

Book reviews

Developing a Social Psychology of Monkeys and Apes. By John Chadwick-Jones. Pp. 184. (Psychology Press Ltd, Hove, East Essex, UK, 1998.) £29.95, ISBN 0-86377-820-8, hardback; £14.95, ISBN 0-86377-821-6, paperback.

The sunlight cannot get through the dense canopy in this African forest. There are two black shadows that can be seen on a branch of a fig tree. The observer cannot focus very well on these animals as they are very distant. By getting closer to them, the observer recognizes them as two chimpanzees very close to each other. With the help of a pair of binoculars, he can now see that one of the individuals is eating a fruit while being begged by the other. In a few words, the observer can now see the details of the interaction of this pair of chimpanzees and the signals that they transmit to each other in that particular situation.

This book is like binoculars: it provides social psychologists and primatologists with different lenses to study primates, emphasizing in each case the 'small, inconspicuous signal' (p. 28). The author introduces the topic by stating that some primatologists have already used methods in use in social psychology, especially regarding interpersonal communication.

In Chapter 2, a working hypothesis on the intention of achieving a goal among primates is given so as to interpret their social behaviour. Social intelligence, deception and mind-reading are discussed, introducing us to the flexibility that primates exhibit in social skills, in particular in communicating social signals.

Five chapters are dedicated to explaining the socio-psychological approach to the study of communication in non-human primates. In Chapter 3, the author introduces the topic by explaining the differences between a pure zoological and a socio-psychological approach, in particular by explaining the distinction between proximate and ultimate theories applied to these approaches.

The following four chapters stress the signals to be studied to uncover detailed explanations of their meaning according to their social context. Chapter 4 is dedicated to facial expressions. Theoretical background on classifications of facial signals is given along with case studies. The author stresses the importance of the immediate social context and of other simultaneous signals, such as gestures – the next topic discussed. Here, the interpretation of signals is explored not as just emotional but also as means to influence others.

This theoretical issue is also covered in discussing the vocal signals in apes (Chapter 6). The problems related to the study of vocalizations, especially in terms of the 'listener's' reliability, are examined in Chapter 7, approaching the topic from the point of view of studies on monkeys. The case studies illustrated here serve as an introduction to the detection of tactical thinking and social stratagems by providing great detail about signals and their immediate context.

The following chapters deal with more general aspects concerning social tactics (Chapter 8), social exchange (Chapter 9), sexual behaviour (Chapter 10) and

dominance hierarchies (Chapter 11). These chapters are linked by the theme of the importance of understanding the signals in each particular situation. They also reinforce the importance of the explanations given at the proximate level. The concluding chapter re-emphasizes the theoretical background discussed in the previous chapters and recommends more collaboration between primatology and psychology.

This book is the perfect starting point to acquaint readers with the potential mutual influence of primatology and social psychology. The bibliography is a great resource for the reader knowledgeable about social psychology and interested in deepening his/her understanding of primate behaviour, especially in communication studies. The reader more knowledgeable about primatology will be able to find key references of social psychology studies. In addition, the author has included two appendices to describe the order 'Primates' (Appendix 2) and the social structures of monkeys and apes (Appendix 1).

The book is aimed at an audience from many disciplines, such as psychology, anthropology, zoology and cognitive sciences. The clear style of the book makes it accessible to readers with varying degrees of expertise on the subjects. Even if 'beginners' will not completely understand all the theoretical issues, they will get an understanding of the value of applying social psychology in primate behaviour studies. This will allow them to pay more attention to what they see through their binoculars.

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Abandoned Children. Edited by Catherine Panter-Brick & Malcolm T. Smith. Pp. 231. (Cambridge University Press, Cambridge, 2000.) £13.95, ISBN 0-521-77555-8, paperback.

Children appear to be separated from home and marginalized by society in a wide range of circumstances. Yet such appearances are too often predicated upon Western culture-bound notions of childhood, and thus upon inherent assumptions about the definition, needs and competencies of 'children' and about the responsibilities of parents and states. In an intensely thought-provoking introduction to this excellent collection, Catherine Panter-Brick considers the concept of child abandonment and calls for an unpacking of its various meanings in the media and social welfare literature. The historical and ethnographic contributions that follow examine the ways in which abandonment entails both moral and material dimensions and how previous scholarship has underplayed the variety of experiences lived by orphans, foundlings, street children, runaways, and unaccompanied, fostered or destitute children in various cultural settings.

Four chapters present historical empirical data on foundlings in southern Europe (Sá on 18th century Portugal; Kertzer on 19th century Italy; Smith on 18th century Azores; Viazzo, Bortolotto & Zanotto on 15th century Florence). These reveal the scale and complexity of the foundling system and suggest how it became integral to the organization and social reproduction of state, church, community, commercial

and family structures and why it persisted for an appreciable stretch of time. Taken together, they call for a re-evaluation of our traditional conceptualization of foundlings as children abandoned by adults and bereft of social capital. Rather, these children were in many cases entrusted to the responsibility of the state or church only temporarily and were later returned to their own biological or other families, where they usually assumed an important economic role and often became incorporated into kinship systems. In the broadest terms, the foundling system apparently functioned as a mechanism by which families could adjust the ratio of workers and heirs, population could flow between rural and urban economies, the authorities could secure labour and soldiers, and a variety of livelihoods, from share-cropping to wet-nursing, could be sustained. Thus, we learn that, although in many locations periods of very high mortality among foundlings suggested their diminished social and economic value and anonymity, in other times and places foundlings were the concern of many adults, were invested in, and indeed survived to be adult participants in the societies into which they were born.

Two chapters discuss the movement of children during civil war, and present interesting contrasts. Voutira and Brouskou trace elements of the modern Greek welfare system, in which a large number of non-orphaned children are placed in institutionalized care, to a history of competing responsibility for children between parents and the state that began in the civil war of 1947–9. The basis for their argument is the historical evidence that the opposing Communist Democratic and National Armies both conducted campaigns of ‘child gathering’ or ‘child protection’ whereby children were systematically removed from families and placed in camps rather than displaced by violence and social collapse. The perceived crisis of childcare precipitated by the war fuelled a persistent ideology that children in para-statal care were cared for and educated in a more systematic way than parents were thought capable of achieving, and protected from exposure to the enemy’s political ideology.

Charmley discusses the well-publicized case of children separated from their families in the more recent Mozambique war. She presents evidence of the remarkable resilience and efficacy of indigenous mechanisms for coping with the large numbers of displaced children. Since children are perceived as the collective responsibility of distant relatives and chiefs, most have been placed in substitute families, obviating the need for a large-scale provision of institutional care by donor agencies. Moreover, they are generally well treated in their foster families and quickly returned to their natural parents if claimed. Taken together, these two cases alert us to the fact that state or institutional care is not always necessary or purely humanitarian, even under conditions of extreme socio-political upheaval.

By challenging the key assumptions of the ‘abandonment model’, focusing on children’s own accounts, perceptions and rationalizations of their lives, and seeking unbiased empirical data on case numbers and time allocation, three chapters argue for a re-appraisal of our understanding of the condition of street children in Brazil (Hecht), Nepal (Baker & Panter-Brick) and in general (Velae, Taylor & Linehan). For many of these children (and their families), separation from the home is not seen as the central problem of their lives. Indeed, participant observation reveals that even in specific settings a diversity of relations exists between home and ‘the street’ and a variety of self-identities are enacted. Similarly, ethnographic evidence that urban

children living in poverty in Thailand do not experience a marked disjuncture between family membership and participation in sex work forces us to re-cast our understanding of child prostitutes as abandoned *by* their parents. Rather, their exploitation follows from the social and economic marginalization or abandonment *of* their parents.

Papers on children of refugees and political exiles round off the collection (Hinton on Bhutanese of Nepali origin living in camps in Nepal; Flores-Bórquez on Chileans in Britain). In both cases, while parents perceive themselves as abandoned or displaced people with a clear-cut cultural and political identity, their children adapt well to their new environment. However, in the case of returning Chilean families, unexpected feelings of abandonment are experienced when children born or largely raised in exile attempt to reintegrate into a culture which is, in fact, no longer their own.

In calling for more critical and issue-driven anthropological research on the condition of children growing up under challenging social and material conditions, this edited volume joins the ranks of Schepher-Hughes & Sargent's field-defining *Small Wars: The Cultural Politics of Childhood* (California), James, Jenks & Prout's *Theorizing Childhood* (Oxford) and Panter-Brick's excellent *Biosocial Perspectives on Children* (Cambridge). All of the contributions extend our understanding of the lives of children living outside of the idealized or typical framework of the Western family in several key ways. First, the cases are examined from the perspectives of children themselves as well as those of adults, allowing us to re-think issues of agency. Second, a focus on the coping strategies of both adults and children demands that we question the negative assumptions entailed in notions of abandonment. Third, considered are the implications of the circulation of seemingly abandoned children for both the individuals involved and various groups within the wider society, forcing us to confront questions of marginality and disempowerment. Any social scientists interested in the problem of defining child well-being will find something of interest here.

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Evolution's Eye. A Systems View of the Biology–Culture Divide. By Susan Oyama. Pp. 274. (Duke University Press, Durham and London, 2000.) £12.95, ISBN 0-8223-2472-5, paperback.

The book consists of two parts – 'Looking at development and evolution' and 'Looking at ourselves' – made up of 11 chapters based on previously published articles by the author in different scientific journals and books which appeared between 1981 and 1999. According to the author, this book 'is meant to mitigate the inconveniences of the scattered publishing that comes from addressing very diverse audiences'.

When reading this intellectually challenging book I passed through rejection, enthusiasm and finally rational criticism. Focusing on developmental processes, Oyama proposes a new perspective on evolution, redefining such fundamental biological concepts as evolution, phenotype, inheritance, nature, environment and the relationships between them. What is more, she reconsiders the evolutionary agents

that selection acts upon. Although biologists have abundant evidence that genes are better evolutionary agents than individual organisms or groups of organisms, Oyama's proposal of developmental systems as the main agents of evolutionary process is worthy of reflection and further scrutiny.

The author's attempts at creating new synthesis are very praiseworthy, especially with respect to her rejection of both extremes of genetic and environmental reductionism. Although generally convincing, her arguments may not persuade evolutionary biologists of the main idea presented here. Oyama stresses that developmental systems theory (DST) is a new approach to the biology–culture division and not just new terminology. Although the issue of re-naming and re-definition is not really resolved in this book, this is not a major concern. The metaphors used for genes, molecules and the transmission or expression of information are not really as important as the ideas conveyed; other sciences have similar problems in the use of metaphor. This is because language was not constructed in order to describe molecules or the behaviour of galaxies, but for effective social communication.

In one chapter Oyama tries to integrate environment and genes in attempting to explain nature–environment relationships. This attempt resembles the search for the biological counterpart of the famous equation of Albert Einstein: $E=mc^2$. This is an extremely ambitious undertaking, given that knowledge of gene–environment interactions is problematic, and that approaches attempting to disentangle nature–environment problems are usually plagued with indeterminacy. It is good that Susan Oyama wants to 'open evolution's eye'. However, by trying to look too broadly or metaphorically with too open a pupil, there is the danger of losing sharpness of vision.

All attempts at breaking the nature/nurture dichotomy are very welcome. I am all for erasing all frontiers constructed by human minds; unified theory is needed not only by physicists but also by biologists and social scientists. The question is whether the idea presented by Oyama might be considered a scientific breakthrough of the same magnitude as that of Maxwell, who overcame the division between electricity and magnetism, or that of Wöhler, who overcame division between organic and non-organic matter, or that of Darwin, who overcame the division between animals and humans. As a psychologist, Oyama concentrates mainly on the human species. This is not surprising given that the nature–nurture (or biology–culture) division is hotly debated only for *Homo sapiens*. Biologists, however, see humankind as but one of many living creatures, and this is why they have broader perspectives when considering the problem of hereditary or environmental influences on the behaviour of different living organisms. Genocentrism, an idea that repels Oyama, does not exclude personality and its influence on human life, or social behaviour, co-operation and altruism. The second part of the book, entitled 'looking at ourselves', is too narcissistic in perspective to shed light on the biosocial rules of life.

What is missing from this book is the work of behavioural geneticists, who are crucial in informing the nature–nurture debate. Apart from many known gene–environment interactions cited by the author, Oyama avoids presenting other hard evidence, some of which might not support the central idea of the author.

It is admirable that the author attempts to build bridges across such classical oppositions as between nature and nurture, genes and environment, biology and culture, internal and external. An important question is, however, of what matter are

these bridges constructed? If made of paper, they might be crossed by social scientists or scholars of the humanities. However, life scientists, who carry not only heavy equipment but also hard evidence, need a more solid framework to pass across. The near future will show how solid the bridges built by Oyama are, and how enduring the school of thought she belongs to is. In the meantime, I leave this intellectually enjoyable task to all potential readers of this book.

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Intergenerational Transmission of Health. Reproductive Health of Mother and Child Survival in Kerala, South India. By Sabu Sethu Pillai Padmadas. (Thela Thesis, Amsterdam, 2000.) £14.95, ISBN 90-5538-050-4, paperback.

This reasonably priced paperback volume is an analysis of the changing patterns of health and demography in Kerala, South India, with a specific focus on the ways in which maternal factors influence the health and survivorship of children. While there has been steady demographic change in India as a whole, Kerala is unique among all the states of India in that demographic rates resemble those of most industrialized nations, with fertility rates below replacement level and very low infant mortality rates. For this reason, the health of the population of Kerala has been watched keenly in recent decades by international public health professionals. The author takes an integrated life history perspective of health change, linking fertility, birth interval and child survival in Kerala, using the National Family Health Survey data collected there in 1992–93.

The eight chapters proceed logically, starting with an introduction which places the reproductive health and reproductive behaviour of the population of Kerala in the context of India as a whole. The second chapter presents the theoretical framework of the analysis, while the third chapter gives an outline of the integrated model developed here, linking the model of Bongaarts & Potter (1983) of fertility and birth interval, with that of van Norren & van Vianen (1986) concerning child survival. The fourth chapter presents the research design, while the fifth chapter gives statistically based descriptions of maternal reproductive health careers in Kerala. Chapter 6 considers child survivorship and health, while Chapter 7 considers the ways in which maternal reproductive characteristics interact with child survivorship and health. Chapter 8 places these findings in a broader cultural and economic context. Although the vast majority of the observations are in broad agreement with what is known of maternal reproductive health and child survivorship elsewhere in the world, it is very useful to have this analysis available for Kerala, because of its enormous importance to international public health.

This volume is a welcome addition to the literature on the 'Kerala phenomenon', and should please all those with an interest in it, as well as those working or studying demography and public health in South Asia, and internationally.

References

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Molecules at an Exhibition. By John Emsley. Pp. 240. (Oxford University Press, Oxford, 1999.) £7.99, paperback.

This book has developed from a series of articles published in *The Independent* newspaper over 6 years from 1990 to 1996. It is literally a tour of an exhibition of chemicals and their weird and wonderful properties and uses. The author guides us through eight galleries with intriguing titles that include 'Nearly as nature intended, an exhibition of some curious chemicals in the food we eat', to 'Elements from Hell, an exhibition of molecules that are mainly malevolent'.

The innovative presentation style is unusual enough to engage anyone with the vaguest interest in science. The text is well researched and informative but explained in a manner that will be understood by most people. At times the volume of information can be overwhelming but it is worth persevering with each topic.

Each gallery covers a loosely connected group of chemicals. The properties and uses (or misuses of the chemicals) are explained and illustrated with historical and often gory details. The format at times encourages the reader to continue to the next chemical and at other times offers a natural break. This is not a book to be picked up and read from cover to cover. It is very much a book to dip in and out of and then go away and tell your friends about the fascinating information you have just learnt. Even experts in a specific area will enjoy the way the facts are presented.

While most people will enjoy this book, regardless of their knowledge of chemistry, the informed reader is more likely to appreciate the amount of research that has gone in to writing this book and getting the facts right. It may even encourage the less interested individuals to realise that science is fun and part of our everyday lives, not just isolated to stuffy laboratories.

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The Anthropology of Modern Human Teeth. Dental Morphology and its Variation in Recent Human Populations. Cambridge Studies in Biological and Evolutionary Anthropology. By G. Richard Scott & Christy G. Turner II. Pp. 382. (Cambridge University Press, Cambridge, 2000.) £19.95, ISBN 0-521-78453-0, paperback.

Many anthropological studies would be very restricted without samples of modern, prehistoric and fossilized teeth, as the examination of teeth not only gives information about diet, but also provides insight into development and life history (Aiello & Dean, 1990). In addition, modern human tooth morphology preserves traces of cultural practices and gives an indication of inter- and intra-population variation, two topics that are explored in *The Anthropology of Modern Human Teeth*.

Scott & Turner's book provides an accessible but detailed treatment of many aspects of human dental variation. Along with the discussion of geographic variation in human teeth, *The Anthropology of Modern Human Teeth* features sections on the history and practice of dental anthropology, tooth morphology, the description and classification of permanent crown and root traits, dental ontogeny, fluctuating asymmetry and sexual dimorphism. The genetics of morphological trait variation in human teeth is also covered in depth, and a cultural dimension to a book dominated by biological considerations is provided by the prologue discussion of deliberate, often ritual, tooth modification. However, the authors make it clear that the primary emphasis of *The Anthropology of Modern Human Teeth* is very much on the external features of teeth, as well as dental variation, so those looking for sections on tooth microanatomy, microwear and isotopic analyses will be disappointed.

Dental anthropology is highly specialized, and the range of terms used by dental anthropologists can be overwhelming to those who do not work in the subfield. However, Scott and Turner manage to avoid overly-technical discussion of dental traits, providing two excellent introductory chapters on the 'basics' of dental anthropology, including some useful photographs, and although *The Anthropology of Modern Human Teeth* is not designed as a reference text, the clear subheadings allow it to be used easily as such. At the same time, the book provides an insight into the wider sphere of biological anthropology, and Scott and Turner expertly illustrate major topics within the discipline, such as development and heritability, with well-chosen examples taken from dental anthropology. Thus, *The Anthropology of Modern Human Teeth* is a book that will interest a general biological anthropological readership as well as those involved in the study of modern human teeth.

Reference

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