

## Culture



**James H. BARKOW, Leda COSMIDES and John TOOBY (eds), *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, New York: Oxford University Press, 1992; 666 pages, \$77.00**

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James H. BARKOW, Leda COSMIDES and John TOOBY (eds), *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, New York: Oxford University Press, 1992; 666 pages, \$77.00.

By Tim Ingold

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This massive volume is intended to lay the foundations for a new discipline, of evolutionary psychology, whose object is nothing less than to establish the "missing link" that would connect the biological study of human evolution, on the one hand, with the study of the social, cultural and historical dimensions of human existence on the other. The logic of this connection is extremely simple. Social and cultural phenomena are the products of human minds. Any mind capable of generating products of such richness and complexity must already be highly structured. Since this structure cannot arise *ex nihilo* in every new generation, it must form part of an innate, species-specific endowment, fashioned over an immense span of time by the evolutionary process — first adumbrated by Darwin — of variation under natural selection. For the greater part of this time, throughout the Pleistocene era, our ancestors lived as hunters and gatherers. Because natural selection adapts organisms to their prevailing conditions of life, we can expect that the evolved design features of the human mind arose as adaptations to the requirements of hunting and gathering in Pleistocene environments. By focusing on the sorts of problems that ancestral hunter-gatherer populations would have faced in these environments, we can make educated guesses about the specific features with which a functioning human mind should be equipped which can then serve as guides to the discovery of previously unknown psychological mechanisms. Conversely, by demonstrating how known mechanisms would have functioned adaptively under ancestral conditions, we have the basis for an ultimate explanation of how and why they evolved.

Following this agenda, evolutionary psychology is concerned with the discovery and explanation of what the editors of this volume repeatedly call "the evolved architecture of the human mind". To this end they have assembled papers from twenty-five contributors, almost all of them psychologists, who were set the task of showing how this or that aspect of human activity — from co-operation, mat-

ing and parenting to speech, environmental perception and habitat choice — reveals the operation of panhuman but domain-specific cognitive universals, and of identifying the selective pressures that would account for their evolution. In every case, the argument takes the form: "If you were a hunter-gatherer, it would be advantageous to be able to do X, therefore natural selection has led to the establishment of a psychological mechanism for X-ing". For example, if you were a hunter (presumed male) it helps to be able to navigate and to orient yourself in an environment while in pursuit of mobile prey; if you are a gatherer (presumed female) it helps to be able to remember where plants are growing from one season to the next: therefore, men are well endowed with mechanisms for orientation, women with mechanisms for spatial recall. And again, if you are a woman gatherer, it helps to attach yourself to a man who is a good provider of animal protein, and — during early pregnancy — to keep off plant foods that may be toxic to the developing embryo: therefore, natural selection leads women to be attracted to men with high resource acquisition potential and, when pregnant, to develop specific food aversions. Moreover, gatherers need to be alert to cues which signal the presence of different species of plants; colourful flowers furnish such signals in an environment that is otherwise monotonously green; therefore, natural selection has programmed humans to be attentive to flowers, which is why we find them so aesthetically pleasing. And so on. Some of these demonstrations are more convincing than others; what is striking about the volume as a whole, however, is that despite the editors' insistence on the centrality of hunter-gatherer studies to their enterprise, very little reference is made to what ethnographic and archaeological inquiries have actually revealed about hunting and gathering ways of life. I could find only two pages relating to properly documented material. Hunters and gatherers, it seems, can be whatever the evolutionary theorist makes them out to be — and some of these constructions are fanciful, to say the least.

This is not to say that individual contributions are without merit. Profet's paper on the effects of maternal ingestion of teratogens contains much material of intrinsic interest, and Fernald's on the melodic patterning of mothers' speech to infants is quite fascinating. Pinker and Bloom's paper on the evolution of language, the only one in the collection to have been published previously (in *Behavioral and Brain Sciences*, 1990), delivers a strong critique of the

argument of Chomsky and others that language could not have evolved by natural selection, while Shepard, in an intriguing paper on colour perception, offers the daring suggestion that the kinds of selective pressures that gave rise to the properties of colour vision would be experienced not just by human beings but by the animal inhabitants of *any* terrestrial environment on *any* planet capable of supporting complex forms of life. Overshadowing all these various contributions, however, is the key-note paper of the volume, by Tooby and Cosmides, which sets out the theoretical foundations for evolutionary psychology and its claim for superiority over competing approaches. Covering no fewer than 117 close-packed pages, this paper is almost a book in itself. Tooby and Cosmides do not mince their words: they state their case boldly and unequivocally. Some will doubtless regard the paper as a *tour de force*. For my part, while admiring the authors' audacity, I found it in turns repetitious, absurd, contradictory, dogmatic and offensive.

For Tooby and Cosmides, practitioners of the human sciences are of two kinds. There are the social scientists, prone to muddled thinking and lost in a fog of half-digested observations and incoherent theories. And there are proper scientists who, with principled arguments and rigorous standards of evidence, are spearheading a revolutionary new synthesis. And despite fine words in the introduction about how fields of inquiry, traditionally at loggerheads, should gracefully accept each other's intellectual gifts, Tooby and Cosmides have no such benign purpose in mind. They are out to ridicule social science, to show that it has nothing of value to offer, and to establish the invincibility of their own contrary agenda. This agenda appeals to the authority of Darwin to justify its combination of the information-processing language of cognitive science with an uncompromisingly mechanistic biology. Darwinism, they insist, must be right since no other approved explanation for the "machinery of life" is available. This dogmatic conviction, itself profoundly anti-scientific, apparently offers them *carte blanche* to discredit most of social science without bothering to read much or anything of what social scientists have written, and to make extravagant claims about human universals without consulting any relevant ethnography. Apropos the former, their reading in sociology and anthropology is apparently limited to a few snippets from Durkheim and Geertz, though having gained a convert in Sperber, his writings on the "epidemiology of representations" are also fre-

quently cited. Apropos the latter, Tooby and Cosmides treat us to such doctrinaire statements as that "infants are everywhere the same" (p.33), and that "the psychic unity of mankind is genuine and not just an ideological fiction" (p.79). Yet most of their supposed universals — for example that all humans attribute the behaviour of others to inner "beliefs" and "desires" (pp.89-90) — are ethnocentric inventions.

The principal target of Tooby and Cosmides' attack is something they call the Standard Social Science Model (SSSM). Since it bears little relation to anything that social scientists have written in the past, and none at all to what they write today, the provenance of this model is uncertain. There are some hints, however, that it may have its source in the construction of social science by certain biologists and psychologists who are more sympathetic to its project, but whose views Tooby and Cosmides oppose. Thus it seems that social scientists are cast as surrogate victims in a dispute that is in fact internal to biology and psychology. This dispute is, in essence, between those who advocate a view of the mind as a general-purpose culture-carrying vehicle, and those who view it, as do Tooby and Cosmides, as a network of functionally specialised computational systems, each dedicated to the production of solutions to particular adaptive problems. Now it may be that if one were challenged to design a machine that would reliably produce appropriate behaviour under a range of environmental conditions, the design would have to incorporate many of the computational devices that Tooby and Cosmides attribute to the mind. It does not occur to them, however, to question their assumption that human beings are pre-designed behaviour-producing mechanisms, nor do they realise that much recent writing in social science — dealing with questions of agency, intentionality and personhood — has shown this assumption to be quite false.

In place of the discredited Standard Social Science Model, Tooby and Cosmides aim to instal their alternative, the Integrated Causal Model (ICM). But their approach is riddled with contradictions. They claim to dispense with the archaic subject/object dualism of Western thought, while unwittingly displacing it onto the dichotomy between the evolutionary scientist (to whose sovereign imagination is revealed the architecture of nature) and the hunter-gatherer (tied to the execution of behaviour generated as the output of built-in, information-processing

algorithms). They reject as "incoherent" any opposition between innate and acquired traits, but proceed to reproduce it in their distinction between genetically inherited "metaculture" and socially learned "epidemiological culture". They argue that the "architecture of the mind" is a product of development, yet that it pre-exists as a set of design specifications *underwriting* development. Tooby and Cosmides might be advised, perhaps, to attend to the muddles in their own thinking before preaching to social scientists on the virtues of principled explanation.

Indeed, the editors of this volume launch their manifesto for evolutionary psychology from the deck of a sinking ship which is rapidly becoming swamped by the weight of its own contradictions. More often than not, works that triumphantly announce the emergence of a new era of scientific understanding turn out in retrospect to mark the terminal decline of an old one. In this, I predict, this book will prove to be no exception. However, if the approach it trumpets is rotten at the core — as I, for one, am sure it is — then the onus is on us to show *why* it is so wrong, and to come up with something better. *The Adapted Mind* may be read as a cautionary tale of what can happen if the problem of the evolution of mind is left in the custody of cognitive scientists and neo-Darwinian biologists. For this reason, if no other, social and cultural anthropologists should study it carefully. They cannot afford to make the same mistakes.

Raija WARKENTIN, *Our Strength is in our Fields: African Families in Change*, Dubuque, IA: Kendall/Hunt Publishing Company, 1994; 330 pages, \$21.95 US (paper).

By D. G. Hatt,  
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This book is an ethnographic study of people whom the author identifies as the "Fofu" (a fictitious name intended to protect the privacy of people whose lives are revealed in intimate detail) of northeastern Zaïre. It is cast in an avowedly feminist, experimental, dialogical and polyphonic genre, and is focused closely on the personal conflicts and dilemmas of Fofu individuals, mostly, but not exclusively, women. The information on these individuals is set in a matrix of the author's personal perspective as an often bewildered foreigner living among the Fofu, seeking to understand what was going on around

her. In each episode, we learn how she first encountered these individuals, how she interacted with them, and how her understanding of their situations evolved over repeated episodes of interaction. Much of the information is presented in the individuals' own words, often embedded in dialogues with the author, who makes no claims to privileged knowledge about either the people or their society. In this sense, the ethnography preserves many of the steps of the author's own process of discovery. It is, in sum, a striking and very up-to-date example of self-reflexive ethnography, and might, indeed, serve well as a textbook example both of the strengths and weaknesses of that methodology.

The book "reads" in many respects more like a personal narrative than a standard ethnography, and thus should be highly approachable to the non-specialist reader to whom it is addressed. Thanks to the author's unusually long sojourn among the Fofu, spanning a total of twelve years, we can see three-dimensional persons develop over time, as they absorb hurts and losses, some of them maturing as individuals along the way, and others coming to sad ends. The book's strength is in its ability to convey, vividly and directly, the texture and tone of the everyday life of ordinary individuals, and in particular, of their confusions and mutual misunderstandings as they cope with their dilemmas and struggle to interpret their existence to themselves and to one another. The author makes no assumption that there is some underlying matrix of cultural meaning shared by the Fofu which she, as a trained specialist, has somehow unlocked or decoded. On the contrary, her individuals are left pretty much to stew in their existential universe of humanly-posed meanings and shifting and contested interpretations.

This brings us to what is, in my view, the work's principal shortcoming. So great is the author's commitment to making her subjects' lives directly intelligible to the reader at the "human" level, and so assiduous her commitment not to exoticise them, that it is difficult to discover much that is either socially or culturally peculiar to the Fofu in the book. The subtext of Warkentin's ethnography is really that, though the Fofu might live in thatched huts and have polygamous households, and subscribe to rites and ceremonies unfamiliar to us, they are really, as individuals, people very much like ourselves. Such information on Fofu society or religion as is contained in the book is presented in small bits and pieces, scattered throughout the work, mostly as