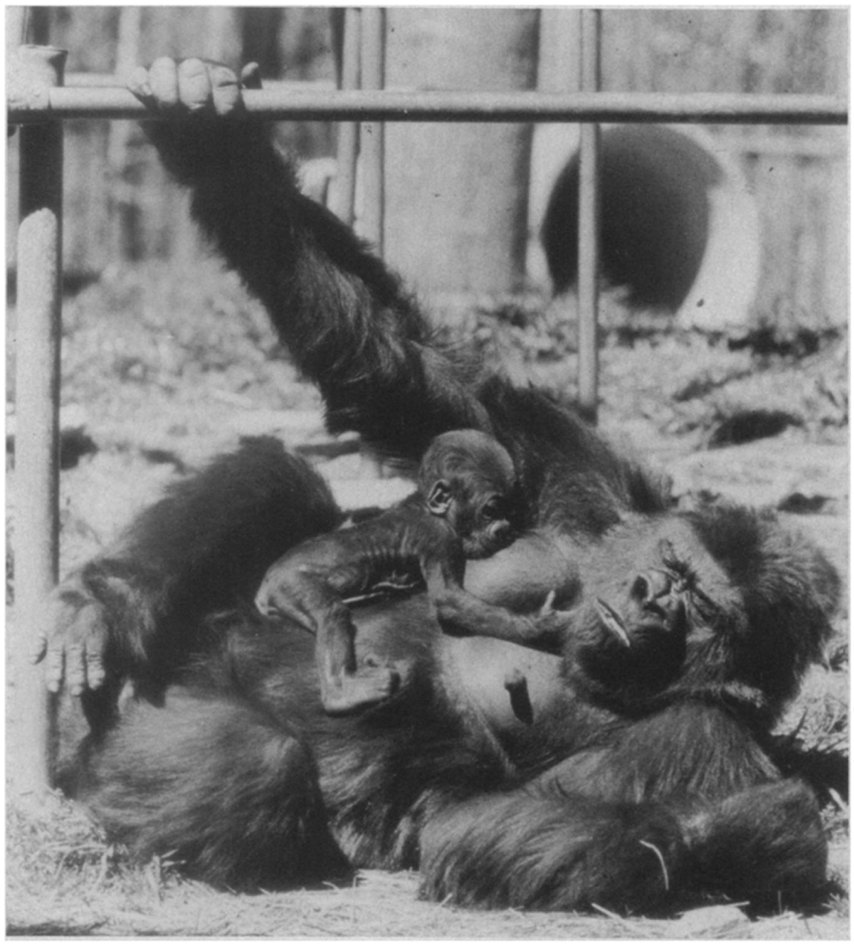
The Evolution of Child Abuse

Child abuse is not an exclusively human behavior. But do the beating and neglect of infant monkeys and apes tell us anything about the roots of human child abuse? Or is the phenomenon simply an artifact of captivity?



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By WRAY HERBERT

There are certain patterns to human child abuse. One classical type of fatal child beating occurs in families of single mothers. The mother invites a new boyfriend into the family, asks him to babysit her infant while she runs errands, and when she returns the baby is dead. Experts call it the Cinderella syndrome, after the world's best-known mistreated stepchild.

There is a striking parallel to such behavior among non-human primates, according to psychologist Joseph Erwin, director of the Mattole Institute in California. "The highest risk situation for infanticide among monkeys," Erwin says, "is when a new male enters the group. It's been documented now in a number of species."

Does this constitute pathology, or part of a pattern of adaptive behavior deeply ingrained in human and non-human species alike? Some dismiss the parallel as misleading. Indeed, some primatologists are unconvinced that child abuse is common among monkeys and apes, and when injurious behavior does occur, they argue, it is something qualitatively different from the heinous forms of child abuse now epidemic in human society. Others, including Erwin, find the analogy compelling; in emphasizing this and other parallels in human and non-human child abuse, they aim to create an animal model for understanding — and ultimately curbing — this peculiar kind of aggression.

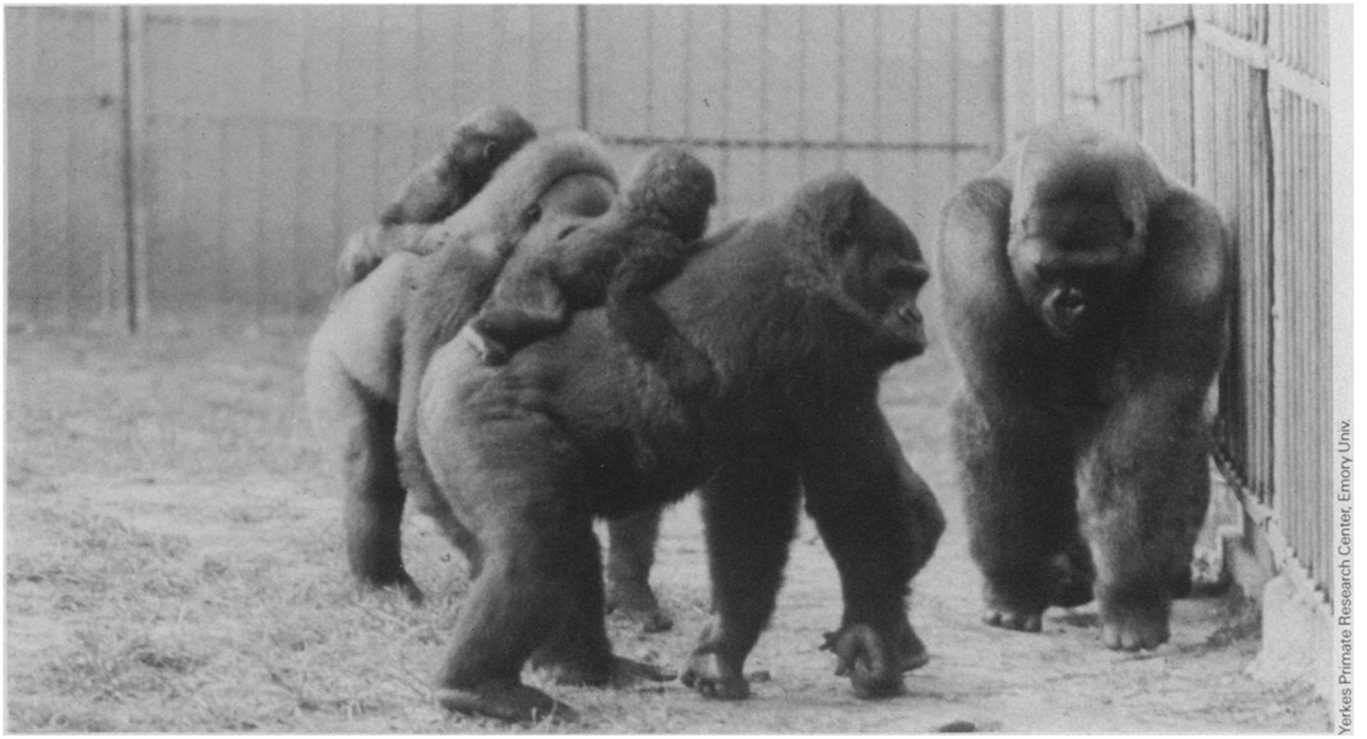
The dispute has in the past few years prompted primatologists to look more closely for evidence of child abuse among primates, both in captivity and in the wild. What they have found is not always consistent. Martin Reite, a psychiatrist at the University of Colorado School of Medicine, and Nancy Caine, a Bucknell University psychologist, recently completed an analysis of 12 years of data on infant abuse in a colony of pigtailed macaques. The researchers found what Reite calls "remarkable similarities" to human child abuse patterns. Looking for evidence of physical injury resulting from maltreatment or neglect, they found 87 cases of abuse involving 69 infants, about one-third of the infants in the colony. Interestingly, male infants were injured more often than were females — in a ratio very similar to that found in the literature on human child abuse. Eighteen percent of the abused infants were repeatedly abused — a figure that also corresponds to human data, Reite and Caine say — and over 60 percent were injured so badly that they died.

A major drawback of Reite and Caine's retrospective analysis is that they were unable in most cases to determine the abusive adult, but it is not likely that mothers were involved exclusively, they say. Rather they liken the large harems that pigtailed monkeys form to extended human families, where siblings, uncles and aunts are all involved in child care and potentially in child abuse. The causative patterns they discovered match very closely what is known about the causes of human child abuse.

Reite and Caine found, for example, that mothers who were separated from their infants soon after birth often became abusive parents; they also abused even later offspring from whom they were not separated. These data, they point out, support the theory that the failure of early mother-infant bonding leads to social problems, including child abuse. They also found — again consistent with what is known of human child abuse — that children of abusive parents tend themselves to become abusive parents.

Reite and Caine also found that extremes of social crowding were associated with increases in abuse. "Our data show that when crowding is obvious, abuse goes up," Reite says. "There is similar evidence in the human literature. On the other hand, if you go to the other extreme — isolation and lack of social support — you also see this abusive behavior go up. Primates are social animals and have evolved in the context of social group structure. They are not isolated animals. Clearly there is an optimal level of social crowding, and when you exceed that you're asking for trouble."

Finally, Reite and Caine report, as in the human population psychopathology seems to account for a very small percentage of child abuse among monkeys. There were a few cases, according to Caine, where "psychotic" monkeys were involved in diabolical patterns of abuse — systematically biting off the fingers and toes of babies, for example — but in most



The once common zoo practice of isolating female gorillas with their infants following birth was discovered to be the cause of maternal neglect. By allowing new mothers and their infants to stay near the dominant male (above) as they would in the wild, many zoos have successfully promoted competent child rearing (left).

cases there was no apparent behavioral deviance.

"The broad spectrum of abuse occurs in people who are otherwise fairly normal," Reite says. "There seems to be a threshold for abuse, and when the threshold is exceeded by a variety of pressures — crowding, disturbances of attachment, social alienation — then abusive behavior is triggered, or at least no longer inhibited. Our point is that this may not be a uniquely human phenomenon but one seen in high primates generally." It makes sense, Reite and Caine conclude, to consider the possibility that the mechanisms underlying human child abuse may be rooted in the evolutionary history of primates.

Others have found evidence supporting at least some of the conclusions of Reite and Caine. Psychologist Ronald D. Nadler of the Yerkes Regional Primate Center in Atlanta has found, for example, that when gorilla mothers are isolated from their normal social group following the birth of their infant, they tend to reject or physically abuse their newborn. It used to be common zoo practice to separate pregnant gorillas from the group prior to birth and for a short time afterward so that it would be easier to retrieve the infant if a problem developed, Nadler explains. Through a survey of the nation's zoos, Nadler found that zoos that followed this practice had high incidence of child abuse, while zoos that allowed new mothers to remain in their group had no such problem. It became apparent that the common zoo practice was a deviation from the gorilla's natural behavior pattern — a pattern Nadler has since observed in the wild. "In normal conditions in the wild, gorillas live in social groups, and when they give birth females change in their behavior from being relatively distant from the silver-back male — the group leader — to being very close to him. Females with infants stay closer to the silver-back male than females without infants."

Nadler emphasizes that different species vary significantly in maternal behavior, so that what is true for gorillas may not hold true for other apes or monkeys. In fact, he says, chimpanzee mothers tend to retreat with their infants from their social group, and orangutan mothers always raise their children in isolation. Humans, he suggests, seem to behave more like gorillas in this regard — a fact that, if true, could have important implications for understanding human child abuse. "One of the characteristics of infant abuse among humans," he points out, "is that the parent or abuser is a relatively isolated social individual — a loner."

Nadler says that most zoos, by changing the way they dealt with pregnant gorillas, have eliminated abuse, and Reite notes that he, too, has virtually eliminated child abuse in his colony by eliminating the apparent causes — crowding and social isolation, for example. This would indicate that child abuse is an artifact of captivity, and, indeed, Nadler says he has seen no evidence of child abuse in the wild. Supporting this view is psychologist Gray G. Eaton of the Oregon Regional Primate Research Center, who reports that he has seen no evidence of child abuse in his large colony of Japanese macaques; the macaques are kept in a four-acre enclosure closely resembling their natural habitat.

Others disagree. According to University of Wisconsin psychologist Stephen Suomi, for example, "Abuse is widely reported in the field, and it's not terribly rare. It's not frequent but it's not zero." It has been observed in macaques — including rhesus monkeys — in langurs and in baboons, he says. Caine and Erwin concur, noting that there is a good concordance between behavior in the wild and behavior in captivity. And, Erwin adds, it should not be particularly surprising that abusive behavior occurs in the wild. "People have the impression that the wild is a Nirvana and nothing bad ever happens there. There is actually a lot of trauma in the wild."

There are numerous explanations for child abuse among monkeys. According to Suomi, both early experience and present social conditions have been implicated as causes of child abuse. It is well documented in every species that has been studied, he says, that so-called "motherless mothers" (first studied at Wisconsin by Suomi's mentor, Harry Harlow) are at much higher risk for rejecting, neglecting or abusing their own offspring than are those who grew up with their mothers.

Not every infant who grows up in adverse circumstances becomes a poor mother, however, and perfect rearing conditions do not prevent child abuse. Present social conditions play an important part in determining maternal behavior, Suomi says. He agrees with the findings of Nadler that mothers who give birth and raise their infants in an appropriate social group are less apt to be child abusers. But

Psychologist Harry Harlow's "motherless mothers," raised in isolation from any adult caretaker, ultimately became neglectful mothers themselves.

the group, he adds, must be stable. "If new members are coming in and out of the group when the mother is trying to give birth, it upsets the stability of the group, raises tension, and increases the risk of any kind of aberrant or bizarre behavior. High incidence of infant abuse has been recorded in colonies where, for experimental purposes, the social groupings are constantly in flux, he says, and similar instability is not uncommon in the wild. "For example, if you have a large rhesus macaque or Japanese macaque troop that is in the process of splitting, so there's a lot of squabbling inside the group, the probability for mothers to have problems with their kids is much greater than it would have been a couple of years before," Suomi explains.

Finally, Suomi says, research at Wisconsin has recently indicated that some females may be predisposed because of genetic and/or prenatal factors to be more stress-prone than others (SN: 1/16/82, p. 36). It appears that these "uptight" monkeys are much more likely to become incompetent mothers, especially if they have had a history of social loss and depression. This biological propensity, Suomi argues, could also explain some of the child abuse that has been reported in the wild.

Suomi emphasizes that whatever the apparent cause, child abuse almost always involves the first-born infant; maternal behavior improves, often dramatically, with subsequent babies. He says that if incompetent mothers stay with their infants for as short a time as a week — even if it is an unpleasant experience — they are likely to emerge as good mothers after a second birth. "And once a mother becomes a good mother," he adds, "she almost never becomes a poor mother again, no matter how bad she was in the past. We haven't found a single case where other factors such as isolation will overrule good mothering." Field workers confirm this finding. Terry Maple, a psychologist at the Georgia Institute of Technology who has observed mountain gorillas in Rwanda, says that inexperience seems to contribute more than anything else to inadequate mothering. And University of Chicago biologist Jeanne Altmann, an expert on baboon mothers, says that neglect and abuse take place almost exclusively in the first few days after an infant is born. They learn rapidly, she says, and after a week it is impossible to distinguish a first-time mother from an experienced mother.

One thing that most primatologists agree on is that child abuse is not exclusively the mother's fault — that there are infants who seem to invite mistreatment. "Some infants are easier to take care of than others," Suomi says. "Current thinking is that it may be the combination of an incompetent mother and a difficult-to-care-for kid that leads to abuse." Just as with humans, Suomi and others say, abuse of premature and deformed infants is much greater, suggesting that it might be a way to avoid worrying about infants who aren't going to survive anyway. "It's an investment strategy," Suomi explains. "The mother does not want to make a huge investment in an infant that isn't going to make it."

In looking for causes of child abuse it is important, Altmann says, to distinguish between an abusive parent and an abusive outsider, because the phenomena are quite different. Infanticide, the most severe pattern of abuse, is almost always committed by outsiders, she says. The best known research on infanticide has been done by anthropologist Sarah Hrdy of Rice University, who a few years ago reported a regular pattern of infanticide among langur monkeys; when new males entered a breeding group, they would destroy the offspring of other males. Hrdy's theory is that such behavior is a genetically based reproductive strategy — that the usurping male is eliminating genes that are not his and bringing the female into heat sooner to begin reproducing his own lineage. Interestingly, Altmann says that infanticide is much rarer among baboons — perhaps, she suggests, because baboons live in groups with many males and females where paternity is less certain.

Sociobiologists draw on such data to explain child abuse as an evolved behavior. Psychologists Martin Daly and Margo Wilson of McMaster University in Ontario have analyzed archival data on human child abuse and found that children living with a stepparent are abused more often than children in other living situations. They also found that infants with poor prospects for physical fitness were more often abused, and while they do not argue that abusive behavior is adaptive in the species, they do suggest that parental solicitude may be a product of evolution. "Our argument," Daly says, "has been that parental feeling as a product of evolution is a motivational system directed toward particular kids who (a) you know are your own and (b) are good prospects."

Hrdy, however, rejects the comparison of langur infanticide with the Cinderella syndrome in humans. "In the way the word [child abuse] is used by public health and medical people, it's a uniquely human problem. You have some analogues in captive monkeys when they're kept under unusually harsh conditions, but it's a learned phenomenon. Learning is not what's going on with non-human primates. It has more to do with an adaptive strategy. I'm very leery of any comparison." Daly's data, she says, indicate that stepchildren are only marginally higher risks for child abuse than are others. "The evidence is terrible," she says. "Think of all the stepfathers who are good nurturers."

Duke University primatologist Peter Klopfer agrees. He remains skeptical about Hrdy's report of infanticide, and although he concedes that there may be some selective advantage to destroying impaired infants, he argues that such behavior does not qualify as child abuse. "I think the concept of child abuse is simply not applicable to primates. Child abuse bespeaks a cognitive response of mother to child, and I see no basis for those assumptions when you look at animals. The concept of abuse, with all the cultural overtones, is peculiarly human." □