

## ANTHROPOLOGY

## Diversity Disregarded

N. J. Enfield

In a 1966 paper “The zoological perspective in social science,” the aptly named authors L. Tiger and R. Fox pitched the importance of biology to social anthropologists. “The fact that man is the animal which has relatively recently succeeded in dominating all others does not mean that he is therefore exempt both from being an animal and from being studied as such” (1). It is a simple enough point. Biologists commonly catalog detailed patterns of social behavior of different creatures, specifying for each species many of its ways of social life: patterns of mating, arrangements for rearing of young, structures of coalition and dominance, ways of distributing resources, and so on. So, for example, each primate species has an identifiable profile in the domain of sexual reproduction: pygmy marmosets practice polyandry (one female with multiple males) while hamadryas baboons practice polygyny (one male with multiple females) and gibbons practice nuclear-family style monogamy (2). If the lack of significant observed intraspecific variation allows such generalizations to be readily made about these primates, then one might expect the same for humans. We are, after all, a single species.

But the ethnographic record shows that such generalizations across the human species are not possible. Thus, for instance, in human family life around the world we observe just about every known primate arrangement (3), including the just-mentioned polyandry (e.g., in certain Tibetan groups), polygyny (e.g., in many African groups), and monogamy (practiced globally though far from universally). As cultural anthropologists have long known and shown, patterns of social behavior in humans display the kind of diversity that we see across species in other animals. Accordingly, Tiger and Fox argued not that ethology should take over social science but that there should be a marriage of the two disciplines. Just as social scientists need to learn from



Visiting a spa. Japanese macaques (*Macaca fuscata*) at Jigokudani hot spring.

biology, they suggested, biologists “have a lot to learn from students of the most complex social animal of them all” (1). Why, then, nearly 50 years later, is this needed marriage yet to be arranged?

In *Games Primates Play*, primatologist Dario Maestriperi (University of Chicago) argues that human social behavior is best understood in evolutionary context. The author’s expertise is in the social behavior of macaques, and he draws on his extensive experience and understanding of the dynamics of social life among nonhuman primates. Using concepts such as social dominance and cost-benefit trade-offs to analyze human relationships, he pursues the claim that the

social ways of humans are not particularly different from those of our closest evolutionary relatives. Maestriperi entertains the reader by juxtaposing portrayals of the social behavior of humans with that of other primates. So just as a macaque may adopt the strategy of behaving submissively to all his seniors,

waiting patiently for succession through the dominance ranks, a “good citizen” works her way to the top of a software corporation by being ultra-prosocial. Or just as a macaque may brazenly risk all by attacking the alpha male, so the “young Turk” in a research lab arrogantly challenges authority. It’s fun to read, but while the macaque stories are based on carefully documented scientific accounts, the human stories are fictional creations of

the author. Although the book is ostensibly about the science of human social behavior, most of what we are told about humans comes from personal anecdotes (“me-search,” as the author terms it), Hollywood gossip, or Maestriperi’s mind.

The author’s intuitions may be spot-on for the human groups he has observed, but the reader has no way to check. A more critical shortcoming is that from his convenience sample of data on human social relations, Maestriperi takes it as fact that “human beings around the world act the same way in similar social situations.” He dismisses the idea that human diversity might be important. After noting “behavior is variable,” by analogy with the essential properties of cats (“cats are cats”) and apples (“apples are apples”)

he submits that “humans are humans.” He fails to engage with the question of cultural diversity and to provide evidence to support his strongly universalist stance. Such shortcomings are surprising given that cognitive science is now beginning to seriously grapple with the implications of human diversity (4–7). Once we face such diversity head on, we come to very different conclusions. For example, as philosopher Jesse Prinz notes: “The investigation of our natural constitution should be directed at explaining human plasticity. We can call that the study of human nature, but the label is misleading. It carries with it the dubious idea that there is a natural way for human beings to be” (8).

To understand human sociality, a phylogenetic perspective is necessary but not sufficient. We must combine it with a historical perspective (9, 10). The observed diversity of human behavior arises from the combination of our extreme behavioral plasticity and the cumulative historical effects of social learning in human populations. This combination makes us radically different from other primates.

None of my criticism takes away from the importance of what Maestriperi wants to say about primate social relations—that we are evolved creatures with certain common problems and certain common strategies for solutions to those problems. But *Games Primates Play* addresses neither the empirical facts of human diversity nor their implications. To bring about the needed marriage between social science and biology, we need to focus on the relationship between a universal, evolved substrate for sociality (our high-

**Games Primates Play**  
An Undercover Investigation  
of the Evolution and Economics  
of Human Relationships  
by **Dario Maestriperi**  
Basic Books (Perseus), New York,  
2012. 320 pp. \$27.99, C\$31, £11.99.  
ISBN 9780465020782.

The reviewer is at the Language and Cognition Group, Max Planck Institute for Psycholinguistics, PB310, Nijmegen, 6500AH, Netherlands. E-mail: Nick.Enfield@mpi.nl

grade social intelligence and strong propensities for cultural learning) and the important ways in which this substrate is embedded in, and sometimes even retooled by, culturally diverse ways of life.

#### References

1. L. Tiger, R. Fox, *Man* 1, 75 (1966).
2. R. I. M. Dunbar, *Primate Social Systems* (Croom Helm, London, 1988).
3. R. Fox, *Kinship and Marriage: An Anthropological Perspective* (Cambridge Univ. Press, Cambridge, 1967).
4. J. Henrich et al., *Behav. Brain Sci.* 33, 61 (2010).
5. N. D. Evans, S. C. Levinson, *Behav. Brain Sci.* 32, 429 (2009).
6. S. Beller et al., *Top. Cognit. Sci.* 4, 342 (2012).
7. S. C. Levinson, *Top. Cognit. Sci.* 4, 396 (2012).
8. J. J. Prinz, *Beyond Human Nature: How Culture and Experience Shape Our Lives* (Allen Lane, London, 2012).
9. W. H. Durham, *Coevolution: Genes, Culture, and Human Diversity* (Stanford Univ. Press, Stanford, CA, 1991).
10. R. Boyd, P. J. Richerson, *The Origin and Evolution of Cultures* (Oxford Univ. Press, Oxford, 2005).

10.1126/science.1225365

## PSYCHOLOGY

# What a Piece of Work Is Man

Barry Schwartz

About a century ago, psychology caught physics-envy flu, and behaviorism was born. If you can't measure it, you can't study it. You can't measure mental life, so study behavior. This rather pinched view of what it was possible to study (methodological behaviorism) grew into the view that it was all that was actually worth studying (radical behaviorism), and for almost half a century, that approach to understanding human beings dominated academic psychology. Though it left out much of what is most important about humans, behaviorism made substantial progress. In addition, it had built into it a focus on behavior—on action.

Then came the “cognitive revolution.” Investigators discovered that mind could be measured, and psychology was transformed. Much of psychology these days is the study of mind, whether in cognitive science, psychological neuroscience, decision science, affective science, or social cognition. The liberation from the tight methodological strictures

The reviewer is at the Department of Psychology, Swarthmore College, 500 College Avenue, Swarthmore, PA 19081, USA. E-mail: bschwar1@swarthmore.edu

of behaviorism has produced insights and understanding that one couldn't have imagined in behaviorism's heyday.

But the cognitive revolution has brought collateral damage. In its enthusiasm for understanding mind, psychology largely lost interest in behavior. As a result, the study of what moves people to act in the world has been neglected. Action demands knowledge and motivation. Our understanding of knowledge grew ever more sophisticated and complex, but our understanding of motivation remained primitive. We'd assume that motivation is about seeking pleasure and avoiding pain. It's about seeking rewards and avoiding punishments. It's about meeting biological needs. End of story. Knowledge is complicated, but motivation is simple.

Well, no. Motivation is complicated, too. And E. Tory Higgins has spent a long and productive career studying that complexity. Now, he brings his work together in *Beyond Pleasure and Pain*. It is a magisterial work. Though its core structure revolves around Higgins' own theoretical insights and empirical findings, it is encyclopedic in scope, ranging into almost every corner of psychology, historical and modern. A careful reader of this book will get a picture of the best that psychology, in general, has to offer.

In brief (although the book resists easy



**Motivated.** Eva Risztov and Haley Anderson racing to the finish of the women's 10-km marathon swim at the 2012 Summer Olympics.

summary), Higgins's view is this: Of course, people pursue pleasure and avoid pain. Of course, much of what people do is as a means to valued ends. But people want more—much more—than pleasurable lives. People also want truth: they want to know what is real. As Higgins points out, Adam and Eve taught us this lesson when they ate from the tree of knowledge in Genesis. And people want control: they want to be effective in the world. And even when they pursue valued ends, the means matter—both what people do and how they do it (“God loveth adverbs,” the saying goes). Moreover, these various motives interact in complex ways. They don't simply add

## Beyond Pleasure and Pain

How Motivation Works

by E. Tory Higgins

Oxford University Press,  
Oxford, 2012. 568 pp. \$69.95,  
£45. ISBN 9780199765829.

together or substitute for one another. And they are manifested differently in different people and by the same people in different contexts. One does not automatically enhance learning by making learning fun—by making it pleasurable.

Nor does one enhance learning by making it materially rewarding (a fact amply demonstrated by the failure of recent efforts to improve student performance with often substantial material incentives).

People are complicated, motives are complicated, and the key to successfully motivating people to act in desired ways is in finding or creating a fit between different motives, different individual predilections, and different contexts. The notion of “fit” is a crucial component of Higgins' account. So also is what he calls “regulatory focus”—the orientation either to promote good results or to prevent bad ones. People differ in which of these two orientations dominates their activities, but even people with a dominant promotion focus are in prevention mode some of the time.

Although targeted for nonacademics and gracefully written, the book is not an easy read. Higgins refuses to oversimplify. It takes him more than 400 pages to tell his story (with an additional 100 pages of notes and references). And that's too bad. Because anyone who tries to manage a workforce and thinks that getting productivity is just a matter

of finding the right system of financial incentives should read this book. Anyone who teaches and thinks that getting mastery from students is just a matter of finding the right incentives should read this book. And anyone who works in healthcare and thinks that getting people to live healthier lives is just about finding an effective way to give them the relevant information should read this book. In short,

nearly anyone who works with other people should read this book.

But most of the people who need to read *Beyond Pleasure and Pain* won't. They want simple answers, quick solutions. We have spent years thinking that there are simple solutions to life's complex problems, that there are one-size-fits-all magic bullets to promote healthy, informed, productive lives. Well, Shakespeare was right, and we've been wrong. Humans are quite a complex piece of work. And Higgins does a masterful job of both revealing and explaining that complexity.

10.1126/science.1227731

CREDIT: MIKE GROLL/AP PHOTO