

## THE TANGLED WING: BIOLOGY AND HUMAN DESTINY

"The contents of this book are known to be dangerous." With this statement, Melvin Konner, a biological anthropologist and author of The Tangled Wing: Biological Constraints on the Human Spirit (Harper, Colophon Books, 1983), confronts the serious reader consulting the footnotes for the first time. The subject of the book, the biological aspects and determinants of human behavior, is indeed considered dangerous by many--dangerous to fairness, to decency, to equality of opportunity, and to the fragile co-existence of different peoples in a nuclear world.

If we concede that behavior is at all determined or even constrained by physiology, or anatomy, themselves determined in part by genes, then might not populations differ genetically in behavior just as they do in other genetically influenced traits? And behavioral genetics has a terrible history of misuse by social planners. It is only a short leap from the idea of inherited controls, or limits on behavior, to the conclusion that differences between the behavior or performance of different groups are inborn and cannot be changed. From that conclusion to the systematic neglect, oppression, or slaughter of "inferior" groups is a road too often taken in our century.

From its founding as an academic discipline, American anthropology has come down squarely on the other side. Anthropologists have stressed the shaping of a person's behavior by his or her culture. They have argued that hereditary differences in behavior among human populations do not exist. In large part, the statements of anthropologists on the respective determining roles of race and culture have had a beneficial effect in eradicating prejudice and in instigating social programs to overcome disadvantage. So why should an

anthropologist, even a biological one, argue the case for biological constraints on human behavior? Quite simply, the case has become too strong to ignore. And an understanding of our biological heritage may yet be the key to our future humanity in all the senses of that word.

In The Tangled Wing, Konner integrates insights from the social sciences (anthropology, sociology, psychology), the biological sciences (ethology, evolutionary theory, neuroanatomy, neurophysiology, and biochemistry), and the humanities (history, literature, philosophy) to examine human thought, mood, and action on many levels. An anthropological perspective, both cross-cultural and evolutionary, is clear at the outset. In the section "The Quest for the Natural" the San (bushmen) are seen as in some way representative of the way of life lived by our evolving ancestors whose progress is briefly reviewed in "The Crucible." Equally emphasized, however, is the viewpoint of biology. Konner discusses the role of evolutionary processes and inheritance in the determination of social behavior (sociobiology), and the anatomy and physiology of the brain in relation to both behavioral consequences and genetic variations.

In light of the two perspectives of anthropology and biology, Konner proceeds to review current theories on the origins, anatomy, physiology, and purpose of sex differences ("The Beast with Two Backs"); human emotions ("The Well of Feeling"); and our most characteristic trait, language ("Logos") whose uniqueness is not diminished by its presence, in very attenuated form, in our animal relations near and far. As the book progresses, Konner presents science as perhaps the most fundamental form of humanism. Science seeks not to reduce the human condition to a series of biological processes but to extoll and explore the furthest potential of the human mind, to recognize the limits of

the knowable, and to keep alive a sense of wonder and mystery. In the first efforts of a baby to name the objects of her universe,

"what we are looking at is the most rudimentary form of what may be the key to being human: a sort of wonderment at the spectacle of the world, and its apprehensibility by the mind; a focusing, for the purpose of elevation; an intelligent waking dream. In that capacity, it seems to me, we find our greatest distinction, and in that, and that alone, may be our salvation."

Part II of The Tangled Wing takes up one by one the biological basis of seven human emotions: rage, fear, joy, lust, love, grief, and gluttony. Each discussion moves from historical views to new explanations; from the societal level of human interaction to the psychology of the individual to the molecular level of brain biochemistry; from the conclusions of rigorous laboratory investigation to the insights of poetry. Konner also examines the existence of such states as grief, love, and joy in non-human societies, especially those of our nearest animal relatives, pointing out as well what we know of these emotions' accompanying physiology. Each chapter ends on a dual note: the biological continuity we share with other species and our human uniqueness. Although the latter may also derive in part from our biology, it is ultimately mysterious.

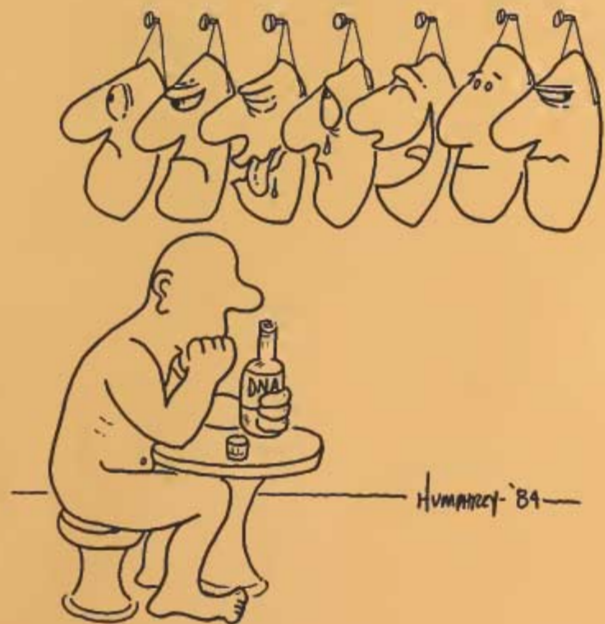
"What we must hope for, with [Wallace] Stevens, is some sort of recognition that the grieving is part of what makes life precious, that we would not love life nearly so well without it. We could perhaps be less angry at it. We could try, at least, to stop taking it out on each other. Perhaps we could get together sometime and shout turbulent praises at the sun."

In a similar way, the chapter on gluttony ends on a note of anguish for

the children of our middle class society whose endless and insatiable demands for material goods, encouraged by us, are beyond all reasonable needs of the human organism. If we do not teach them to distinguish need from want, fear, or anger, "we leave them languishing eternally, like Ciaccio [the glutton of Dante's Inferno], in the rain; a vividly Dantesque fate in which the very source of life's plenty becomes an instrument of torture without end."

Overall the book is beautifully written and displays a broad range of humanistic and scientific scholarship, a worthy successor to the tradition of such anthropological writers as Loren Eiseley. Yet the sections dealing with physiology, and biochemistry will be tough going for those unfamiliar with the rudiments of these sciences. In large part, this is due to the total lack of illustrations, which in turn suggests that our reliance on "Logos" can always be improved with some communication along a more common animal channel.

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In the concluding sections, Konner faces and argues down the chimera of biological determinism. Behavioral biology is dangerous, difficult, and potentially explanatory. It flies in the face of seventy years of anti-biological-reductionism arguments in American anthropology. Yet our biology includes our plasticity, by which biological, environmental, and cultural forces change and direct our individual natures and our common behavior. While the biology of behavior could lead to pessimism about the perfectability of human society, not to understand our biology is to lose control of our destiny. Our biological potential and our destiny together are "the tangled wing" of the title, the twisted fossilized wing of an archaeopteryx, "a piss-poor reptile and not very much of a bird" but the herald of a magnificent future.

Alison S. Brooks