

THE SOCIAL AND THE BIOLOGICAL: A NECESSARY UNITY

by Daniel G. Freedman

"It is undoubtedly true," writes the sociobiologist David P. Barash, "that genetic factors are less influential in the behavior of *Homo sapiens* than they are for any other species."¹ The image I get from remarks like this, inasmuch as man has no fewer genes than other mammals, is that of DNA molecules sitting around and twiddling their base pairs. If Barash is talking about learning, we will get none without the active, appropriate genes. If the reference is to free will, try *not* using your free will. It is clearly not possible, for human free will is as basic as the heart beat, and logically each must be accounted for in the DNA blueprint for the species.

ON THE PERVASIVENESS OF THE BIOLOGICAL

Indeed all attempts at distinguishing human products from human nature are logical travesties. One finds parallelisms, as when Richard Dawkins distinguishes genes (units of biological evolution) and memes (units of cultural evolution). The typical parallelist argument is that repositories of ideas, such as books, are the stuff of cultural memory, the genes the stuff of biological memory.² This is no more than sleight of hand. The writing of books was a historical development in some groups of man—a development that arose from man's ability to plan for the future, take cognizance of the past, and think of the "merely possible," all aspects of the human capacity to use abstractions.³ Since we are the only species so to use abstraction, and since it

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is universal among us, it is a species-specific capacity and, by any zoologist's definition, a facet and product of human biology. Where then is this neat boundary line between the book and man's biology upon which psychophysical parallelism is so dependent? Not to denigrate the written or spoken word, but the distinction might be made as well between man's feces and his biology.

Is there then no way to distinguish biological from cultural events? Surely there must be examples of "purely" cultural events that contain no hint of biology. Let us examine as one such possibility the practice of circumcision among some Australian aboriginal tribes. What can be biological about human circumcision since it is entirely an act of invention, tradition, and will? But look at it within this context: All human tribal groups seek to distinguish themselves from their neighbors and frequently do so sartorially and through facial scarification, tattooing, etc. This need to separate oneself as a visibly distinct group is part of what for three quarters of a century we have called ethnocentrism and what for some forty thousand years apparently has characterized Australian aboriginal tribal groups.⁴ As best as we can reconstruct it, from a single migration across a temporary land bridge, all of the continent was taken over gradually by the successive fissioning of groups, with each newly spawned group doing its best to gain distinction from its generator.⁵

Toward this end we find that it is rare that adjacent tribes circumcise, although the practice is continentwide, thus yielding the hypothesis that circumcision is one means of achieving tribal distinction from neighbors. Similarly all Australian languages, even those of immediate neighbors, are exceedingly distinct and usually mutually unintelligible (save in the bilingual), and Australia was a virtual Tower of Babel in Captain Cook's time. Thus the proliferation of languages too appears to be in the service of maintaining tribal distinctiveness and identity.

We now are prepared to return to the question of whether aboriginal circumcision is a nonbiological, purely cultural act. As I have tried to argue elsewhere, all of tribal *Homo sapiens* can be characterized as tribal-centric, and ethnocentrism indeed may be part of our primate heritage.⁶ Given this expanded view of biology, cultural acts that contribute to ethnic identity are not without biological importance. Indeed the aegis of biology has grown so much that it is now problematic whether any activity or behavior can be reasonably distinguished as nonbiological. D. O. Hebb, for example, deals with this issue by stating that behavior is best thought of as 100 percent acquired and 100 percent inherited.⁷

I should like to state my deeply held conviction (admittedly here unproved) that psychophysical dualism in any of its current disguises (parallelism, isomorphism, interactionism, transaction) is not viable and that culture and biology do not separate any more than do mind and body, heredity and environment, or innate and acquired. My position is much like D. Suzuki, the Zen philosopher, who told an audience of neuropsychiatrists: "You have taken mind and body apart, and you are now stuck with fitting them back together."⁸

In my experience most Westerners, myself included, find it nearly impossible not to make that distinction, and "interactionism" is the closest most come. Interactionism, however, does not relinquish dualism or the causal model; it instead "cyberneticizes" the relationship. I should like therefore to state that in the research which follows I am specifically eschewing a model in which biology "causes" culture, or vice versa. It is instead a model which considers the two as aspects of a common process, with no directionality implied (even if the language used seems to do so).

RESEARCH FINDINGS

I will seek here to join two fairly coherent idea systems that for the most part have been treated independently by scientists. One is culture relativity, the idea that each culture differentially encodes the world about it. This is probably the major axiom of modern anthropology. The other idea derives from evolutionary biology and holds that relatively isolated populations of the same species invariably will exhibit differential gene frequencies. It is on such variation that evolution is said to be based, and so it too is a central, if not the central, axiom within evolutionary biology.

I will present evidence that representative samples of the major races (sub-Saharan Africans, European Caucasoids, American Indians, and Chinese Orientals) vary in significant ways at birth and that these apparently biological variations influence the way the respective cultures in these areas encode their social and conceptual worlds.

It is in a sense an extension of the Australian aboriginal example. There I made the claim of a "drive" toward differentiation between neighboring populations. If extended to the world as a whole, the prediction is that, despite a common origin, the more removed peoples are from one another geographically, the greater the accumulation of biological and cultural differences.

Inasmuch as this is a politically sensitive area and any such attempt is open to charges of racism (i.e., genotype *a* invariably yields behavior *a'*, while genotype *b* invariably yields behavior *b'*), let me state

that modern geneticists have no such notion of fixed relation between genotype and phenotype; rather it is understood that genotypic expression (the phenotype) may be modified thoroughly by changing environmental conditions.

I start with a *précis* of our work with newborns of different ethnic and racial groups.⁹ Our first study was a comparison of twenty-four Chinese-American and twenty-four European-American newborns, all born in the same San Francisco hospital and equated on a large number of potentially relevant variables. We used behavior scales developed by Dr. Berry Brazelton and me—scales that measured temperament, sensory development, maturity of the nervous system, motor development, and social interest. Differences began showing up almost immediately. Caucasian babies cried more easily, and once they started they were harder to console. Chinese babies adapted to almost any position in which they were placed; for example, when placed face down in their cribs, they tended to keep their faces buried in the sheets rather than immediately turning to one side, as did the Caucasians. In a similar maneuver (called the “defense reaction” by neurologists), we briefly pressed the baby’s nose with a cloth. Most Caucasian and Afro-American babies fought this maneuver by immediately turning away or swiping at the cloth with their hands, and this is reported in most Western pediatric textbooks as the normal, expected response. The average Chinese baby in our study, however, simply lay on his back and breathed through his mouth, “accepting” the cloth without a fight.

Other subtle differences were equally important but less dramatic. For example, both Chinese and Caucasian babies started to cry at about the same points in the examination, especially when they were undressed, but the Chinese stopped sooner. When picked up and cuddled, Chinese babies stopped crying immediately, as if a light switch had been flipped, whereas the crying of Caucasian babies only gradually subsided.

In another part of the test we repeatedly shone a light in the baby’s eyes and counted the number of blinks until the baby “adapted” and no longer blinked. It should be no surprise that the Caucasian babies continued to blink long after the Chinese babies had adapted and stopped.

It began to look as if Chinese babies were simply more amenable and adaptable to the machinations of the examiners, while the Caucasian babies were registering annoyance and complaint. It was as if the old stereotypes of the calm, placid Chinese relative to the more excitable, emotionally changeable Caucasian were appearing spontaneously in the first forty-eight hours of life.

We later tested thirty-six Navajo newborns, and the results paralleled the stereotype of the stoical, impassive American Indian. These babies outdid the Chinese, showing even more calmness and adaptability than we had found among them.

We filmed the babies as they were tested and found reactions in the film we had not noticed. For example, the Moro response was clearly different among Navajo and Caucasians. This reaction occurs in newborns when support for the head and neck is suddenly taken away, and tests for this response usually consist of raising and then suddenly dropping the head portion of the basinet. With most Caucasian newborns, after a four-inch drop the baby reflexively extends both arms and legs, cries, and moves in an agitated manner before he calms down. Among Navajo babies, crying was rare, there was little arm extension, limb movements were reduced, and calming was almost immediate. This difference was reported originally by Clyde Kluckhohn, and it has been replicated since by J. Callaghan, a coworker at the University of Chicago.¹⁰

James S. Chisholm of Rutgers University, who, like Callaghan, has studied infancy among Navajo over the past several years, reports that his observations are much like my own.¹¹ In addition, he followed a group of young Caucasian mothers in Flagstaff (some sixty miles south of the reservation, in Arizona) who had decided to use the cradle board. Their babies complained so persistently that they were off the board in a matter of weeks, a result that should not surprise us, given the differences observed at birth.

Navajo and Chinese newborns may well be so much alike because Navajo were part of a relatively recent emigration from Asia. Their language group is called Athabaskan, after the lake in Canada around which they originally settled. The Navajo and Apache contingents went on to their present location in about 1200 A.D. Even today a significant number of words in Athabaskan and Chinese appear to have the same meaning, and if one looks back several thousand years into the written records of Sino-Tibetan, the number of similar words makes clear the common origin of these widely separated peoples.¹²

As will be seen below, it is important to note that we also tested a series of Japanese newborns and found that they were rather more sensitive and irritable than either the Chinese or Navajo babies. In other respects, though, they were much like them, showing a similar response to consolation and accommodating easily to a light on the eyes or a cloth over the nose.

Following these studies of newborns, we naturally become interested in what happens when such babies grow and interact with

those around them. In one study Joan Kuchner observed ten Chinese and ten Caucasian mother-infant pairs over the first three months of life.¹³ Again the two groups of babies were different from the start, and it soon became apparent that Chinese mothers were less intent on eliciting response from their infants. By the third month Chinese infants and mothers rarely vocalized to each other compared to the Caucasian pairs. This was exactly what another scientist, William Caudill, had shown as differentiating Japanese and Caucasian mother-infant pairs in the third month. He had given his data a strictly environmentalistic interpretation, but we now know that these results probably were based on the developing coalition between biologically unique babies and biosocially unique mothers.

This is not to say that mothering will not or does not change under differing social conditions, and Caudill's experiment with third generation Japanese-American mothers (who far outvocalized Japanese mothers in Japan and also their Caucasian counterparts at a 2:1 ratio) amply demonstrates this truth. Apparently, in their role as Americans, Japanese mothers exhibit a more outgoing, aggressive phenotype and with this extra effort bring their infants' vocal responses almost to the level seen in an American Caucasian control group.¹⁴ That is to say, an idealized American phenotype can be and probably is achieved in a great variety of ways.

In the same vein we tested groups of Swedish and Italian newborns with the obvious hypothesis born of national stereotypes: Swedish babies, like Swedes, should be more "self-contained" than Italian babies. The results were quite the reverse, and Italian babies (from Turin) were more passive and less irritable than a comparable sample of babies from Stockholm. Had the study been done "blind," we certainly would have guessed that the Italian babies were Swedes and vice versa.¹⁵

Similarly Callaghan found that Navajo babies continued to show greater passivity than Caucasian babies throughout the first year and that Navajo mothers seemed to do best with such babies; however, while the older generations preferred less active and less excitable babies, younger Navajos expressed a preference for more stimulation by mothers, and presumably they will so shift in the rearing of their children.¹⁶

It should be clear then that our view does not demand or even predict fixity of behavior, but it must be admitted that it does lead to conservative predictions on the potential influence of environmental impositions.

What then happens to our Oriental-Caucasian differences beyond infancy? Do similar contrasts continue to characterize these popula-

tions? Studies of older children do indeed bear out the theme of relative unexcitability in Chinese and Navajo as compared to Anglos (the term used in the Southwest for Caucasian). In an independent research project at the University of Chicago, Nova Green studied a number of nursery schools. Following observations in Chicago's Chinatown, she reported:

Although the majority of the Chinese-American children were in the "high arousal age," between three and five, they showed little intense emotional behavior. They ran and hopped, laughed and called to one another, rode bikes and roller-skated just as the children did in the other nursery schools, but the noise level stayed remarkably low, and the emotional atmosphere projected serenity instead of bedlam. The impassive facial expression certainly gave the children an air of dignity and self-possession, but this was only one element affecting the total impression. Physical movements seemed more coordinated, no tripping, falling, bumping, or bruising was observed, nor screams, crashes or wailing was heard, not even that common sound in other nurseries, voices raised in highly indignant moralistic dispute! No property disputes were observed, and only the mildest version of "fighting behavior," some good-natured wrestling among the older boys. The adults evidently had different expectations about hostile or impulsive behavior; this was the only nursery school where it was observed that children were trusted to duel with sticks. Personal distance spacing seemed to be situational rather than compulsive or patterned, and the children appeared to make no effort to avoid physical contact.¹⁷

Another graduate student, Sheila Smith, compared a new crop of nursery schoolers in the same Chinese preschool, this time with a group of Jewish preschoolers on Chicago's north side. In addition to corroborating Green, she found that unlike the Chinese the Jewish children almost always were engaged in flights of fantasy—the girls were most often emergency-room nurses and doctors or patients, while the boys were most often interstellar warriors. Newcomers into this nursery school immediately were included in the plot, and a new lad might find himself threatened with a laser gun on the possibility that he is a member of the enemy camp. Thus far the Chinese children, who watch the same TV shows in the same amounts, have shown no such predilection for extended fantasy games. Smith is continuing this work with more careful studies of fantasy behavior among the Chinese children.¹⁸

On a visit to China a group of developmental psychologists, including William Kessen, Urie Bronfenbrenner, Jerome Kagan, and Eleanor Maccoby, was described as baffled by the behavior of Chinese children:

They were won over by the Chinese children. They speak of an "attractive mixture of affective spontaneity and an accommodating posture by the chil-

dren”: of the “remarkable control of young Chinese children”—alert, animated, vigorous, responsive to the words of their elders, yet so unnervingly calm, even during happenings (games, classroom events, neighborhood play) that could create agitation and confusion. The children “were far less restless, less intense in their motor actions, and displayed less crying and whining than American children in similar situations. We were constantly struck by [their] quiet, gentle, and controlled manner . . . and as constantly frustrated in our desire to understand its origins.”¹⁹

The report of course is strikingly similar to Green’s and Smith’s descriptions of the nursery school in Chicago’s Chinatown. When making these comparisons, the psychologists obviously had in mind classrooms filled with Caucasian or Afro-American children.

There is a fair-sized literature on Chinese personality, but suffice it to report here a recent study by K. A. Abbot of Chinese teenagers and their families, using the California psychological inventory.²⁰ Based on data from Cantonese in Taiwan and from newly arrived Fukienese in San Francisco, Abbott’s discussion of “basic Chinese personality” is in clear concordance with our description of Chinese temperament. On the Chinese-Caucasian comparisons, Chinese score higher in self-control and passivity while the Caucasians are higher in achievement via independence. In general Abbot finds the Chinese more conforming to social demands, the Caucasians more aggressive, and these are, as usual, attributed to differences in social learning. To date, however, I have seen nothing in the literature to contradict the somewhat different notion that there is substantial continuity from birth through old age in Chinese/Caucasian biocultural differences.²¹

SOME IMPLICATIONS

The broader implications of these findings started creeping in on me as we were testing the Chinese infants in San Francisco. At that time I made a number of visits to the Avery Brundage Collection of Oriental Art at the De Young Museum, and I could not resist the thought that only grown-up versions of our Chinese babies could have produced art like this! There was, for example, the calm quality of a Chinese jade horse, compared to the tempestuousness of a Roman terra-cotta one. Since then, after reading such classics in art history as I. Chiang’s *The Chinese Eye*, it has become clear to me that Eastern art and Western art have had distinctive flavors: Western art consistently has made its males heroic, whereas even the military heroes of Chinese and Japanese painting appear in sedate, unemotional, and conventionalized poses, and only the gods and demons were allowed emotions.²² Furthermore, Chinese landscape art, the most prevalent form of canvas painting, simply never contained recognizable human fi-

gures. Human hubris was kept below threshold, and the stick figures are a message that nature is master, not man. I do not believe it far-fetched to say that there could be no Chinese Michelangelo.

Although noncommercial Navajo art is restricted to religious sand painting, Oriental philosophy and Navajo philosophy are strikingly similar in feeling. In trying to make this point I once tricked a group of colleagues at a scientific meeting by purporting to read some lines of a Navajo elder:

Whenever someone sets out to remold the world,
experience teaches
That he is bound to fail.
For Nature already is as good as it can be.
It cannot be improved upon.
He who tries to redesign it, spoils it.
He who tries to redirect it, misleads it.

In fact, this is a translation of lines written by Lao-Tze in the sixth century B.C. (verse 29), but anyone knowledgeable about the Navajo knows the verse speaks for them as well as the Chinese.²³ Incidentally, unlike Confucius, Lao-Tze consistently has retained great esteem throughout China's subsequent history, although his current position of favor is not at all clear.

Compare also, in this vein, the nature of Eastern and Western religious leaders. Consider here briefly Christ as social activist and martyred hero, Buddha as the world's foremost example of internal enlightenment achieved via a lifetime of contemplativeness. Why is it that Buddhism spread only eastward from India and that, to this day, Christianity has not gained a major philosophical hold on any Eastern people? (I think a reasonable case has been made that its influence has been largely economic and political, as in prewar North Vietnam or in Japan today). The simplest but not, I trust, a simplistic answer is that Buddhism fit with the more placid Eastern temperament and that Buddha, more than Christ, exemplified an ideal personality and life history for Oriental populations.²⁴

SELF VERSUS GROUP: AN OLD CHINESE DILEMMA

I am carrying on in this vein with the extreme uncertainty born of the intuitive method. While early temperament and later philosophic and religious preferences seem to fit, we are rummaging in areas with enormous literatures, and alternate explanations could be manufactured easily. I nevertheless propose to go a bit farther largely because I was impressed with how well a recent publication by Mark Elvin fits the present argument. Elvin, an economic historian, originally gave it

as a lecture which he called "Self-Liberation and Self-Immolation in Modern Chinese Thought."²⁵

Elvin notes that "many Chinese thinkers in the first half of the twentieth century present a paradox. They begin with a search for the liberation of the self. Again and again they end with the desire for the *extinction of the self: for its absorption into a collective consciousness*, the homogenization of its individuality, its perpetuation as a fragment of a greater Social Self, or its assimilation into the flow of a progressing human history."²⁶

This paradox, he says, goes to the heart of the modern Chinese feeling for life, and it is best embodied in the work of the great Chinese reformist T'an Ssu-t'ung in his *A Study of Altruism*, a very modern sounding title indeed, although published in 1898. In the preface T'an expressed the pain he felt as a youth: "From the time I was young until I was grown up, I everywhere encountered the afflictions of the bonds and relationships [of conventional morality]. I swam deep in their bitterness. It was almost something that a living person could not endure. The burden was deadly, and yet one did not die."²⁷

These are clearly akin to the feelings of sensitive adolescents in our culture; nor are his radical demands for change particularly foreign: "First we must break through the net of profits and remuneration. Then we must break through the net of conventional scholarship. . . . Then we must break through the net of moral norms. Then through the net of [believing in] Heaven. Then through the net of the world's religions. Last of all, we must break through the net of Buddhism."²⁸ However, in his utopian vision we begin to see an element not seen in Western utopian thought: "In the government of the world, there should be an All-Under-Heaven, but no nation-states. . . . Since everyone is free, no one should be the citizens of any particular state. If there are no states, then boundaries will dissolve, wars cease, suspicions end, *distinctions between self and others vanish, and equality appear*."²⁹

Elvin points out that T'an's goal, then is a collective enlightenment. For this the self as such must be extinguished in the totality. Consider these words, strange to Western ears, from T'an's closing pages:

As every person, every place, every time, and every phenomenon is different, how can there be a means whereby others and the self can communicate? The fault lies in the mutual incompatibility, or, in other words, in [the uniqueness of each] consciousness. If we now seek intercommunication . . . *we must extinguish consciousness*. If we want to extinguish consciousness, we must change the way in which the ethers of our brain move. Contact with the outside must be cut off. Internally, we must return to simplicity. We must

become simpler and simpler until nothingness is reached, at which point consciousness will have been destroyed. When consciousness has been destroyed the self will have been removed along with it. When the self has been removed, differences will have been annihilated, equality appears. When equality has been attained, every entity will be penetrated by an awareness of every other entity, with not the least barrier between them. This is the culmination of the intercommunication of self and others. . . . This is altruism.³⁰

Thus has the transformation been effected. T'an's call for the liberation of the individual self has become the demand for its disappearance. Consider what a very long way this was (and is) from the American Dream.

Elvin goes on to show how much the same conflict and solution are present in the four other major Chinese philosophers who wrote between 1890 and 1950, including Feng, who had given allegiance to the Communist revolution, and Ai, whose *The Philosophy of the Masses* (1949) is, according to Elvin, the most systematic exposition of Chinese Communist ideology. One does not have to distort Ai's words to align them with the nineteenth-century quotations of T'an, although now the rhetoric is Marxist:

If you are resolved to become a very good camera, and able to have an accurate knowledge of everything, then you must first resolve a basic question, namely, you must take the standpoint of the workers and the broad mass of the people. On what basis can you be reckoned to have taken the standpoint of the broad mass of the people? You must be able to make *yourself whole-heartedly, wholemindedly loyal to the interests of the people*, that is, you must resolve that all your work, and all your ability, shall be used for the task of liberating the broad mass of the people; and that you will sacrifice all, without begrudging it, to the achievement of this goal. . . . If you are able to be like this, without the slightest individual selfishness, and vileness of the large landlord or large bourgeois classes, then, when you examine a question, you will have no prejudices, no anxieties, to impede your understanding the true nature of the question to the bottom, then you can obtain a correct knowledge of everything.³¹

Again liberation of the self comes only with total immersion into the mass ego of society at large.

It is perhaps unnecessary to present comparable excerpts from Western philosophers to show the relatively unambiguous importance of "freedom to be one's self" or the imperative that the "good society nurtures individuality."³²

Western Marxist philosophers have stressed, at the psychological level, the "anomie" produced when one is merely a cog in a wheel; for example, capitalist suppression of individuality is Herbert Marcuse's major theme.³³ Even René Descartes's emphasis on the first person singular in "I think, therefore I am" is an edifice to the primacy of the

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individual.³⁴ Clearly these differences between East and West are enduring and pervasive.

IS/OUGHT

It is often the case in a symposium organized around an idea that one writes the paper uppermost in his mind and then tries to fit it into the symposium theme. And so it has been with me. The theme of this paper is obviously that major issues of thought are perceived in substantially different ways by peoples of substantially different biosocial backgrounds.

As I already have implied, religions and ethical systems are not exempt but instead provide good examples for this argument. While it may be comforting to idealize a universal belief system to which all men can adhere with equal faith, it would appear that on close examination no such universally pristine set of injunctions of beliefs is known. Aside from commonplaces such as the golden rule, which probably all peoples can assent to, variety indeed spots the global landscape.

As Shusaku Endo asked in his moving novel, *Silence*, while you can take Catholic Christianity to the Japanese, do the Japanese bring to Christianity the same order of belief as did those martyred Portuguese missionaries who brought them God's word? Endo's answer is that the Japanese see God quite uniquely and that Eastern is not identical with Western Christianity. By comparison, the Japanese version of Chinese Buddhism is but a baby step removed, despite the fact that Japanese and Chinese writers are impressed by differences between the two. To a Western student of culture difference, Japan and China clearly trod many of the same pathways even as they share the aforementioned dilemma around differentiating group from self.³⁵

In the same vein S. Malik has compared preferred modes of thought among Caucasian and African graduate students in the Chicago area, including several African clergymen, and it is apparent that the very opposition of "is" and "ought" is not understood as a meaningful issue by a significant number of the African subjects. "Ought" is seen in strictly concrete, political terms, in definite realistic planning, not at all as a philosophic issue or a moral injunction. The fact that this is true of the clergy as well has led Malik to the tentative conclusion that there is no direct equation between, say, Catholic Africans and Catholic French, or, for that matter, between Muslim Africans and Muslim Arabs.³⁶ While Malik interprets these data in the usual environmentalist framework, stressing "socialization," my preference is to substitute the word "biosocialization." Given more time

and space than this paper allows, I could accrue a story line much like the Chinese-Caucasian saga starting with, say, African-Oriental differences at birth, which are striking and considerable, running through early group differences in behavior, and again diffusing into differences in preferred modes of thought.³⁷

I realize that this emphasis on differences between groups of mankind reads contrary to the 1964 United Nations statement on race and to the espoused goals of such anthropologists as M. Sahlins and zoologists as R. C. Lewontin.³⁸ The message here, however, is that a unity which depends on biological sameness is unrealistic and without foundation. The unity we should be seeking instead should take open cognizance of the substantial sociobiological differences in preferred modes of behavior and thought that characterize mankind at all levels, from individuals through subgroups to the larger racial divisions. If despite demonstrable differences we can still respect one another, then we indeed shall have achieved a worthwhile unity.

Nor can we depend on "modernization" or "Westernization" as a basis for achieving full understanding and communication with, say, African nations, for studies such as Malik's clearly show that that is insufficient to do the job. I have suggested elsewhere that the best equipped architects of racial, philosophical, and religious understanding may be the half-breeds of the world, those who biosocially bridge two or more worlds.³⁹ (Andrew Young is one of the best recent examples I can think of.) It does follow from all I have said above.

The message here is a simple one. Questions such as is/ought surely will be addressed in different ways by comparably competent people who differ in biocultural background. Currently Western theologians most likely will see it as an issue of moral action versus immoral inaction, and solutions will tend to appeal to the individual at the level of his or her own conscience. According to Elvin's translations the Chinese would tend to focus on the scourge of present materialistic, nepotistic, and geographic selfishness and on the importance of realizing one's true self through selflessness and identification with the whole (most likely "the nation"). Sub-Saharan Africans would likely develop yet another thematic approach, perhaps transporting the issue from the arena of morality to that of realpolitik.

Such is the claim. An experiment along these lines doubtless would show how wrong I am.

NOTES

1. David P. Barash, "Evolution as a Paradigm of Behavior," in *Sociobiology and Human Nature*, ed. M. S. Gregory, A. Silvers, and D. Sutch (San Francisco: Jossey-Bass, Inc., 1978), p. 28.

2. Richard Dawkins, *The Selfish Gene* (Oxford: Oxford University Press, 1976); or see the majority of papers in Gregory, Silvers, and Sutch and in A. L. Caplan, ed., *The Sociobiology Debate* (New York: Harper & Row, 1978).
3. See esp. L. Goldstein, *The Organism* (New York: American Book Co., 1939).
4. Since W. G. Sumner's *Foldways* (Boston: Ginn, 1906).
5. R. L. Kirk and A. G. Thorne, eds., *The Original of the Australians* (New York: Humanities Press, 1976).
6. See my *Human Sociobiology: A Holistic Approach* (New York: Free Press, 1979). Macaque monkeys apparently behave much as did aboriginals in this regard. When groups are much beyond some two hundred fifty individuals, they fission into two mutually antagonistic groups (C. B. Koford, "Group Relations in an Island Colony of Rhesus Monkeys," in *Primate Social Behavior*, ed. Charles H. Southwick [Princeton, N.J.: D. Van Nostrand Co., 1963]; B. D. Chepko-Sade and D. S. Sade, "Patterns of Group Splitting within Matrilineal Kinship Groups," *Behavioral Ecology and Sociobiology* 5 [1979]: 67-86). A process such as this has been documented first hand among the Yanomamo Indians of Brazil (N. Chagnon, "Mate Competition, Favoring Close Kin and Village Fissioning among the Yanomamo Indians," in *Evolutionary Biology and Human Social Behavior: An Anthropological Perspective*, ed. N. Chagnon and W. Irons [North Scituate, Mass.: Duxbury Press, 1979]), and it is likely to have been a common human occurrence throughout man's past.
7. D. O. Hebb, "Heredity and Environment," *British Journal of Animal Behavior* 1 (1959): 43-47.
8. D. T. Suzuki, in a paper presented to an international conference on psychiatry and neurology, Tokyo, Japan, August 1961.
9. Freedman, *Human Sociobiology*.
10. Clyde Kluckhohn, "Some Aspects of Navajo Infancy and Early Childhood," in *Personal Character and Cultural Milieu*, ed. D. G. Haring (Syracuse, N.Y.: Syracuse University Press, 1948); J. Callaghan, "Anglo, Hopi and Navajo Infants and Mothers: Newborn Behaviors, Interaction Styles, and Childrearing Beliefs and Practices" (Ph.D. diss., University of Chicago, 1980).
11. James S. Chisholm, "Cradle Boarding Practices among the Navajo" (Ph.D. diss., Rutgers University, 1977).
12. R. Shafer, "Athabaskan and Sino-Tibetan," *International Journal of American Linguistics* 18 (1952): 12-19.
13. Joan Kuchner, "Chinese- and European-Americans: A Cross-Cultural Study of Infants and Mothers" (Ph.D. diss., University of Chicago, 1980).
14. W. Caudill and N. A. Frost, "A Comparison of Maternal Care and Infant Behavior in Japanese-American, American and Japanese Families," in *Influences on Human Development*, ed. Urie Bronfenbrenner and M. A. Mahoney (Hinsdale, Ill.: Dryden Press, 1975).
15. C. LoProto, "A Comparison of Infant Differences in Two Ethnic Groups: Italian and Swedish" (paper, Committee on Human Development, University of Chicago, 1979).
16. Callaghan.
17. Nova Green, "An Exploratory Study of Aggression and Spacing Behavior in Two Pre-School Nurseries: Chinese-American and European-American" (M.A. thesis, University of Chicago, 1969).
18. Sheila Smith, "Imaginal Behavior in Chinese and Jewish Pre-Schoolers" (paper, Committee on Human Development, University of Chicago, 1980).
19. *New Yorker* (ca. 1975); see also W. Kessen, ed., *Childhood in China* (New Haven, Conn.: Yale University Press, 1975).
20. K. A. Abbott, "Cultural Change and the Persistence of Chinese Personality," in *Responses to Change: Society, Culture and Personality*, ed. G. A. DeVos (New York: D. Van Nostrand Co., 1976), pp. 74-104.
21. It should be noted that the general issue of continuity versus discontinuity in human temperament and personality is a recurrent one and that it has never been

satisfactorily solved (e.g., see my "Personality Development in Infancy," in *Perspectives on Human Evolution*, ed. S. L. Washburn and P. C. Jay [New York: Holt, Rinehart & Winston, 1968]).

22. I. Chiang, *The Chinese Eye: An Interpretation of Chinese Painting* (London: Methuen, 1960).

23. Lao-tze, *Tao Teh King*, trans. A. J. Bahm (New York: Frederick Ungar Publishing Co., 1950). G. Witherspoon, *Language and Art in the Navajo Universe* (Ann Arbor: University of Michigan Press, 1977).

24. None of this is to say, e.g., that Europeans are more prone to warfare than Orientals or that Chinese boys are less interested in guns and military display than European lads; aggression and the interest in its display are very likely human universals. It is to say that, within such universals, permutations exist which differentially characterize mankind.

25. Mark Elvin, *Self-Liberation and Self-Immolation in Modern Chinese Thought*, 39th Morrison Lecture in Ethnology (Canberra: Australian National University, 1978).

26. Ibid.

27. As quoted in *ibid.*

28. As quoted in *ibid.*

29. As quoted in *ibid.*

30. As quoted in *ibid.*

31. As quoted in *ibid.*

32. E.g., Erich Fromm's *Man for Himself* (New York: Rinehart, 1947) and Joseph Wood Krutch's *The Measure of Man* (New York: Grosset & Dunlop, Inc., 1954).

33. Herbert Marcuse, *Eros and Civilization* (Boston: Beacon Press, 1955).

34. The president of Senegal (Leopold Senghor) gave an African twist to Cartesian logic by revising it into "I feel, therefore I am" (S. Malik, "Psychological Modernization: A Comparative Study of Educated Africans and Americans in the United States" [Ph.D. diss., University of Chicago, 1980]).

35. T. S. Lebra, *Japanese Patterns of Behavior* (Honolulu: University Press of Hawaii, 1976); F. L. K. Hsu, *Americans and Chinese* (Garden City, N. Y.: Natural History Press, 1970).

36. Malik.

37. Daniel G. Freedman and M. DeBoer, "Biological and Cultural Differences in Early Child Development," *Annual Review of Anthropology* 8 (1979): 579-600.

38. "UNESCO Proposals on the Biological Aspects of Race [Moscow, 1964]," in *Race and Social Difference*, ed. P. Baxter and B. Sansom (Baltimore: Penguin Books, 1968); M. Sahllins, *The Use and Abuse of Biology* (Ann Arbor: University of Michigan Press, 1976); R. C. Lewontin, "The Apportionment of Human Diversity," *Evolutionary Biology* 6 (1972): 381-98.

39. Freedman, *Human Sociobiology* (n. 6 above).