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## PRINCE KROPOTKIN'S GHOST

Melanie Killen and Marina Cords

With all the violence in the world, it is natural to wonder, as Pat Shipman did recently in these pages (*Macroscopic*, November–December 2001), whether aggression is deeply rooted in human nature. Perhaps it is. But we would argue that human aggressive inclinations are balanced by equally strong tendencies to cooperate with one another—an argument Prince Piotr Kropotkin made a century ago in *Mutual Aid*, a survey of altruistic societies. This view flies in the face of much current thinking on the subject, which presupposes there are deep biological roots to violence. Molecular biologists have, for example, sought to identify genes that control aggression in mice on the assumption that similar mechanisms operate in human beings. Indeed, scientists have regularly attempted to explain people's more savage tendencies by making comparisons with animals, particularly since Konrad Lorenz (an Austrian zoologist and Nobel laureate) theorized about the evolutionary roots of such behavior in his 1966 classic *On Aggression*.

Lorenz's view was that aggression is an inevitable character trait for most creatures because it is functional: A combative disposition helps males acquire resources, and it aids females in protecting their young. Guided by the assumption that aggression is a basic animal instinct, Lorenz and those who followed in his footsteps readily applied this principle to explain the behavior of men and women. The many violent acts making the daily headlines would only seem to confirm their suppositions.

Fortunately, and counter to prevailing ideas, there is now a large body of work on the psychological development of children that suggests

otherwise. This research demonstrates that children do not automatically resort to aggression when conflicts arise between them. Instead, they often use an array of strategies to prevent, mitigate and resolve discord and to minimize its effects on their social relations.

The developmental psychologists who have brought such behavior to light are not trying to convince anyone that relations between children are completely peaceful. But they are trying to get across the point that conflict is not just a disruptive aspect of social life (as aggression has typically been viewed). Rather, conflict has the potential to aid children, because it can provide them with the opportunity to take the perspective of others, to negotiate and to construct for themselves concepts of justice and equality.

**Natural Negotiators**

As an example of children's social skills, consider the results of an investigation that one of us (Killen) conducted with Elliot Turiel of the University of California, Berkeley. For that study, we brought three 4-year-olds into a room to play, leaving them alone for 15 minutes while a video camera recorded their exchanges. Some of their conversation was illuminating:

Ruth: [Holding up two toy people] Hey, I want the green person. How about if we trade? Here, you can have this one. [Ruth gives a blue person to Michael.] And I can have the green one. Okay? [Ruth reaches for the green person that Michael is holding.]

Michael: [Holding on to the green person] No! We already did trade. I want this one. I want it now and you had it already.

Lily: Hey, you can both have my spoons, if you want. [Lily shows her spoons to Michael and Ruth.]

Ruth: No, I want the green person.

Michael: [Hovering over his toys] I'm not trading any of mine.

Lily: [Singing] I'm not trading any of mine.

Ruth: [Singing] I'm not trading any of mine.

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Figure 1. Scenes of young children sharing toys with one another (*top*) and chimpanzees distributing food among themselves (*bottom*) support the contention that some basic instincts favor sociality and cooperation rather than violence and aggression. (Photograph of children courtesy of Melanie Killen; photograph of chimpanzees courtesy of Frans de Waal, Yerkes Primate Center.)

Lily: Well, that's not fair because I don't have any people.

Michael: [To Ruth] Give her one of them.

Ruth: But you have three and she has none and I have one. So that's not fair.

Lily: Yeah, because I have none.

Ruth: [To Michael] You know what? If you give me the green and then I'll give her the red one and then we'll all have one.

Michael: Well, if you don't give me the red one then I won't invite you to my birthday party.

Lily: But I don't have any people.

Ruth: [To Lily] Okay, I'll give you this one, and I'll take this one from Michael and then we'll all have one, okay?

Michael: [Gives orange person to Ruth.] Okay, but can we trade again tomorrow?

Ruth: [Singing] Birthday party! [Ruth takes the orange person from Michael and gives the red person to Lily.]

Lily: [Singing] Birthday party!

Michael: [Singing] Birthday party!

This snippet reveals some of the complexities of young children's social and moral capacities, abilities that adults often underestimate. Lily, Ruth and Michael maintained the flow of interaction with collaborative suggestions ("Let's trade"), moral justifications ("That's not fair because..."), third-party intervention ("Hey, you can both have my spoons"), compromises (children got a different toy than the one originally requested), conventionalized rituals (singing), ownership claims ("You had it already"), threats ("I won't invite you to my birthday party") and bargaining ("I'll give you this one and I'll take this one..."). Although the children sometimes promoted their own interests, they also worked very hard to make things work out for the group.

Are Ruth, Lily and Michael anomalies? After examining more than 2,000 conversations between children at play with no adults present, we found that the most common phrases uttered were not commands or insistences. More often we heard expressions of collaboration, which we defined as an exchange in which one child offers a suggestion or negotiates with others.

Interestingly, when we observed the very same children playing with a teacher present, the amount of give and take decreased dramatically. Instead of negotiating their differences, the children appealed to the adult to intervene, threatened that the adult would intervene or just let the issue drop. Clearly young children have ways to avoid or resolve conflicts, but in most preschools they are rarely granted the opportunity to exercise these skills, perhaps because their teachers suppose that their charges, left alone, would tend to act on their aggressive animal instincts.

We believe that children are inherently more social than that. Of course, it's very difficult to disentangle children's basic natures from what adults have taught them. As many parents report, they have spent hours and hours helping their toddlers learn to share and take turns. Presumably, some of this training has influenced their developing social abilities. But is there any evidence that positive forms of social interaction are not strictly a product of adult instruction? One can't, after all, examine children who have been denied such tutoring. As it turns out, primatologists have provided a missing piece of the puzzle: Observations from the natural world suggest that there is, in fact, a biological basis for our social predispositions.

Just as children are frequently in conflict over the way they will play together, so too are the members of a typical nonhuman primate group. These animals have regular disagreements about

what they will do with whom and when, or where their group will go next. And these primates, just like children, have various techniques for preventing or defusing the tensions that arise in their lives together.

### Primate Peacemaking

What specifically have the primatologists shown? Beginning with essentially chance observations in the 1970s of chimpanzee opponents exchanging hugs, kisses and other gestures of apparently reconciliatory friendliness after a squabble, primatologists led by Frans de Waal of Emory University expanded the study of conflict management by conducting systematic observations of the events that follow outbursts of aggression.

These workers found that former opponents regularly seek each other out for some kind of friendly encounter within minutes after a battle. Careful observation and experiment has revealed how these reunions restore amicable relations and reduce the anxiety that rivals typically feel in the aftermath of a fight. These studies have also shown that primates have many ways to prevent aggressive conflict or to minimize its effects. Like people, these animals may adopt conventions of various sorts to avert disputes even before they erupt. In many primate species, one powerful individual in a group takes precedence, by convention, over others at a feeding site: A subordinate will simply get up and leave—without protest—when the dominant member approaches. In other situations, the applicable rule is "finders keepers." If a subordinate can carry a desirable object, he can keep it unchallenged by more powerful members of his group.

Thus this research has highlighted the varied mechanisms primates have for maintaining relative peace within their ranks. This work has also stimulated the examination of similar peacemaking skills in our own species. Developmental psychologists, becoming aware of reports about our closest relatives, monkeys and apes, began to pay more attention to reconciliatory reunions after conflict and, not surprisingly, found the same phenomenon in schoolchildren. For example, in a cross-cultural comparison of Russian, U.S., Italian, Swedish and Kalmyk children, Marina Butovskaya and her coworkers at the Russian State University for Humanities in Moscow recently showed that youngsters are capable of a wide range of postconflict peacemaking. They may, for example, offer to share or hug, chant reconciliatory rhymes or involve third parties to mediate their differences.

These results have come as no surprise to primatologists, who already have abandoned their simplistic preconceptions about the sorts of aggressive "instincts" Lorenz had made famous. Perhaps it's time for others to open their minds as well and to rethink just how applicable Lorenz's view is to people.