

The Hardy Sarah Blaffer Hrdy

The scientist who destroyed our quaint concept of what a mother ought to be comes to terms with her own life

By Claudia Glenn Dowling

Photography by Jenny Gage & Tom Betterton

The bitch is a Rhodesian Ridgeback named Nyoka, Swahili for "snake." She is a handsome chocolate animal big enough to hunt down a wildebeest. Her owner bred her, and she whelped 16 pups. Several died at birth. There was one runt, a tiny, perfectly formed female. No matter how many times Nyoka's owner put the runt to the teat, when she came back later she found the pup pushed away, as if an imaginary circle surrounded the mother and her marginal offspring had not been permitted inside. "Ah," thought the owner, anthropologist Sarah Blaffer Hrdy, "yet another example of maternal instinct."

Motherhood has been of consuming interest to Hrdy (rhymes with birdie) for years now. Her theories about why mothers— as well as fathers— behave as they do brought her scorn, and then respect, as one of the most radical evolutionary thinkers of our day. In her most recent book, *Mother Nature: Maternal Instincts and How They Shape the Human Species*, she demonstrated that mothers may abort, abandon, or even kill offspring they do not have the resources to rear. Her assertion that infanticide is common to species across the animal

kingdom shook biology, especially when she applied her theories to *Homo sapiens*. Her feminist reinterpretation of evolutionary theory, as well as data, challenges the archetype of "the good mother," a natural Madonna, and replaces her with a more complex female figure— ambitious, calculating, nurturing, selfish, loving, sexually assertive. The Ridgeback's behavior, which saddened Hrdy, "was a kind of confirmation," she says.



"I am a very old-fashioned anthropologist," says Sarah Blaffer Hrdy. "I believe that my mission is to understand human nature in all of its variations."

Six feet tall and rangy, with a big Texas smile, Hrdy, 56, doesn't look like a radical who wants to upset the mom-and-apple-pie order of our cultural norms and public policies. Yet her contention, backed up by research, that motherhood is a burden seldom embraced unconditionally has profound implications. Her message is clear: Many women with no access to support systems will choose abortion over a marginal existence and penury.

Hrdy maintains that a human infant is so costly to raise— requiring 13 million calories to attain adulthood— that mothers since the Pleistocene Epoch have made calculated decisions about when, how, and whether to rear them.

That rare scientist who is willing to use her own life as an object of research, she openly discusses how ambivalent she was 25 years ago when "I found myself torn between my work and an admittedly adorable but insatiably demanding human baby." She points out that today— when for the first time in the history of the human species, females have a choice about conceiving children— birthrates are plummeting not just in Europe and the United States but also in less developed nations like India and Brazil. "Women are voting with their ovaries," she says, "opting to delay births, to have only one or two children, or none at all."

Hrdy believes that if a male scientist made such claims, his peers would be unlikely to question his relationship to his research. Yet she knows from experience that, as a female writing about females, her life comes under the lab lights. Colleagues have at times been so threatened by her ideas that their attacks have gotten personal. An evolutionary biologist once commented, "Sarah ought to devote more time and study and thought to raising a healthy daughter." That remark stung— he had hit on Hrdy's secret guilt.

Still, over the years Hrdy has had the satisfaction of not only watching her three children grow up happily but also seeing her radical ideas become mainstream and her colleagues come around. So, these days, she makes a pre-emptive strike: Her quest, she says, is "to understand not just who I am, but how creatures like me came to be." For her, everything— whether experienced, observed, or consumed in the literature she tears through— is a piece in a giant jigsaw puzzle she's trying to fit together, a picture of how the human family is evolving. Her brain, like a kaleidoscope, realigns patterns, illuminating them with a clear, startling light.

Hrdy's first book about infanticide among primates, *The Langurs of Abu: Female and Male Strategies of Reproduction*, was published in 1977. At the time,



As a postdoctoral researcher at Harvard— and the mother of a daughter— Hrdy was working two jobs. "She was very caring," says Katrinka (at right), now 25 and a teacher. "But as I got older, I realized the conflict she felt."

Photograph: Georgia Litwack.

biologists questioned her research and sniped. "Sarah Hrdy's monkeys are deranged," she recalls one prominent physical anthropologist saying. She had witnessed male langurs attacking infants sired by rivals and leaving them for dead to clear the way for impregnating females with their own genes. But she also observed that females employed their own strategy to counter such behavior. When an alpha male took over the tribe, the females would simulate estrus, the period of ovulation, to copulate with him and convince him that he was the father of their offspring, thereby gaining his protection. Hrdy's conclusions are widely accepted today. "You have to really put your head in the sand now to dispute the matter," says Alison Jolly, author of *Lucy's Legacy: Sex and Intelligence in Human Evolution* and former president of the International Primatological Society.

Hrdy's next book, *The Woman That Never Evolved*, "hit a lot of nerves too," Jolly adds. In that study, published in 1981, Hrdy suggested that primate females evolved many strategies, including forming alliances with other females, to counter male dominance. She argued that Charles Darwin's notion of a passive or coy female role in sexual selection stemmed from comparatively recent social conventions and didn't apply to most primates, including some human societies. Again the knives came out. "So, Sarah, put it another way— you're horny, right?" Hrdy remembers one colleague quipping. "That was the most mortifying moment of my life," she says. Now her insights are accepted. Says the once-dismissive Robert Trivers, an evolutionary biologist and professor at Rutgers University who advised Hrdy at Harvard University, "Her argument that by copulating with numerous males, the female gives the others the illusion of paternity, which tends to make them more solicitous of offspring— that theory's worn well."

In *Mother Nature*, published in 1999, Hrdy synthesized her previous work, positing that both infanticide and polyandry— the tendency for females to mate with more than one male— exist because humans evolved as cooperative breeders and, as such, are ill-equipped to cope without helpers. Historically, humans have made use of allomothers, she maintains. Allo means "other than" in Greek, so allomothers are group members who help a mother rear her child. They may be female (older sisters, aunts, grandmothers) or male (brothers, lovers, and fathers). The absence of support networks for modern mothers may explain why so many newborns are dumped in bathrooms, Hrdy says.



"Single-minded devotion is typical of ape mothers," says Hrdy, but that doesn't keep a langur female from accepting child care from another tribe member (right). "Mothers elicited assistance where they could get it."
Photograph courtesy of Sarah Blaffer Hrdy.

"She's done it again," Jolly says. "To say that a child may be abandoned because a mother has to save her own health first— this is not saying abandoning children is good or abortion is good. Sarah's saying that, to prevent mothers from making this decision, they need help raising their children. I hope *Mother Nature* causes political pressure for the provision of child care. Human mothers need help."

Hrdy herself was brooding about whether she would need help to raise her children on the day she first met Jolly 26 years ago. The mother of four, Jolly has served as a role model for many young female scientists over the years. At the time, she was lecturing at Harvard. One of a crush surrounding the visitor, Hrdy blurted, "But what is your life like?" She meant "How do you juggle your responsibilities?" At the time, she wasn't at all sure she herself would be able to do it.

Sarah Blaffer grew up determined to be a better mother than her own mother had been. She had been raised in the 1950s, before the psychologist John Bowlby showed that primate babies need to attach securely to a mother figure. The prevailing wisdom was, "If a child cries, don't pick it up," she recalls. Her mother was a woman of the times, distant with her infants. "My mother was, by some standards, an appalling mother," Hrdy says. "But I loved her tremendously."

The daughter was determined to use her brain, at least in part to make up for her mother's thwarted intellectual ambitions. After graduating from Wellesley College, Sarah's mother had wanted to go on to law school, but her family insisted that she come home to Dallas to make her debut instead. "All that was open to her was to marry advantageously," says Hrdy, which she did. Sarah's father, heir to an oil fortune, sired four daughters before he got the son he wanted. Sarah was the third. "I was a bluestocking from the word go, and in the social environment in which I grew up, that was not acceptable," she says. "But I was the heiress to spare, and that left me a lot of freedom." An intellectually stimulating boarding school allowed her, at 16, to dream of a life of the mind. She went off to her mother's alma mater, then transferred to Radcliffe and eventually made her own token curtsy to society. After graduating summa cum laude and Phi Beta Kappa in 1969, Sarah went on to earn a doctorate in anthropology at Harvard. Her mother took vicarious delight in Sarah's successes, and in adulthood the two grew so close that for a year after her mother's death in 1991, Sarah reached for the phone every morning to ring her as usual.

In graduate school she realized how difficult it was for a female to break into the boys' club of science. "I was blown away," she recalls. "All my life I had felt guilty for being overprivileged, and all of a sudden people were discriminating against *me*." Once, filling in for a missing lecturer, she was introduced as "the woman who has just written a book about a six-meter-long, death-dealing penis," a reference to *The Black-man of Zinacantan*, her book about a Mayan legend. "I was irritated and

am sure I gave a better lecture as a result." Hrdy concludes, "I learned that you could get so mad that you would want to become a revolutionary."

Female scientists are different from males, Hrdy says, only in that because they empathize with female subjects, they ask different questions: "The science is the same." She recalls once discussing female libido with several scientists. A man suggested doing a study to determine whether sexual desire was cyclical in human females, as it is in other primates. The women looked at each other and said, "We don't have to." They assumed that libido was higher at the time of ovulation and were more interested in asking why than whether. Hrdy now believes that some of her contrarian insights, such as that killing infants might be adaptive behavior, may have grown out of her struggle against male bias in anthropology and evolutionary biology. "It was painful at the time, but I think it was probably very fruitful," she says. "I started to challenge conventional wisdom, which is a good thing to do."

For a revolutionary, her private life has been traditional. This woman who contends that females are often polyandrous has herself been a constant mate since 1970, when she fell in love with Daniel Hrdy in Anthropology 101, a Harvard class taught by the grand old man of physical anthropology, William Howell. Two years later, as Daniel headed off to the Solomon Islands to collect hair samples and Sarah left for India to study langurs, they married in Kathmandu. The two Dr. Hrdys— he genial and tidy, she wired and messy— have been together ever since. When Sarah Blaffer Hrdy collected the W. W. Howell Prize for an outstanding contribution in biological anthropology in 2001, she said in her speech, "the real prize was Dan."

For nine years, the couple commuted between Boston and India as Sarah studied primate behavior and Daniel, a specialist in infectious diseases, studied rotaviruses. "It was the happiest time of my life— being outdoors with animals who were beautiful and fascinating, solving a puzzle, leaving problems and everyday life behind." Then motherhood changed everything. At 31, she had her first and "very wanted" daughter. "Overwhelmed by the child's lusciousness," the new mother made up a lullaby: "Katrinka, Katrinka, lovely little Katrinka, with velvety skin and silky hair, everybody's so glad that you are there." What she terms "the honeymoon period" gave way to frustration because she couldn't find time to write or do research. On one of her last trips to India, she took along a paid allomother (what Mama would have called a nanny). Katrinka developed "virulent diaper rash— she was one unhappy child." One evening Hrdy came home to find that the toddler was



In the forest, a pregnant adult langur, grown tired of baby-sitting, lets an infant slide between her legs (center). A juvenile female (right) eagerly waits to take over— "important practice caring for infants," says Hrdy.

Photograph courtesy of Sarah Blaffer Hrdy.

being attacked by a troop of monkeys trying to snatch her cookie. The overextended biological mother suffered agonies of guilt. On the flight home, sick with pneumonia and a fever of 104 degrees, Hrdy lay across the middle row of seats drinking water from a baby bottle. The day they got home, the baby-sitter quit. "Fieldwork is incompatible with having children," Hrdy concluded. If she wanted her children to have a greater sense of security than she did growing up, she had to give up her field research. "You compromise to have a family, but you don't give everything up," she says now.

With more children came more compromises. In 1982 an international symposium on infanticide in animals and man was scheduled at Cornell University after the due date for the birth of her second child. However, a strict no-babies rule was imposed by a male co-organizer. Daughter Sasha arrived just a week before the meeting, and her mother's plans to establish breast-feeding were thrown into disarray. Hrdy nursed in the evenings, while a friend who was also nursing fed Sasha her breast milk during the day so Hrdy could present her paper. It worked. Son Niko was born in 1986, when Hrdy was 41. "That was the year I won a Guggenheim fellowship to write a book on the natural history of motherhood," she recalls, "which somehow did not get written that year." It did not become a book—the 700-page *Mother Nature*— for another 13 years.

Those experiences have made Hrdy a fierce advocate for good day-care programs, which she considers the modern substitute for a tribal network of allomothers. She visits centers around the world to study their techniques and lobbies government childcare agencies for higher standards. "Stability, stability, stability," she reiterates. She finds it inconceivable that anyone doubts that quality day-care programs are worthy of public funding. She says the woman who drowned her five children in the bathtub in Texas is a tragic example of the need for a support system. "She should not have been alone in that house with five young kids and a record of depression— it's a no-brainer. Not even a mentally healthy woman should have to be in that situation."

Hrdy realizes her privileged circumstances are far different from those of most mothers. Katrinka had a series of au pairs, and both younger children had long-term caregivers. All went to boarding schools in New England, and both daughters went on to Harvard. Hrdy feels irritated by the accusation that her theory of cooperative breeding is a rationalization of her own choices, but she acknowledges being the



Katrinka accompanied her mother on two trips to India, but she remembers little more than the scents. After the second journey, Hrdy decided that the demands of fieldwork and motherhood were incompatible.

Photograph courtesy of Sarah Blaffer Hrdy.

rare female of her generation who has integrated maternal and scientific voyages of discovery. Trivers, who once doubted her ability to do it all, says, "Sarah's solution has been allomothering— which she's writing about. She employed helpers at the nest. And the children have had the benefits of two mothers: Sarah, who's a loving mother, but busy. And a second one, a young woman of good spirit."

"She's a fabulous mother," says Katrinka, a history teacher and crew coach at a boarding school in upstate New York. "She feels bad about the time when she was busy with research, but I don't remember that." When she tells friends that her mother is an expert on infanticide, people often say, "Hey, you're lucky to have survived," but the joke has grown stale. "My cute mom," says Katrinka. "Her theories are pretty modern— she's got all these wild ideas about family, but our own family is kind of traditional— family dinners and everything."

In the late afternoon, sunshine lights up the nearby California coastal range. This is the second oldest set of hills in the country, Hrdy says. They remind her of India's Aravalli Hills, the place where she spent the most satisfying years of her working life. Binoculars around her neck, she listens intently, hoping to locate the troop of wild turkeys that rove the 1,000-acre farm. Last year the Hrdys harvested about 300 tons of walnuts here. "We wanted this place to make enough of an income so that it can support itself, and the kids can keep it," says Hrdy, who has done a study comparing inheritance patterns of



Roaming her California farm with one of her Rhodesian Ridgebacks, Hrdy observes a troop of wild turkeys, banded for a student project. They are not langurs, she says, but "they have a similar breeding system."

daughters and sons. At the moment, the only child who seems interested in farming is their son. "I admit it looks bad," she says. Niko, 16, is away at prep school. Allomother Guadalupe de la Concha "started grieving a year before he left," says Hrdy. De la Concha has taken another job but still poses for family Christmas cards, lives in the empty nest, and cares for Niko's leopard geckos. One of his science projects still decorates the dining room, bacteria counts from cultures "proving that chickens, sheep, and little boys have dirtier feet than dogs," his mother says. Lined up on the floor are four beds belonging to the dogs in question, all Rhodesian Ridgebacks.

Hrdy, the alpha female, possesses an airy study filled with fertility goddesses, engravings of primates, family photos, and shelves of books so high she needs a ladder. But the real work gets done in the tiny, distraction-free closet in the study that her children call the cave. In this room with no view, the scholar lives her real life, the one in her mind.

Here she has just started pondering her next book, "a deep and intimate history of the human family." What she has yet to decide, especially considering the criticism she's come in for in the past, is just how intimate it will be. Before she died, her mother, Camilla, was at last able to put her intelligence to use, writing a book about the family's history and genealogy. The material could be used as research. Sarah Blaffer Hrdy can see patterns— inheritance and patriarchy and sexual selection and maternal ambivalence, all the traits of all the ancestors who came before, back and back and back to the advent of man and woman. Even she may be surprised at what she discovers. Her relations may squirm, her critics may cavil, but Mama would be proud.

RELATED WEB SITES:

Read about Sarah Blaffer Hrdy's research on primate infanticide in "First, Kill the Babies" by Carl Zimmer, *Discover*, September 1996. This article is available at www.discover.com.

A PDF of Hrdy's 2001 Tanner Lectures, "Mothers and Others," can be viewed at www.tannerlectures.utah.edu/lectures/Hrdy_02.pdf. An abridged version of the lecture appeared in *Natural History*, May 2001, and is available online at www.amnh.org/naturalhistory/0501/0501_feature.html. This article also appears in *The Best American Science Writing 2002*, edited by Matt Ridley (Ecco Press, 2002), and in *The Best American Science and Nature Writing 2002*, edited by Natalie Angier and Tim Folger (Houghton Mifflin, 2002).

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