

THROUGH A WINDOW. By J. Goodall. Boston: Houghton Mifflin. 1990. 268 pp. \$21.95 (cloth).

Jane Goodall's observations of chimpanzees in Gombe National Park, Tanzania, represent the world's longest continuous study of a group of individually recognized, largely unprovisioned, animals. As a result, our knowledge of certain aspects of chimpanzee behavior, such as social relationships and variation in individual life histories, is greater than that available for most other animals. This is a stroke of good fortune for anyone hoping to gain a deeper understanding of human origins.

*Through a Window* is a sequel to Goodall's popular book, *In the Shadow of Man*, which described the first 10 years of research at Gombe. In the new book, Goodall assumes that we have read her earlier volume or are otherwise familiar with previous findings. She begins with a brief description of the history of studies at Gombe and evidence concerning the nature of the chimpanzee mind, but otherwise does not attempt an overview of her research. Instead, Goodall captures the essence of her findings through vivid descriptions of particularly revealing events, such as intercommunity violence or the struggle among males to achieve alpha status, and through intimate portrayals of individual lives.

These vignettes, well illustrated by superb photographs, provide compelling examples of striking individual variation in chimpanzee life histories and personalities and help to illuminate some of the important factors underlying this variation. Goodall begins with a chapter on mothers and daughters that focuses on two of the older females, Flo and Passion, and their now-grown daughters, Fifi and Pom. She describes radical differences in the older females' personalities and child-rearing techniques and convincingly argues for a relationship between these differences and the different paths their daughters' lives have taken. Another chapter on mothers and sons, which also focuses on Flo's and Passion's descendants, echoes this theme for male development. Two chapters focus on still another of Flo's offspring, Figan; his dramatic rise to alpha rank with the help of his brother; Faben, and the tactics he employed to maintain this position in the face of persistent challenges from his nemesis, Evered.

Chapters on "Sex" and "War" emphasize aggression. We learn that males compete intensely over fertile females, and that they often employ brutal measures to convince recalcitrant females to submit to their sexual advances. Goodall's account of the division of the Kasakela community into northern and southern communities, and the subsequent systematic, violent elimination of the southern community by their former associates to the north, reads like a horror story. The chapter ends with an account of how the victors later were nearly vanquished by their enemies further to the south and to the north, a reminder that chimpanzee intergroup aggression, like that of humans, is an extremely risky undertaking.

In a chapter on chimpanzees and baboons, Goodall reveals startling variability and complexity in their interspecific relationships, which range from playmates and sexual partners to competitors and prey. Three chapters provide moving portraits of the chimpanzee females Gilka, Melissa, and Gigi. Low-ranking Gilka was plagued with misfortune her entire short life, including the loss of two infants to cannibalistic attacks by Passion and Pom, and she produced no surviving young. High-ranking Melissa also lost at least one infant to Passion, but she lived to old age and produced two surviving adult offspring whose own reproductive careers seem likely to succeed. Large, dominant, sterile Gigi cycled regularly for years and was a frequent sexual partner for community males. She never conceived but expressed her maternal yearnings by helping several mothers to rear their infants and by adopting two orphans who might not have survived otherwise. These chapters illustrate how unique historical events, such as female Passion's murderous attacks or Gigi's repeated sexual cycles, can influence both community social dynamics and individual life histories.

Variation in male life histories is well illustrated by two chapters on Jomeo and Goblin. Jomeo, largest of the Gombe males, seemed entirely lacking in dominance drive and remained low-ranking and easily intimidated all his life. Melissa's son Goblin, in contrast, appeared obsessed with the desire to become alpha male and succeeded in doing so against great odds. The comparison between the two males shows that it is psychological traits, such as motivation and courage, rather than brute strength, that

determine which chimpanzee males rise to the top.

Goodall concludes her account of Gombe chimpanzees' lives with a chapter on "Love" that describes the fates of immature chimps who lose their mothers. Even if they are fully weaned, such orphans consistently show signs of severe depression, and many die. Others, adopted by siblings or, surprisingly, by unrelated females or even males, survive, but their physical and social development is permanently compromised. In this chapter Goodall stresses a theme that surfaces throughout the book: the tremendous significance of the extremely strong bond between chimpanzee mothers and their young.

Goodall's style throughout is immediate and personal. She describes events with evocative prose designed to arouse emotions in the reader, and she often reveals the feelings that she experienced while watching the chimpanzees do something particularly amusing, poignant, or nasty. She writes about individuals with a novelistic flair, encouraging us to share her fascination with the triumphs and tragedies of their lives. After describing especially fascinating or puzzling events, she pauses to provide speculations about chimpanzee emotions and motivations. She also shares moments of ecstasy and despair during her 30 years at Gombe. These moments reveal the author's profound and sometimes numinous connection with the chimpanzees and their forest habitat and her fears for their mutual destruction. Although these revelations help the reader to understand what Gombe has meant to Goodall all these years, their purpose is not to provoke sympathy for herself but rather to evoke the reader's concern for chimpanzee welfare and tropical forest conservation.

Some readers may feel that Goodall's subjective tone compromises scientific objectivity. Three points may be made in her defense. First, this book is designed for a popular audience; scientists interested in a more dispassionate and quantitative account of Goodall's research can turn to her authoritative volume, *The Chimpanzees of Gombe* (Harvard University Press, 1986). Second, emotional identification and subjective speculations are an important part of

what keeps ethologists interested in their subjects; without such experiences, no one would have the persistence to keep a research project going for 30 years! Third, and most important, the fact that Goodall so easily empathizes with the chimpanzees says something not only about Goodall, but also about chimpanzees. Of all the animals on earth, they are most like ourselves. To eschew subjective comparisons would involve ignoring one of the most valuable sources of insight into their nature, and, by implication, our own.

At the end of the book, Goodall addresses issues raised by the chimpanzee's close phylogenetic relationship to humans. In a chapter called "Bridging the Gap," she discusses the similarities and differences that emerge from a comparison of chimpanzee and human social behavior. She stresses that, despite many striking parallels between the two species, only humans possess the capacity to engage in harmful or helpful acts with full, conscious awareness of their implications. Goodall's emphasis on conscious and deliberate action forms the basis for her plea, in a chapter entitled "Our Shame," for chimpanzee conservation, for the development of more humane conditions for captive chimpanzees, and for the eventual elimination of all use of chimpanzees in biomedical research. Any reader moved by the earlier chapters on particular individuals cannot help but take very seriously the issues raised here.

This book will appeal to a broad audience, ranging from lay readers interested in animal behavior and human evolution to experts engaged in research in those fields. For the hard facts about chimpanzees, read Goodall's scientific publications and those of other chimpanzee researchers. But to get a feeling in your gut for what our closest relatives are like, and why they must not be allowed to disappear or suffer needlessly, read this wonderful book.

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