Death, Hope and Sex

Steps to an Evolutionary Ecology of Mind and Morality

By showing how and why human nature is what is is, evolutionary theory can help us see better what we need to do to improve the human condition. Following evolutionary theory to its logical conclusion, *Death, Hope, and Sex* uses life history theory and attachment theory to construct a model of human nature in which critical features are understood in terms of the development of alternative reproductive strategies contingent on environmental risk and uncertainty. James Chisholm examines the implication of this model for perspectives on concerns associated with human reproduction, including teen pregnancy, and young male violence. He thus develops new approaches for thorny issues such as the nature–nurture and mind–body dichotomies. Bridging the gap between the social and biological sciences, this far-reaching volume will be a source of inspiration, debate, and discussion for all those interested in the evolution of human nature and the potential for an evolutionary humanism.

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For my mother and father,
my sisters and brother,
my wife and my son

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Preface

> If the misery of our poor be caused not by the laws of nature, but by our institutions, great is our sin.
>
> Charles Darwin, *Voyage of the Beagle* (1839/1936:781)

This book is about suffering, healing, and evolved human nature. It is about the mundane suffering that is wrought by our very nature, and why knowledge of this nature is our best hope for healing the suffering that it so often brings. The shape of my argument is this: (1) what our nature is, (2) why it is this way, and (3) why knowledge of why it is this way has therapeutic implications. I believe that my overall argument follows logically from my most basic assumption, which is that human beings have a nature. There are two reason why I am happy with this assumption. First, I believe that we are part of nature, part of life. Therefore, because evolutionary theory is our only scientific theory of life, for me, literally everything about life is ultimately explainable in terms of evolutionary theory or terms compatible therewith. Second, not only do I believe that human nature is a fact of nature, I also believe that value exists as a fact of nature and that knowledge of the value that is in life, including ourselves, would constitute an extremely valuable set of facts. Indeed, since the continuation of our species (our descendants) may depend on knowing and accepting our nature, I cannot imagine any more valuable set of facts. This book is about using evolutionary theory to understand human nature in order thereby to heal and preserve human life and life in general. It is therefore an essay in evolutionary medicine. It is an essay on the use of evolutionary theory as a rational basis for human problem-solving. It is therefore also an exercise in what Julian Huxley (1964) called "evolutionary humanism."

Human nature is that which we have in common despite our differences. It is that which transforms us from local partisans with cramped loyalties into *kosmou politēs*, "citizens of the universe," with allegiances to what we undeniably share: the qualities of life. In the coming pages I will paint a picture of human nature that is emerging from recent thinking at the interface of evolutionary theory and human development about

the evolved nature and contingent development of human reproductive strategies. I will describe this thinking and what we know about reproductive strategies in considerable detail in succeeding chapters. For now, however, it is enough to define a reproductive strategy loosely as the sum of all the adaptations – anatomical, physiological, psychological, and developmental – that enabled all of the (direct) ancestors of all organisms that ever lived to solve the problems that had to be solved in order for them to have left descendants. These adaptations are the qualities of life.

To set the stage for what follows I must emphasize at the outset that, while evolutionary biologists believe that organisms actually do possess – indeed *are* – such adaptations (and their by-products), and that many can be convincingly demonstrated, the concept of reproductive strategy is fundamentally an *assumption,* which means that it is a working hypothesis, a mental model, an image or a way of seeing, rather than an empirically established entity. An assumption is the *if* that comes before a *then*. In the act of determining whether some *then* that we predict actually exists, we have assumed that the *if* that precedes it is true. Or, as Pierre Ryckmans put it recently, "The saying 'to see is to believe' must be reversed: to believe [to assume] is to see" (1996:13). Darwin was getting at the same idea when he wrote to Alfred Russel Wallace in 1857, "I am a firm believer that without speculation there is no good and original observation" (Burkhardt 1996:183).

In evolutionary theory this has proved to be an extraordinarily powerful and productive problem-solving gambit. To assume that human nature is fundamentally, essentially about reproduction is to adopt what Dennett (1987, 1995; see also Fodor 1994) calls the "intentional stance," which is to assume that the qualities of life – adaptations – are *for* something, that they were *intended* by some imaginary agent (say, a blind watchmaker [Dawkins 1986]) to solve some problem. We do not *really* believe this, of course, any more than we believe that each and every biological trait actually is an adaptation (more on this later). However, the fundamental logic of the process of adaptation by natural selection that is embodied in the intentional stance allows us to make predictions about the nature of the problems that organisms in particular ecological or political–economic circumstances will face, which, in turn, often gives hints about the kinds of solutions (adaptations) that we might look for. This is what evolutionary ecology is all about. This why I believe that the concept of reproductive strategy can contribute substantially to new perspectives on human nature: because it helps us to understand the adap-

tive problems that each and every one of our (direct) ancestors logically had to have solved before each and every one of us could exist. Knowing what these problems are, I believe, will help us understand how their solutions are represented phenotypically – that is, how solutions to adaptive problems (the problems of life) are materially instantiated, literally embodied in flesh, blood, bone, neural networks, and other physicochemical structures and processes. Knowing what these problems are, in other words, may help us understand how the *ifs* of human reproduction give rise to their various *thens.* Knowing these *ifs* and *thens* would constitute a supremely valuable set of facts.

From these basic assumptions, I work toward the conclusion that it is not only possible, but indeed valuable to view human nature as a manifestation of our reproductive strategies and thus as a natural, biological phenomenon. I maintain, however, that this can be only cold comfort to outdated "greedy" reductionists who believe in some fixed, universal human nature. This is because an essential part of human nature is the way that it evolved to be reliably, adaptively affected during development by certain kinds of information about young human beings' local socioecology. From my combined evolutionary/developmental perspective, in fact, human nature comes to be seen as essentially, biologically, adaptively local, contingent, and emergent.[1] Not only does the view of human nature as a manifestation of our reproductive strategies increase our understanding of human nature, such a view also provides a rational, scientific basis for a theory of value and an ethical stance that combines reason and compassion, that says it is rational to be compassionate, and that can help us *ameliorate* our all-too-human condition. From assumptions about the essential reproductive function of human nature – that human nature is ultimately *for* reproduction – I develop a rational, evolutionary theoretical foundation for an ethical stance that aims to be therapeutic by increasing our practical reason. Indeed, in some ways this book amounts to one long argument against G. E. Moore's (1903) naturalistic fallacy – the idea that it is wrong to argue from facts to values. The structure of my therapeutic argument is the proposition that if human nature is a manifestation of our reproductive strategies, and if our reproductive strategies evolved to be reliably affected by certain features of the environments in which we develop, then the essence of human nature,

[1] Emergent in the literal sense of *coming into view*, not necessarily in the technical sense of *arising unpredictably* from what comes before (Dennett 1995:415).

the part we care about most, our minds and moral sentiments, must be at least partly contingent on these same environmental features.

And what environmental features are these? What are our minds and moral sentiments *for*? What particular problems did they evolve to solve? As I will show in the coming chapters, evolutionary theory and human development are (for different reasons) coming to conceive of these problems in terms of environmental risk and uncertainty, which is how evolutionary ecologists refer abstractly to threats to an organism's survival or its potential for leaving descendants. I believe that when human nature is viewed from a conjoined evolutionary/developmental perspective, our minds and moral sentiments emerge as essentially adaptations for predicting the future. Predicting the future reduces environmental risk and uncertainty, thereby reducing the chance of death, nurturing growth and development, and providing hope for future generations. For evolutionists, future generations are what reproductive strategies – sex – are meant to achieve. In short, predicting the future maximizes the chance of *reaching* the future. This, I shall argue, is the origin of value itself. And, because inequality is a major source of risk and uncertainty, it is also a reason for valuing equality and human rights.

Acknowledgments

This book has many beginnings. One was in Gregory Bateson's famous seminar at the University of Hawai'i. This was a heady affair, for I was just a first year graduate student, and doubly lucky to be enrolled while he was writing *Steps to an Ecology of Mind* (1972). His mark on my thinking about mind and nature has been enduring. I am also plainly indebted to him for my subtitle, which I have appropriated as a way of honoring his vision of the importance of ecology for understanding the mind.

Parts of the book began as papers presented at conferences. Portions of chapters 2, 3 and 5 were presented in November, 1991, in Teresópolis, Brazil, at the Wenner-Gren Foundation for Anthropological Research International Symposium, "The Politics of Reproduction," organized by Rayna Rapp and Faye Ginsburg (this paper is now Chisholm 1993). In December 1992, I presented another version of these ideas in the symposium, "The Anthropology of Romantic Passion," that Bill Jankowiak organized for the annual meeting of the American Anthropological Association in San Francisco (now Chisholm 1995a). In 1994, I made two preliminary attempts to sketch the whole argument. One was "Steps to an evolutionary ecology of mind," which I presented in April at the conference "Biocultural Approaches to the Mind and Human Development," which was organized by the Cognitive Studies Group of the Institute for Behavioral Research at the University of Georgia (now published in *Beyond Nature–Nurture: Biocultural Approaches to the Emotions*, edited by Alex Hinton and D. Harper-Jones [Cambridge University Press 1999]). The other was in December, in the symposium "Ethnicity and Health," organized by Linc Schmitt and Len Freedman for the annual meeting of the Australasian Society for Human Biology in Perth (now Chisholm 1995b). Portions of chapter 2 were presented in the symposium, "Nature, Culture, and the Question, 'Why?'" organized by Lutz Eckensberger and Michael Lamb for the biennial meeting of the International Society for the Study of Behavioral Development in Quebec City in August, 1996. Portions of chapter 3 were presented in the symposium, "Childhood in Life History Perspective," organized by Gilda Morelli and Paula Ivey for the annual meeting of Society for Cross-Cultural Research in Santa Fe in February, 1994 (now Chisholm 1996a). Finally, portions of chapter 4 were presented

at the symposium, "The Evolution of the Ontogeny of Enculturation," organized by Keith McNeal and John Bing for the Annual Meeting of the American Anthropological Association in San Francisco in November 1996.

Much of this book began in the minds of teachers, students, colleagues, and friends who over the years have shared their ideas with me and encouraged me by their example to forage for ideas and insights across traditional disciplinary boundaries. Many of them also read and commented on various early sections and versions of the book. I want to acknowledge in particular the inspiration and advice of Jay Belsky, Nick Blurton Jones, Berry Brazelton, Ric Charnov, David Coall, Ellen Dissanayake, Pat Draper, Robin Fox, Len Freedman, Sara Harkness, Henry Harpending, Murray Head, Sarah Hrdy, Mel Konner, Michael Lamb, Jane Lancaster, Jim McKenna, Neil Pelkey, Scott Rushforth, Barb Smuts, Charlie Super, Ross Thompson, Lionel Tiger, Noel Wescombe, and Carol Worthman. I am fortunate to have had such a collection of mentors.

The book also began with support from the Australian Research Council and the University of Western Australia. A grant from the ARC relieved me of my other academic reponsibilities for a term, resulting in the blissful but altogether necessary luxury of writing full time. UWA, through its Deputy Vice-Chancellor, Professor Alan Robson, provided an additional term of leave. This second consecutive semester of leave more than doubled the value of the first, and I am grateful to Alan for his support and vision.

As might be expected of a developmentalist, I also discern beginnings for this book in my past. My father was an engineer and my mother a poet, so for me Snow's two cultures were so familiar and warm as to become one. My brother Doug became an engineer as well, and from him and my father I learned long ago that things can be "reverse engineered." From my sister Jean I learned more about engineering (managing) social relations. I am especially grateful to her for her concept, and practice, of the "ideology of concern."

Finally, this book had a number of important beginnings all in one person, my wife, Victoria Katherine Burbank. I am enormously grateful for her inspiration, guidance, grace, and insight. She was the one who showed me that, although inequality is a social fact, it has critical biological implications and might therefore serve as another basis for a unified biosocial science.