimpanzees need to possess the full-blown human counterparts to these concerns; *wholeness*, for example, might result from anything from a successful foraging expedition to a college education. The point is that these concerns, for any self-aware organism, differ in degree, not kind.

Flanagan’s understanding of an intrapersonal sense of ethical concern, emerging out of the subjective sense that one is a distinctive person over time, is the foundational moral category on which a minimal morality may articulate duties and obligations. *Persons* are those creatures for whom first-order self-regard and self-recognition are primary constituents of their consciousness, which define them as beings. The notion of personal integrity can then be deduced from implications contained in (1) Gallup’s empirical markers of mind and their derivation from mental states of self-awareness; and (2) a revised understanding of evolutionary parsimony which assumes similar physical, psychological, and social mechanisms to be at work in species which are closely related to each other, in this case, chimpanzees and human beings (de Waal 1991b, 297–320). In much the same way that it would be unparsimonious to assume radically divergent mental states of representation between the two species (here, self-awareness and violation of the self’s integrity), so too would it be unparsimonious to assume radically different notions of personal perceptions of the self over time.

CALCULATED RECIPROCITY AND MORALISTIC AGGRESSION

The second and third proposed traits, calculated reciprocity and moralistic aggression, are commonly understood as components of reciprocal altruism. Here, however, they are isolated from that context in order to link them specifically to the more traditional moral terms *obligation* and *blame*. Both traits rely on cognitive processing and advanced memory, which are necessary if an individual is to express gratitude in response to positive reciprocal action or hostility in response to a negative return. (Calculated reciprocity should be distinguished from symmetry-based reciprocity, in which kinship and preferential associations, rather than true mental record keeping of favor exchanges, can explain any demonstration of reciprocal behavior. Although calculated reciprocity may exist side by side with symmetry-based reciprocity, the former would seem to require higher-order mental states.) Thus, calculated reciprocity sets the state for the possibility of interpersonal exchanges and favors which can be mentally charted and recorded over time, thereby encouraging a sense of obligation to develop in either or both actors. Equitable, as opposed to rank-related or hierarchical, distribution of goods between individuals would not be possible without this higher-order form of reciprocal action.

The sense of obligation implied by calculated reciprocity could not be considered reciprocity at all if the possibility did not exist that an actor would fail to meet an obligation. Selfishness is in essence blameworthy and open to sanctions. Robert L. Trivers (1971) first postulated the notion of moralistic aggression as an evolutionary response to non-reciprocating individuals. He claimed that moralistic aggression in humans was selected for three reasons: "(a) to counteract the tendency of the altruist, in the absence of any reciprocity, to continue to perform altruistic acts for his own emotional rewards; (b) to educate the unreciprocating individual by frightening him with immediate harm or with the future harm of no more aid; and (c) in extreme cases, perhaps, to select directly against the unreciprocating individual by injuring, killing, or exiling him" (Trivers 1971, 49). In other words, there are certain negative actions which are interpreted as being committed intentionally and with full awareness on the part of the agent committing them. For example, adult chimpanzees tolerate the indiscretions of infants as they would not tolerate similar actions in older chimpanzees (de Waal [1982] 1989a). Aggression would seem to be suspended against individuals who, for reasons of age, do not know the rules. So the term *blame* is appropriate here in the sense of assigning responsibility for something deserving censure, or not acting in such a way as to assume responsibility when there is no such expectation. These twin possibilities of obligation and blame for failure to meet obligations constitute the major part of the everyday interactions of moral systems.

EMPATHY

But if obligation and blame form the superstructure of morality within a species, it is empathy that forms the base. In empathy, empirically expressed in actions of consolation, the agent attempts to discern and appreciate the mental states of other agents and responds appropriately. Consolation has been observed in chimpanzees in both wild and captive settings (de Waal and van Roosmalen 1979; Goodall 1986). Consolation is a very advanced form of empathic response; it is the presence of this involved form of empathy in agents that opens them up to continued actions of reciprocity (meeting obligations) or to negative sanctions (blame), as in the case of moralistic aggression. The moral sense of agents resides in their ability to choose, through their empathic ability, the appropriate course of reciprocal action that will continue the cycle of calculated reciprocity between two individuals and avoid the blame of their fellows. It also should be noted that advanced empathic responses also seem to lead to moralistic aggression against third parties with whom the agent is not in direct conflict but who have harmed a conspecific. Frans B. M. de Waal recounts how in the wake of a fatal encounter between three chimpanzee males at Arnhem that left the male Luit dead, the high-ranking female Puist, who had been observed to be a close ally of Luit, afterwards ferociously and singly attacked Nikkie, one of the two individuals involved in the fatal attack (de Waal 1989c, 68). Even if Puist had no conception of how gravely Luit had been wounded, it would have been a very risky course of action for her to take for simply pragmatic or political reasons. Her attack, in my estimation, demonstrates a conception of revenge that cannot be fully explained by political or pragmatic concerns.³

This example, however, leads us to a major objection that could be lodged against empathy as a marker of morality, rather than its precursor. The recorded instances of consolation (and in Puist's case, revenge) center upon individual exchange rather than communal punishment and reward (de Waal 1991a, 347). Evidence for the universalization of empathic responses in chimpanzees seems uncertain. There seem to be obstacles in applying fellow feeling beyond a narrowly specified social range. Are we prepared to grant the status of morality to a social system where empathy flourished without universal recognition? In a recent article by Natalie Angier in the *New York Times*, Martin L. Hoffman sums up this stance: "[to] the degree that one is very empathic toward one's own group, that may mean one is very hostile toward another group. . . . So you get this paradox of empathy as a source of racism." The article continues: "Empathy encourages group identification, and groups often persist by pitting themselves against despised others" (Angier 1995). Empathy, in this view, is not a sufficient basis for moral-

ity, since it remains unpredictable and chaotic in its focus, because of its local and particularistic nature. Since empathy cannot guarantee universal, categorical moral recognition across groups, it is rejected by those who esteem transcultural relevancy for ethical norms.

But we must not forget how very recent a development the notion of universality in ethics is. Although universality may be a desirable feature in contemporary theories of morality and justice,⁴ I do not believe it is necessary for the mere identification of a moral system, if that system is construed in a broad ethnographic sense. If we were to include universal recognition as a marker of true moral systems, then we would have to claim that Aristotle's moral philosophy was neither, for he excluded aliens, slaves, and women. On the level of the practical morality of our everyday life, universality as a realistic characteristic of such systems is still awaiting confirmation as something other than an antinaturalistic delusion of moral philosophers. Defining the morality of everyday life according to lofty academic philosophy is to risk incoherence, exclusion, and irrelevance. But taking morality seriously as an evolutionary by-product of advanced social living arrangements involves appreciating the revelations of social regularity among other primates.

Having looked at these four behaviors, let us now turn to a social situation within chimpanzee life which would seem to require most, if not all, of these traits in order to function: food sharing.

FOOD SHARING

De Waal (1989b, 433–59) did a systematic study of food sharing among nineteen chimpanzees in an outdoor enclosure at the field station of the Yerkes Primate Center in Atlanta, Georgia. Over a three-month period of data collection, large, freshly cut branches and leaves were tied together with honeysuckle vines (to prevent scattering) and given to the waiting community by one of two methods: either the caretaker carried the bundles of food from the kitchen to the enclosure and threw the food down from an observation platform, or the caretaker concealed the food in order to throw bundles to low-ranking adults who had not had a chance to procure food from high-ranking dominants. A total of 4,653 food interactions were recorded by de Waal, of which 50.4 percent resulted in food being passed from a possessor to a nonpossessor (de Waal 1989b, 1991a). De Waal observes that “[a]s this figure indicates, possessors were selective as to whom they allowed to come close to their food, turning their back to or pulling the food away from some individuals but not from others. The large majority of food transfers was of an unforced, nonaggressive nature. Most commonly, an individual would approach a food possessor and carefully remove one or two branches from his or her bundle or cofeed with the possessor on the same branches” (de Waal 1991a, 342). Among

the most interesting findings of the experiment was what de Waal calls *suspended priority rights*. This is a phenomenon whereby a subordinate chimpanzee takes food, with little or no apparent fear of retaliation, from the hands of a dominant (de Waal 1989b, 453). In fact, it was the clearly dominant alpha male who was “most often subjected to assertive methods of food collection” (de Waal 1989b, 453). Although de Waal cautions that high rank did count for something in the food transfers (high-ranking members committed and were involved in more food transfers), it still is significant that the rank order was suspended even partially. “It seemed, therefore, that the hierarchy was temporarily suspended during sharing sessions” (de Waal 1991a, 343). What was more reliable than rank in predicting food transfers was the level of reciprocity demonstrated by the individuals involved in the process. The “generous individuals met with the least resistance when requesting food from others, whereas requests by stingy individuals were more often rejected” (de Waal 1991a, 344). Also, as predicted by de Waal, the previous grooming of chimpanzee B by A correlated positively with B’s future food sharing with A. Interestingly, the data also showed a tendency among chimpanzees not to share as frequently with another whom they had recently groomed. De Waal interprets this as a kind of “turn-taking rule” which prevents “a one-sided accumulation of benefits” (de Waal 1991a, 343).

In this experiment, then, we find the presence of calculated forms of reciprocity dependent upon past tallies of one’s trading relationship with another. But perhaps even more important, de Waal believes that significant evidence of moralistic aggression is confirmed in this experiment:

In the chimpanzee, the largest frequency increase in response to food concerns, [was] not aggressive behavior, but calming body contact and greeting rituals. Aggressive tendencies are mitigated at a scale not encountered in most other species. This is not to deny a strong “undercurrent of threat” during feeding sessions . . . , but this undercurrent has been turned into a functional part of the system of reciprocity. *If it facilitates food relinquishment it does so mainly indirectly, through the rejection of food requests by uncooperative individuals, rather than through direct punitive action against possessors.* (de Waal 1989b, 455; italics mine)

This is strong evidence for the existence of moralistic aggression, that is, blame leveled against individuals who do not share food resources. It makes sense to understand the failure to share as a failed obligation of the chimpanzees to adhere to the nearly egalitarian rule system of the feeding context. The chimpanzees are effectively blaming stingy individuals for not adhering to the prescribed rules; they are responsible for some action demanding censure, in this case, failure to share. It is important to recall that obligation and blame are not possible outside of the context of empathy, understood as comprehension of another’s mental states; it seems that the chimpanzees are faulting the intentions of stingy individuals in a way

that demands an awareness of both their own and others' mental state. "Without assuming a well-developed capacity to keep mental records of social events, it will be hard to account for the balanced, reciprocal sharing of food, the turn-taking, and the negative sanctions" (de Waal 1989b, 454). Mind, it would seem, implies morality.

CONCLUSIONS

What do the fields of cognitive science and scientific psychology tell us about chimpanzees' potential for morality? First of all, the four traits that we have discussed (self-awareness, calculated reciprocity, moralistic aggression, and empathy) are normal phenomena empirically confirmed in the species. Second, these four traits, taken both separately and in conjunction, provide a minimal framework with which *prescriptive rule making* can take place within the chimpanzee community. Third, food sharing exhibits qualities of socially demarcated moral space in which an ethical ideal of equality seems to exist outside of the normal, rank-related hierarchy. Chimpanzee societies seem to function according to a simple system of obligation and blame that recognizes when individuals fail to meet the ideal of equality in the food distribution context; it is *right* that individuals should share, and it is *wrong* that they should not share. This suggests that the common ancestor to chimpanzees and humans was able, albeit within limited circumstances, to appraise actions of others in a rudimentary moral fashion.

What, then, is chimpanzee morality? Chimpanzees most likely have a limited sense of agency related to their level of self-recognition that allows them to assess similar mental states in others (Povinelli and Godfrey 1993). Likewise, it seems likely that chimpanzees possess not only a theory of mind but, as a concomitant phenomenon of mind itself, a rudimentary moral awareness. Within a time and space in which community ideals exert power over the egocentric agency of individuals through the use of prescriptive rules, a moral context of exchange is established: moral, since it deals with behavior inextricably bound up with acquisition of the resources and goods most important to the continued well-being of individuals within the community, that is, food, sex (de Waal 1989c, 198–222), security, and so forth. Community sanctions operate so as to reward those who meet obligations of just exchange and punish transgressors by exclusion from the social flow of resources. Finally, given the roles of agency, obligation, blame, and empathy in human moral systems and the presence in chimpanzees of their corresponding empirical markers, it would seem unparsimonious, even at the highly evolved level of social interaction, to assign a term other than *morality* to certain types of communal regulation that take place in chimpanzee societies.

NOTES

1. Daniel J. Povinelli and Laurie R. Godfrey (1993) have written an interesting article, "The Chimpanzee's Mind: How Noble in Reason? How Absent in Ethics?" in which they conclude that a pedagogical lack in chimpanzees prevents them from transforming individually held values into a community-wide ethical system. This piece is a sort of silent conversation partner to this article, but I have chosen not to deal with it systematically here because it would take us in a different direction. I hope it will become clear why I do not consider pedagogical sophistication necessary for morality to exist in a species.

2. The philosopher Bernard Williams maintains that once one is placed under the demand of obligation within a system of prescribed rules, "there is no escaping it, and the fact that a given agent would prefer not to be in this system or bound by its rules will not excuse him; nor will blaming him be based on a misunderstanding. *Blame is the characteristic reaction of the morality system*" (Williams 1985, chap. 10; italics mine).

3. The relationship between Puist and Luit was, as one might expect, multidimensional. An earlier incident involving Puist and Luit is noted by de Waal ([1982] 1989a) in which Puist attacked Luit for not coming to her aid in a fight, thereby suggesting her assessment of reciprocal action. This event is also recounted by Toshisada Nishida (1994, 391) within the context of a discussion on chimpanzee deception and morality.

4. See especially Rawls 1971 and Habermas 1984.

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