

Book Reviews

Human Ethology. By IRENAUS EIBL-EIBESFELDT. xiv + 848 pp. Hawthorne, NY: Aldine de Gruyter, Inc. 1989. \$69.95 (cloth).

Following in the tradition of Lorenz (to whom this book is dedicated) and the German Ethological school, Eibl-Eibesfeldt begins by arguing that the observation of behavior in the natural context, rather than in a laboratory, is an important starting point for the biological study of human behavior. Eibl-Eibesfeldt's own work in this field has been universally acclaimed, and this book brings together an immense range of research, synthesizing material from the fields of psychology, anthropology, and ethology. As such it is of undoubted value for anyone interested in understanding human behavior.

Eibl-Eibesfeldt defines human ethology as the biological study of human behavior, and then follows Tinbergen's (1963) subdivision of behavioral research into mechanism, ontogeny, (adaptive) function, and phylogenetic evolution. Under this framework, the text covers a wide array of topics ranging from the more conventional such as interpersonal interactions, aggression, development, and communication, to the more exotic such as the neuroethology of human freedom, the ethological contribution to aesthetics, and biology's contribution to ethics. In order to cover this breadth, the text is 719 pages and the bibliography is 67 pages. Despite its great length, the book is highly readable. It is clearly subdivided into numbered sections making it easy to follow. Excellent use is made of photographs, drawings, and graphs.

This book is strongest in descriptions and observations of behavior, especially in areas where Eibl-Eibesfeldt has carried out fieldwork himself. For example, the chapter on sociality presents clear and extensive research on interpersonal interactions, successfully synthesizing his own studies in developing countries with the more experimentally based psychological research. Mother-child and male-female interactions are described in detail, and cross-cultural comparisons are strikingly presented through the use of photographs and frames isolated from 16 mm films. Similarly, in the

chapter on communication, fascinating detail on facial expressions, such as the eyebrow flash, the fear face, aggressive stances, and other signals, is presented, and the universality of such signals is richly illustrated by photographs from several cultures.

The data for much of this research was collected through extensive use of film, and as Eibl-Eibesfeldt and his co-researcher Hass were pioneers in the use of this technology, the chapter on methodology is of particular interest. For example, there is a discussion of the reflex lens, developed by Hass, which allowed the researcher to film at right angles to the direction that the lens appeared to be pointing. This prevented subjects from altering their behavior when they thought they were being watched. Eibl-Eibesfeldt convincingly argues how the use of film as a research tool allows both subtle behavior, for instance, facial expressions, and quickly occurring confusing events such as dances or fights, to be analyzed in a detailed and objective manner. Moreover, the use of film enables subsequent researchers to go back and reanalyze the behaviors, focusing on issues that may not have been of primary interest to the individual collecting the data. Of particular use to the active researcher is Eibl-Eibesfeldt's discussion of details, such as the speed of film which should be used, the way to define an episode, and the background information that should be recorded at the time of filming.

However, where the book becomes very ambitious in its aims, problems arise which are likely to disturb the more empirically minded. The key problem is that this book attempts to describe and provide a biological basis for "human nature" in the grand, all encompassing meaning of the term. To fulfill this goal, the book concentrates on the universals of human behavior, and although the search for universals is not itself a problem, the material often moves away from empirical observations and into the realm of unsupported speculations in the attempt to cover such a wide range of topics. This looseness may be inevitable in the sections on morality or art, but perhaps it would have been more honest to state at the outset that certain parts of the book are based on rigorous obser-

vations, while some of the grander, philosophical issues about the essence of human nature still elude a quantitative scientific approach. It is not that students of human behavior should necessarily avoid the more philosophical issues. At present, however, researchers should admit that they have neither the methodological tools nor the data to test many of the proposed hypotheses.

For example, in the discussion of the neuroethology of human freedom, Eibl-Eibesfeldt argues that brain lateralization allows "man" to detach "himself" from "his" emotions and through the more analytical left hemisphere self control reflection and introspection can occur, thereby freeing "man" from the need to respond immediately to emotional drives. This ability to postpone the fulfillment of a behavioral drive allows the analytical hemisphere to choose between alternative behaviors, thus providing humans with freedom of choice. This is an interesting idea, but ways in which the hypothesis can be tested are not addressed.

An example of where the author's attempt to cover the entire spectrum of human ethology has resulted in a superficial discussion is in the section on sociobiology. Sociobiologists are studying the adaptive functions and reproductive correlates of human behavior, and therefore their work is central to ethology as Eibl-Eibesfeldt defines it. However, in this book sociobiological research is presented in a limited and even a misleading manner. For example, in the section about infanticide neither the data nor the theoretical arguments are objectively assessed. Instead, Eibl-Eibesfeldt argues that infanticide is a pathological behavior, and that it does not occur frequently enough to be considered an adaptation. However, he fails to mention some of the more recent research, thereby creating the misleading impression that infanticide is a rarer phenomenon than it actually is. This problem is illustrated by the fact that he does not even cite, let alone discuss, recent publications such as 1) "*Infanticide: Comparative and Evolutionary Perspectives*" edited by Hausfater and Hrdy (1983), 2) "*Homicide*" by Daly and Wilson (1988), which has two chapters on infanticide in humans, and 3) a paper by Struhaker and Leland (1987), which reviews the arguments about infanticide in nonhuman primates. (The books by Hausfater and Hrdy and Daly and Wilson are published in the same Aldine series as Human Ethology, and

they are even listed on the back cover of Human Ethology!).

The theoretical discussion about infanticide is also muddled. Eibl-Eibesfeldt argues that the infanticidal strategy is bound to fail as once a tendency for infanticide had spread, any advantages gained by male X committing infanticide would be balanced by the cost when male X was ousted and male Y came in, killing male X's offspring. It is true that these effects could balance out, but it does not mean that the strategy will "fail" to spread, or that it cannot be evolutionarily stable. What is needed is some initial advantage to a male committing infanticide and for this behavior to have a way that it can be transmitted to that male's offspring. Under these circumstances, the behavior can spread and even if it becomes fixed in the population, it would still be evolutionarily stable, as any male failing to commit infanticide would leave less offspring than a male who did execute this behavior.

A more worrying aspect of this book is its treatment of socially sensitive issues. Too often I was left with the impression that Eibl-Eibesfeldt is using biology to validate his own opinions. This not only creates misunderstandings but also allows personal view and prejudice to color interpretations in a sometimes dangerous and hidden fashion.

For example, in the discussion of sex differences in behavior, Eibl-Eibesfeldt cites Spiro's descriptive data from an Israeli kibbutz and argues that women are naturally mothers and homemakers. Analyzing children's games, he concludes that boys spent more time in movement games while girls spent more time in fantasy games where they predominantly acted out maternal roles. Given that the stated philosophy of the kibbutz was sexual egalitarianism, Eibl-Eibesfeldt concludes that these differences in the behavior of children are one manifestation of "biologically determined sex differential dispositions" (p. 284). There may well be sex differences in the children's behavior; however, recent work has shown how parents can reinforce sex-stereotyped behavior through extremely subtle forms of conditioning. A discussion of recent research in this area would have provided a more measured approach to this sensitive issue. Moreover, we cannot ignore that the term "biological determinism" raises the idea that biologically based behavior is unalterable.

Building on the premise that innate dispo-

sitions result in the maternal role being of prime importance for women, Eibl-Eibesfeldt suggests that the ideals of equal sexual opportunities can be actually harmful. He implies that feminism can result in women feeling insecure and guilty if they choose to live according to traditional gender roles, and later in the book he writes that women's liberation has resulted in "compulsory emancipation so that even women who do not wish to are being forced into the work force" (p.661). It is true that some women may feel social pressure to go out to work when they would rather stay at home; however, other women have had their opportunities limited and their ambitions frustrated due to the view that women are best suited to life as mothers and homemakers. Moreover, it is puzzling how an assertion regarding the potentially harmful role of women's liberation is disguised as biology and presented in a supposedly scientific book on human behavior! Assertions such as these, combined with the consistent and unnecessary use of male pronouns (man is consistently used to mean human) will dismay many readers.

Personal prejudices also appear to have influenced Eibl-Eibesfeldt's discussion of homosexuality. Eibl-Eibesfeldt dismisses recent attempts of sociobiologists to explain this behavior as an example of sociobiologically minded researchers "... attempting to construct some proof of fitness for every aberration" (p 98). Eibl-Eibesfeldt even presents sociobiological hypotheses although this is what an objective treatment of the subject would demand. One hypothesis about homosexuality is that it is a mechanism, similar to religious celibacy, whereby individuals forgo reproduction in order to help their kin. There is ample evidence from nonhumans of individuals suppressing their own reproduction, while still contributing genes to the next generation through kin selection (Hamilton, 1964; Emlen, 1984; Moehlman, 1983). Whether kin selection is occurring in this particular context in humans is still an open and an empirical question. Alternatively, homosexuality may be a mechanism to promote same-sex bonding (Wilson, 1978; Kirkpatrick, n.d). Among male common chimpanzees hand-to-genital contact is not uncommon between individuals who are engaged in long term affiliative relationships (Goodall, 1988). In bonobo chimpanzees same-sex mutual genital stimulation is thought to reduce intragroup tension

and promote bonding (Thompson-Handler, 1984; de Waal, 1986). In the discussion on heterosexual human relationships, Eibl-Eibesfeldt himself argues that the reason why females are receptive throughout their cycle (rather than only during the fertile period of ovulation) is because sex has an important bonding function, independent of reproduction per se. Therefore, it is not that radical to suggest that homosexuality may perform a similar function between same-sexed individuals (Kirkpatrick, n.d) and Eibl-Eibesfeldt's treatment of this subject would have benefited from a critical discussion of these ideas. Moreover, so convinced is the author that exclusive homosexuality is pathological that the reader is not given the opportunity to make up her/his own mind. Instead, Eibl-Eibesfeldt simply advocates that homosexuality should not be culturally accepted as normal behavior, arguing that individuals may become homosexual through imprinting and consequently that tolerance would result in an increasing number of juveniles becoming "... imprinted aberrantly" (p 261). To assert that such behavior is pathological and aberrant contributes nothing to the understanding of it, but simply fosters intolerance, providing a pseudo-scientific framework for dangerous prejudices.

In conclusion, this book is of mixed value. There is much to learn from Eibl-Eibesfeldt's careful methods of observation, his detailed descriptions, and the fascinating data and illustrations pertaining to certain aspects of human behavior. However, there are other sections of this book which readers may find frustrating and even dismaying. In the areas which have not been the primary focus of Eibl-Eibesfeldt's own research, the text contains inaccuracies and muddled discussions. Moreover, in writing a book of such broad scope, Eibl-Eibesfeldt has gone beyond the arena of science into the domain of speculation and assertion, and this looseness takes much away from a book which describes itself as a biology book.

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Aging and Health: Perspectives on Gender, Race, Ethnicity, and Class. Edited by K. S. MARKIDES. 255 pp. Newbury Park, California: Sage Publications, 1989, \$35.00 (cloth), \$16.95 (paper).

With the demographic restructuring of industrialized populations has come an inexorable increase in the cost of health care delivery. The increase in the proportion of the population aged 65 or over has meant that the prevention and treatment of degenerative diseases of old age is becoming a primary focus of medicine. While infectious diseases remain a threat to human life and will probably remain so as long as pathogens have the capacity to mutate, the burden of maintaining a growing number of people who are chronically impaired will dominate the health care planning process for the foreseeable future.

The industrialized nations of Europe and North America plus Japan and Australia have been in the vanguard of the ongoing trend toward increasing life expectancies. However, the demographic profiles of developing countries such as China and India are undergoing similar change. The potential impact of a dramatically increased proportion of impaired aged in these countries, with an aggregate population of nearly two billion and lacking the infrastructure that has been gradually assembled in the affluent industrialized nations to deal with the problem of chronic disability will be a major socioeconomic factor early in the 21st century. As discussions of the need to ration health care in such affluent societies as the United States take on a growing sense of urgency, the need to identify the factors associated with healthy aging becomes ever more apparent. While there is little doubt that new and innovative approaches to the question of financing health care delivery systems must be found, the full dimensions of the problem must be determined in order to establish a sound basis for policy decisions that will affect everyone. It is in this area of diagnosing the problem that social gerontologists, using demographic methods, have much to contribute. Aging and Health is one such contribution. It provides a collection of informative population studies focusing on the influence of gender, race, and class on the health and survival of segments of the population of the United States in recent years.

In his conceptual overview, Markides outlines the problems to be addressed. By applying the approaches of demographic analysis with those of epidemiology he argues that it will be possible to identify new and nontraditional risk factors which may shape morbidity and mortality patterns of the future. While there is an undeniable increase in average life expectancy, there is also evidence that more years of disability may also be expected. The association of more disability concentrated in the later years of life may invalidate the widely held assumption that improvements in the prevention and treatment of illness will produce a "compression of mortality" in which an increasing proportion of the population would live out their lives with little disability and die after a relatively short terminal illness. "Selective survival," a process by which the less fit members of the population were eliminated early in life by disease, has less effect since