EXPLAINING AND VALUING: AN EXCHANGE BETWEEN THEOLOGY AND THE HUMAN SCIENCES

by James M. Gustafson

Abstract. A comparison of E.O. Wilson's *On Human Nature* and Abraham Heschel's *Who Is Man?* introduces a discussion of how descriptions and explanations of the human are related to valuations of the human. More intense comparative analysis focuses on Melvin Konner, *The Tangled Wing,* and Reinhold Niebuhr, *The Nature and Destiny of Man.* Similarities of outlook toward life in the world are noted, although the supporting information, concepts, and arguments are radically different. The article illustrates how a subject matter, here the human, that is addressed by different disciplines and methods can yield fruitful interdisciplinary analysis.

Keywords: experience; human; human nature; naturalism; nature; spirit.

Theologians, moral philosophers, and many others from the humanities are concerned with the value and meaning of human life. Scholars of the modern human sciences—biologists, psychologists, sociologists, anthropologists, economists—are concerned to provide descriptions and explanations of human life and human activity. At one level of abstraction the issues that emerge between these distinct interests are reduced to the relation between "facts" and "values" or to the relation between the "is" and the "ought." It is the case, however, that the more abstract reduction of the issues can oversimplify them. To pursue them only at the abstract level avoids some of the more interesting and complicated relations that exist in denser and more fully developed accounts by persons with interests in each of the poles. That is the case, in part, because theologians and others who write about the human have explicit or implied descriptions and

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explanations of it which back or cohere with what they claim to be its value and meaning. And, from the other side, one finds a great deal of literature by scientists of the human that issues in statements of the meaning and value of human life.

Let me illustrate this with introductory examples. Rabbi Abraham Heschel, in his book *Who Is Man?* basically argues that *who* we are should guide and determine *what* we are or what we are to become. What it means to be human should determine what human beings become. But, he says, "There is the ontological connective between human being and being human," i.e., between what we essentially are and what we ought to be and become. I quote only one statement of this (Heschel 1965, 16). "Man's being human," the more normative pole, "is constituted by his essential sensibilities, by his modes of response to the realities he is aware of—to the being that *I* am, to the beings that surround *me*, to the being that transcends *me*—or, more specifically, by how he relates to the existence that he is, to the existence of his fellow men, to what is given in his immediate surroundings, to that which *is* but is not immediately given" (Heschel 1965, 16). The normative, being human, "is inherent as a desideratum in human being," i.e., in what constitutes our being. While Heschel is interested in "*who*" we are, that is inherent in "what" we are. Thus his description of what we are is susceptible to investigation of the accuracy, the adequacy, of its empirical and explanatory bases. And, interestingly, he says that "we can attain adequate understanding of man only if we think of man in human terms . . . and abstain from employing categories developed in the investigation of lower forms of life" (Heschel 1965, 3). I infer from this that we are to abstain from using concepts and explanations from genetics and other aspects of biology in our effort to attain an adequate understanding of the human, the meaning of being human. Heschel does not eliminate a description, but he limits what is to be taken into account in the description. I suppose this is because he wants to focus on what is *distinctively* or *uniquely* human. But the uniquely human can be described biologically, as well.

Just as a theological or humanistic account relies on a description, if not an explanation, of the human, so many writers from the human sciences move from explanation to what is to be valued about human life and to its meaning. The sociobiologist E. O. Wilson's *On Human Nature* can be used to illustrate this. Wilson, we must acknowledge, states that this book is not strictly scientific, but it is clear that he desires to support his more expansive view of the human with as much evidence and theory from various sciences as he can muster.

Early on he summarizes the "essence of the argument." It is "that the brain exists because it promotes the survival and multiplication of the genes that direct its assembly. The human mind is a device for survival and reproduction, and reason is just one of its various techniques" (Wilson 1978, 2). In his earlier, more strictly scientific work, he provided critics with an oft-cited comment, "The organism is only DNA's way of making more DNA" (Wilson 1975, 3). Note what is in the service of what. The human mind is in the service of survival and reproduction, not reproduction in the service of the mind. Reason is a technique for survival; survival is not in the service of the calling of the human to use reason. The organism is in the service of DNA, not DNA in the service of the organism. Here we see how explanations of human life back quite specific valuations of it.

But Wilson closes his account of human nature with a chapter entitled "Hope"—the details of which I will not develop. The human species finally faces a "spiritual dilemma" that leads Wilson to give a kind of evangelical moral call. "The human species can change its own nature. What will it choose? Will it remain the same, teetering on a jerrybuilt foundation of partly obsolete Ice-Age adaptations? Or will it press on toward still higher intelligence and creativity, accompanied by a greater—or lesser—emotional response?" (Wilson 1978, 208). And the final peroration is, "The true Promethean spirit of science means to liberate man by giving him knowledge and some measure of dominion over the physical environment. But at another level, and in a new age, it also constructs the mythology of scientific materialism, guided by the corrective devices of the scientific method, addressed with precise and deliberately affective appeal to the deepest needs of human nature, and kept strong by the blind hope that the journey on which we are now embarked will be farther and better than the one just completed" (Wilson 1978, 209).

Heschel, you recall, says we are to abstain from precisely that on which Wilson bases his account, i.e., "categories developed in the investigation of lower forms of life." But Heschel also says that the meaning and value of the human is inherent as a desideratum in what we are. On that general point, I think, our two authors formally agree. Their outlooks (and I deliberately use a very general term) are, however, very opposed. One critical factor is the difference in their descriptions of the human. And a critical question is whether Heschel has given us a description for the sake of supporting a normative view. Similarly, does Wilson's call at the end follow necessarily from his description and explanation, or has he some elided premises?

These examples illustrate the systematic questions that are the

center of this lecture. How are descriptions and explanations of the human related to valuations and meanings of the human? Or, conversely, what descriptions and explanations do persons primarily interested in making a case for the value and meaning of the human provide to back their more normative purposes? These questions can be pursued with attention to a vast scholarly literature, both historical and current. In a lecture under the auspices of a Religious Studies Department I shall confine myself to a more intensive analysis of one theological book, Reinhold Niebuhr's *The Nature and Destiny of Man* (Niebuhr 1941–43), and one book by a "bioanthropologist," Melvin Konner's *The Tangled Wing: Biological Constraints on the Human Spirit* (Konner 1982). The lecture is more one of exploration and critical analysis than it is constructive. An intuition, and not merely a private one of my own, is that these two treatises issue in somewhat similar dispositions or outlooks toward life in the world: a realism that avoids despair on the one hand and secure confidence on the other. This similarity makes my choice particularly interesting.

The structure of the body of this lecture is as follows. First, I will indicate evidences for my conclusion that there are somewhat similar purposes and outcomes in these two treatises. Examples, which will be developed later, are the rhetorical intention to increase human self-understanding and to have this self-understanding as an element in guiding action, and the sense of constraints on human life due to the power of evil. Second, I will analyze the descriptions and explanations of human life and action in each of the treatises, noting the evidences used, the symbols or concepts that are keys to interpretation of those evidences, and the relations of explanations to valuations, or of valuations to explanations. A brief assessment will be made of the coherence of each treatise. Third, I shall move back from the analysis to ask what is at issue between an avowedly theological interpretation and an avowedly scientific interpretation. The answers to that question will provide an agenda for more constructive development than can be executed in this lecture.

Reinhold Niebuhr was a Protestant theologian whose Gifford lectures, delivered in Edinburgh now fifty years ago, became what probably has been the most widely studied book by an American religious thinker in this century. But he was a theologian motivated by political, social, and moral issues, and thus in the profoundest sense a moral theologian. His treatise is written primarily in traditional Christian language, and it is clearly addressed most directly to the Christian community.

Melvin Konner is an anthropologist whose field research was done in southern Africa, and whose interests focus on the relations

between behavior and biology. (At the time of the publication of *The Tangled Wing*, Konner had become a medical student: from that experience he has written an absorbing narrative account, *Becoming a Doctor* [Konner 1987].) He is a "bioanthropologist," and might be recognized by some in this audience as one of the regular contributors to the "Mind and Body" column published in the *New York Times Sunday Magazine*. Konner is also, in a nonpejorative sense, a moralist. He is clearly concerned about human well-being, about the fate of the earth, and as the subtitle of the book under examination shows, "the human spirit." His audience is not religious communities, but culturally and scientifically informed publics; his text is laced with insightful use of a variety of creative literature, but its language is overwhelmingly that of the various sciences that explain human being. From what is clearly, in the end, a profound moral concern, he examines the implications of a vast body of scientific literature in a remarkably synthetic way.

What makes these scholars comparable is a common rhetorical (in a nonpejorative classic sense) intention. Both see grave threats to human well-being, one during the international, political, and economic events in the middle decades of our century and the other in the conditions of its last decades. In the face of these threats each is, I believe, concerned to provide evidence and interpretations of human life that enlarge and deepen human self-understanding. Each believes that a more adequate understanding of human nature or the human condition will issue in better attitudes and stances toward actual and potential events, and in wiser approaches to human conduct and affairs. Neither, in the treatises under examination in this lecture, engages in recommendations or prescriptions for actual public policy or for personal and interpersonal conduct. Their aims are deeper; a proper interpretation of human being will effect a more adequate orientation to our participation in the processes and patterns of life in the world. The sources each interprets are different, but the outcomes are interestingly similar as well as importantly different.

In the Preface to the 1941 edition of the first volume of *The Nature and Destiny of Man* Niebuhr states that his work "is based upon the conviction that there are resources in the Christian faith for understanding human nature which have been lost in modern culture" (Niebuhr 1941–43, 1:vii). He views scientific interpretations of human nature to be rooted in definite philosophical presuppositions, which are either "idealistic" or "naturalistic." The idealistic ones err in overestimating human rational capacities and underestimating the intimate relation between the human spirit and its physical organism.

The naturalistic ones err in not distinguishing between capacities for transcendence and imbeddedness in nature. They explain in biological terms what can, from Niebuhr's perspective, be understood only as a "curious compound of 'nature' and 'spirit' " (Niebuhr 1941-43, 1:viii). The task he undertakes then, is to develop a description and explanation of human nature; he draws upon sources in the Bible and theology, the history of Western culture, and contemporary writings in shaping his argument. These sources are ideas, theories, and concepts, not the empirical sciences.

Konner is adept at drawing upon literary sources of insight, but he argues that an adequate description and explanation of human nature must take into account and build upon biological research. One can paraphrase Niebuhr's conviction: Konner's is that there are resources in the human sciences and particularly in biology for understanding human nature and that these resources must be the basis for addressing issues of modern culture. Konner's work falls under Niebuhr's category of naturalism, but on the face of it, his invoking of the "human spirit" avoids the excesses that Niebuhr sees in that general view. Whether Konner's chapters of analysis *necessarily* lead to his chapter of peroration or only permit it is a question to which I shall return. He views, in that chapter, the hallmark of our species to be the sense of wonder that is the central feature of the human spirit (Konner 1982, 435). He suspects that at the present stage of human evolution "the human spirit is insufficiently developed," and sees the full reinstatement of the sense of wonder as a condition for sustaining and developing the spirit. "We must," he writes, "try once again to experience the human soul as soul, and not just a buzz of bioelectricity; the human will as will, and not just a surge of hormones; the human heart not as a fibrous, sticky pump, but as the metaphoric organ of understanding." These do not need to be "metaphysical entities," as Niebuhr's term "spirit" suggests, but we have to use words to talk about them that make them "unassailable, even though they are dissected before our eyes" (Konner 1982, 435-36).

To all this, Niebuhr might retort that his idea of spirit which locates human capacities to transcend embodiment is more than a sense of wonder, and that even the loss of that sense is fostered by the dominance of a biological naturalistic account of life. He might agree with Konner that the words we use to talk about soul and heart are critical, but assert that his words are more accurate descriptively and more likely to sustain what Konner values.

I think we do not need to get into what Mary Midgley calls the "football match" view of discussions about human nature—those in

which one perspective has to defeat the other and thereby win the day, even if our two authors might take this attitude. And a closer look at some of Konner's passages show his own guardedness and qualifications. While the reader of his book might be impressed with the vastness and depths of the claims made for a scientific explanation, the epigraph he chose for his book is from Bertolt Brecht's *Life of Galileo*: "The aim of science is not to open the door to everlasting wisdom, but to set a limit on everlasting error" (Konner 1982, xvi). While I have not done a count of the use of the word "only" as a claim for the importance of the views espoused, my strong impression is that the theologian uses it far more frequently than the anthropologist. And toward the end of his book, Konner precedes his final quotation of his motto by saying, "It seems to me that so far we have applied our intelligence, and only our intelligence, in ordering of human life on earth. It's not that I don't believe in the sheer power of intelligence. . . . It's that everywhere I turn in the world of science and scholarship I encounter people who believe in it much more than I do; people who serve it as if it were a god" (Konner 1982, 422). He goes on to cite Pope's *Essay on Man* to accent the importance of doubt; we should deem ourselves to be neither a god nor simply a beast (Konner 1982, 423). He is very close to Niebuhr's idea of man as "a curious compound of 'nature' and 'spirit.' "

Our two authors, different as they are, seem to be within speaking distance of each other. If they are, they have come there from very different starting points, from opposite directions. Niebuhr, like Heschel, starts from what is distinctively or uniquely human, in his view of things. Konner, like Wilson, starts from what we humans share with all of animal life, or even all of biological life. If it does not distort our understanding by assuming that "top" is more valued than "bottom," we can say that the theologian starts from the "top" and the bioanthropologist from the "bottom." I might put the contrast another way: Niebuhr emphasizes "spirit"; it is the central descriptive feature of the human. Konner emphasizes "nature"; the human cannot be properly understood without grounding an interpretation in biology. To establish my comparison I must, all too briefly, analyze each account of the human.

We turn first to our theologian. His opening line is as memorable as the opening line from Tolstoy's *Anna Karenina*. Niebuhr writes, "Man has always been his most vexing problem" (Niebuhr 1941–43, 1:1). Description and explanation run together as one outlines his account of the human. One must remember that he insists that man "is a curious compound of 'nature' and 'spirit.' " Backing for this does not come from biology and biopsychology but from his

interpretation of the biblical traditions; they do not support a radical dualism of body and soul. In comparison with "Greek philosophy" the "Hebraic sense of the unity of body and soul is not destroyed while, on the other hand, spirit is conceived of as primarily a capacity for and affinity with the divine" (Niebuhr 1941–43, 1:152). He interprets the Apostle Paul to support this.

But the "essence" of the human, what I take to mean its distinguishing or unique characteristic, is "freedom" (Niebuhr 1941–43, 1:17). "His essence is free self-determination" (Niebuhr 1941–43, 1:16). One does not find the word "freedom" in Konner's account; it is safe to assume that he has left it out consciously. Niebuhr certainly takes cognizance of our biological natures, that which Konner elucidates in detail. He notes that we have difficulty in bringing our various impulses into harmony, but this is "not caused by the recalcitrance of nature but occasioned by the freedom of the spirit" (Niebuhr 1941–43, 1:40). For Konner the ground of such disharmony is in our biological natures.

Niebuhr is given to at least dialectical, and sometimes paradoxical, statements about the human. The human condition is both "bound" and "free"; it is to have the capacity for free self-determination but also to be bound by our finiteness—our bodily and social and historical conditions. We are, to cite one example of a paradox, "both limited and limitless." Konner clearly rejects the latter.

The paradox, this doubleness in which all humans are involved, brings with it "anxiety" as its "inevitable concomitant." To be human is to be free, and to be free is to be anxious. And this anxiety is "the internal precondition of sin" (Niebuhr 1941–43, 1:182). We relieve our anxiety not by faith in the ultimate goodness of God, a faith that always points to an ultimate fulfillment beyond tragedy, but by seeking security through pride: in our intellect, in our moral qualities, in our social communities, and in almost anything that can function as a god. Or we seek to relieve our anxiety by lapsing into our finitude, by denying our capacity for self-determination and following our impulses or acquiescing in the conditions of life in which we find ourselves, and thus in sloth.

I hope this sketch indicates what I mean by Niebuhr's approach to the human from the "top." The essential aspect of the human is spirit, it is freedom. But our spirit, our freedom, is bound to bodily and historical conditions in that curious compound of human nature.

Both our authors are wary of what human activity can do to deface and even destroy much that is valued in human life. For our theologian the source of this is the temptation that leads us inevitably to sin, i.e., all those actions and relations we engage in to overcome

our anxiety or insecurity by our own human power—both individual and collective power; all those things we do to establish our independence and sense of self-mastery, or human mastery collectively (Niebuhr 1941-43, 1:174). The evidences for sin, however, do not come only from biblical texts and interpretations; they come from observations and interpretations of human activity, or human experience.

Niebuhr's first series of Gifford lectures in Edinburgh were given during the opening days and weeks of the war in Europe in the autumn of 1939. Underneath or behind all the political, military, and economic events that led to that event was sin: the actions of collective pride, of the use of power for a human mastery of history and of peoples, of the failure to acknowledge a divine and eternal reality in light of which all human actions stand judged.

Note the importance of a descriptive and explanatory account of human nature here, and how that account can back an interpretation of events and courses of action that should follow from that interpretation. The resources of the Christian tradition are drawn upon, but the aim of that retrieval is not to argue for the orthodoxy of religious doctrines, or for a virtually magical authority of a special divine revelation. The truth of this description, informed as it is by biblical and Christian "myths," is finally verified in experience. "Common human experience can validate" the truth of what is biblically and theologically based (Niebuhr 1941-43, 1:143). When Niebuhr writes about conscience he makes the general point quite clear; he argues that "a universal human experience, the sense of being commanded, placed under obligation and judged" requires presuppositions of the biblical faith. But once that faith is accepted there are insight into and understanding of human experience that make for deeper and more profound awareness. Indeed, he writes, that faith "illumines experience and is in turn validated by experience" (Niebuhr 1941-43, 2:63).

To this claim, someone working from a more empirical tradition that looks for "data" to support a description and analysis of the human, can respond, Does experience validate Niebuhr's account? What evidences from experience are there in favor of or against it? Have his moral and religious interests so impregnated his description that the morphology of his interpretation is tightly circular? Or is the general outcome of his evaluative description supportable from alternative standpoints, and with evidences from scientific studies of the human? If there are similarities between outcomes of various accounts with reference to how human beings ought to act in the world, their perceptions of evils and of dangers to life, their visions

of a better life in which there is greater harmony, is that because of some concurrence in descriptions? If there are dissimilarities in the outcomes, is that because one view has false factual premises, inappropriate interpretive concepts, and inadequate theories?

Our anthropologist's account of human nature cannot be reduced to a brief description any more than Niebuhr's, but an attempt must be made. Konner opens his "Prefatory Inquiry" with a few questions that have been asked for centuries: "Why we are what we are, why we do what we do, why we feel what we feel . . ." (Konner 1982, xi). Note the similarity to Niebuhr's opening sentence, "Man has always been his most vexing problem." His grand attempt is to fit relevant piecemeal explanations and observations into a coherent response to those inquiries. To do this he draws upon his own research but also in an extraordinarily comprehensive way upon research from many pertinent fields and, as I noted, brings in literary sources as well as scientific. Part 2, "Of Human Frailty," begs for far more summary than is possible in this lecture. In it he combines studies from genetics and biology on the one hand and environment and culture on the other to analyze rage, fear, joy, lust, love, grief, and gluttony. All through the book there are explicit and implied critiques of accounts that avoid or do not fully use the biological accounts of human life and activity. At one point, drawing from the work of Ernst Mayr, Konner writes, "Biology chips away at the lofty human soul by, first, showing how much it shares, both in structure and in purpose, with the corresponding phenomena we see in other animals" (Konner 1982, 143). He argues, for example, against optimists who believe that proper cultural conditioning can eliminate violence. "It is subdued, reduced, dormant, yes. But it is never abolished. It is never nonexistent. It is always there" (Konner 1982, 206). Biologists who extend their research to optimistic visions of the future are challenged. "Whatever happened to that school of thought according to which the pain of life was a part of the joy of life, or at least a place on the path to it? That belief that the embrace of, and triumph over difficulty, is more exhilarating than denial?" (Konner 1982, 257). He has evidences and arguments to back his disdain for what we calls the "tinker theory" of human activity and experience. "According to the tinker theory, human behavior and experience are basically good and decent and healthy and warm and cooperative and intelligent, but something has gone a bit wrong somewhere" (Konner 1982, 414). Its practitioners are economists, psychotherapists, and others. He reminds his readers that the classic tradition of tragic literature "is much more consonant with the biological view." Its consistent "view of the dark side of human life" out of which the

chorus cries that it is better to die than to live, and best never to have been born at all, is more to the point than proposals from various sciences and professions to tinker with aspects of the human (Konner 1982, 415, 264–65). The descriptions and their outcome begin to sound somewhat Niebuhrian! In his chapter entitled "Change" Konner stresses the limitations of human potential. With tongue in cheek, I think, he writes, "While we are waiting for human beings to be transformed by some combination of science and magic and the very best of will into the beautiful raw material we all want them to be," and then continues soberly, "we may lose our last chances to take action of practical value that will ensure the people are around long enough for that ultimate transformation to come over them." And in cold sobriety he concludes, "Recognizing the limitations of human nature, and the evil in it, is a necessary prerequisite to designing a social system that will minimize the effects of those limitations, the expression of that evil. That too, paradoxically, is a means of modification of human behavior" (Konner 1982, 406). If this does not come close enough to warrant pondering how different descriptions of the human can lead to similar outlooks, I add another quotation. After citing a novel about the talmudic tradition of Polish Jews which stresses that man is evil from birth, Konner offers a paraphrase: "Human beings are irrevocably, biologically endowed with strong inclinations to feel and act in a manner that their own good judgment tells them to reprehend" (Konner 1982, 427). "Sin," if I may use that term here, is not located in the human spirit with its freedom and anxiety, but in biologically endowed inclinations. One almost wants to say that it is "original," or that it is at least inevitable, though perhaps not necessary, to recur to another Niebuhrian comment.

Konner has nothing really good to say about religion, and certainly he is a naturalist in the sense that no transcendent reality is appealing to him, since he finds no evidence for it. He cannot ground his hope in a benevolent providence that promises fulfillment beyond tragedy, as Niebuhr can. His hope, for which little evidence is given, and which seems slim even in the way in which it is introduced, is in the human. "Who knows what good may not yet lurk in the hearts of men? In the hope of discovering it, in the hope of bringing it forth to the light, in the hope that some mechanism of sublunary nurturance may yet cause it to thrive and grow, we may well set our hearts and minds to a most momentous task." Then, "as a sort of amulet, a good-luck charm of tradition," he quotes a Psalm and ends a chapter with "Amen. Selah" (Konner 1982, 420).

I hope that this sketch, bare as it is, indicates what I mean by

Konner's approach to the human from the "bottom." The essential aspect of the human is nature: human attitudes, outlooks, and behavior are powerfully directed, if not determined, by our biological natures shared with other animals and with the whole of living things. But this nature seems also to ground a sense of wonder; that experience is also real. And it seems not to rule out the sense of moral responsibility to which appeals can be made. Put too neatly, we can say that for Konner the human is embodied in nature with capacities for something called spirit. For Niebuhr one can say that the human is spirit, curiously compounded with nature.

Their valuations of human life are somewhat similar, though they are certainly not the same. Their explanations of human life are radically different. These differences reflect various things. One is the intellectual and professional context or field from which each author comes. The disciplinary context or tradition from which come explanations of human life obviously affects what features of it are judged to be more decisive, and often by extrapolation what is valued. Here one can illustrate beyond our two major authors. One thinks, for example, of Gary Becker's *The Economic Approach to Human Behavior*, which explains as much of human behavior as it can, including marriage and family, on the basis of fundamentally competitive market principles (Becker 1976). Or one thinks of works in biopsychology, sociology, and other fields. Different disciplines almost "naturally" isolate and emphasize different "causal" factors as the most critical in explaining, understanding, and interpreting human nature and action. Quite reasonably, if one wishes to recommend activities to govern or alter the course of human life, the discipline from which one comes focuses on what is judged to be the critical causal factor, or factors. Valuations are correlated with explanations at least at one point: the crucial factors in explanation, valued not morally but for their explanatory powers, predispose any effort to make a normative valuation in their direction. This is a much more complex matter than can be developed in this lecture because what scholars value about human life is not just one thing—e.g., biological survival, economic well-being, or physical health—but many, and because multicausal analysis is necessarily adduced even when making the case for the greater importance of one kind of explanation.

The disciplinary contexts of our two authors predispose them to prefer different sources of "data" and concepts in their explaining and valuing of the human. To state it this way, however, makes their approaches sound accidental; each is also deeply persuaded that his approach bears the most truth. Truth, however, has different

connotations for each. Recall Niebuhr's sentence in the Preface to the 1941 edition; he is persuaded that there are resources in Christian faith for understanding human nature which have been lost in modern culture. His main resources for truth-bearing ideas and insights are the Bible and selected figures in Christian theology. Those on which he draws are used often for their mythic qualities, i.e., their capacities to disclose fundamentally real aspects of human life and action. Thus, in a sense, they heuristically disclose realities of experience. We get to the circularity I indicated earlier, namely that faith illumines experience and is in turn validated by experience. Thus "experience" becomes "data" disclosed by Christian myths and concepts, and the data validate the use of them. There are no hard claims for special supernatural revelation in the Bible, nor are there what we might call "empirical studies" of experience. The objective seems to be clear; the persuasiveness of the account is confirmed by its disclosive power as it issues in a deeper understanding of the human and guides human action. A further test is the moral outcome—in political, economic and other effects—of the actions that it guides.

Konner, as I have indicated, wants the outcome of his work to be somewhat similar. But his data are drawn from the storehouse of many studies of the human by those who use basically scientific methods to develop them. Truthfulness for Konner is accordance of data with the realities of life, and the adequacy of theories to interpret that data. His case is strengthened, in his view, by the authority of the studies he adduces to support his complex and comprehensive account. But one misses something in Konner's work if one does not pay sufficient attention to the literary sources that he calls upon. In this respect he is different from others who bear the mantle of modern sciences of the human—those who eschew other sources of understanding. And in the end Konner appeals to "the sense of wonder," something of human experience which, I think, he has not fully backed by the same kind of data he uses in his examination of rage, lust, love, etc.

"Experience," vaguely conceived, is a source for both our authors. Both, I think, claim that the outcome of their writings discloses something truthful about human life and action. The tests of the truth each seeks to convey differ. Both are basically coherent in the internal structures of their works. But both, interestingly, make appeals that many readers would judge to be gaps in their arguments.

In Konner's case the gap is between the analytical account that sustains most of the book and the final chapter on "The Dawn of Wonder." The critical question is whether the previous analysis

entails or necessitates that more poetic conclusion; whether it permits but does not necessitate it; or whether the conclusion contradicts the previous analysis. Has he knit tightly the previous analysis, based on various sciences, with the more poetic conclusion? Does it provide an adequate explanation for the experience of wonder? Or is the source of evidence for that drawn from literary and poetic sources? I cannot engage here in detailed argument to justify my answer to this issue; I think the last chapter is not necessitated by the previous analysis, nor does it fully contradict what comes before. It is permitted and makes sense only if an aspect of human experience not fully explained in the previous materials is adduced. That aspect is "spirit," but not in Niebuhr's sense of freedom. While it leaves a door ajar to hope, it also cannot guarantee a final outcome "beyond tragedy."

Niebuhr does have confidence in a final outcome beyond tragedy, and the hope that this ensures is critical to his interpretation of the human prospect, as is his confidence in the reality of the mercy of God to forgive our failures and errors. These two appeals to faith provide the conditions, necessary conditions for Niebuhr, to live and act in the morass of moral and political ambiguity—ambiguity that Konner affirms in his own way. The basis for this mercy and hope comes with the Christian message, and Niebuhr is not loath to use the word *only* with reference to that. If there is a gap between Konner's last chapter and the rest of his work, there is also a gap in Niebuhr's work. What each most appeals to for the sake of human well-being goes beyond the "data" each adduces from human life itself.

What is at stake between avowedly theological and avowedly scientific accounts of the human? It is not appropriate to generalize on the basis of our two introductory and our two principal authors. Konner and Wilson both consciously go beyond a purely scientific account to express a way of viewing the world. Both, I think, are in the long run hopeful that the sciences will provide exhaustive explanations of mental activity, human intentionality, and action—all matters that Niebuhr packs into his views of spirit and freedom, and Heschel into his idea of responsiveness. Each of their accounts is subject to assessment of its use of the various sciences on purely scientific grounds, a matter I am not competent to undertake. But both are moralists in a nonpejorative sense; both have a message to bring to the world in the hope that it will be heard and guide action so as to avoid further evils.

Niebuhr and Heschel do not represent "theology" as a whole. Heschel does not represent orthodox Judaism, especially in its talmudic or legal form. And Niebuhr, as I noted, is not a defender of creedal orthodoxy in Christianity, including the conviction of

more orthodox thinkers that the Christian message is authorized by an exclusive special revelation, though he clearly finds that it discloses (reveals) the depths of the human predicament and provides assurance of forgiveness and a hope beyond tragedy. (His frequent use of the word "only" does, however, open support for a more theologically conservative interpretation than I have given his work.) Probably one would find among their colleagues more critics of the theologies of Niebuhr and Heschel than one would find critics of the scientific arguments in Konner and Wilson. But both of the theologians also have a message to bring to the world in the hope that it will be heard and guide action so as to avoid further evils.

I confine my closing remarks to our principal authors.

If the moral outcome, the expression of wisdom, were the *only* purpose of writings like Konner's and Niebuhr's, and if the outcomes are as similar as I propose theirs are, it would not make much difference what arguments were adduced. I think neither of them first determined what attitude toward the world he wanted to support and then simply found evidences and arguments to back it. One finds all sorts of writings that intend to either frighten or assure their readers. For example, Hans Jonas, in his *The Imperative of Responsibility*, deliberately uses what he calls the heuristics of fear, though the argument that backs the fear he evokes is well made (Jonas 1984). And one finds rather utopian extrapolations made from limited evidence to evoke hope on the part of readers: Joseph Fletcher's *The Ethics of Genetic Control: Ending Reproductive Roulette* is one example (Fletcher 1974).

Of course, each addresses a different readership. Most of the readers of Konner would find Niebuhr's work to be esoteric, unintelligible, and, for its use of very Christian themes and symbols, even offensive. At least many readers of Niebuhr would find Konner's work to require some mastery of scientific materials they have only read about in newsweeklies or seen portrayed on television, and would likely believe him to be reductionistic in his confidence in science. Perhaps some who have imbibed in certain forms of critical theory would call science the myth of the twentieth century in that it provides the symbols for understanding reality. So it is the use of one reality disclosing myth against another. Some critics of each work might accuse the authors of intellectual arrogance, a charge that requires qualification by careful reading of each. To radically polarize these books, however, is to take what Mary Midgley calls a football match view of intellectual discourse—one in which one side must defeat the other.

Even though both of our authors rhetorically move to an impact on the reader's view of life in the world, they are concerned for the

"truthfulness" of the evidences adduced to support it. Of course, every author makes such a claim. But Niebuhr's appeals to experience are different from those of many other religious writers; it also is not "data" in the sense that Konner's material is. And Konner's "data" refer to the biological basis of "experience." This is what makes it interesting to focus on these works.

Have we come to the old issue of "two cultures," the humanities and the sciences, once again? In a sense we have, but the overlap of outcomes makes it possible to move beyond a confrontational relation between the two. Special attention must be given to the importance of literary sources for Konner; the motto of his book comes not from a biologist but from Bertolt Brecht. Disclosure of significance—a kind of truthfulness—comes from the creative writer whose reflections are not backed by hard data. If this is the case in general, one can argue that symbols and concepts from religious traditions can (not necessarily do) also disclose significance or meaning. For Konner, I believe, the literary sources provide insight into meanings that cannot be reduced to the scientific materials which provide the main basis of his argument. But they also do not stand over against that material; they disclose wider significance of it in the light of Konner's profound concern for human well-being, and are generally supported by it.

Much of the research used by Konner has been developed since Niebuhr wrote his book, and in his later writings Niebuhr was quite receptive to sources drawn particularly from Erik Erikson's work. It can be argued that a theologian's account, insofar as it seeks to describe and explain human experience can, and ought to, be open to the empirical sciences such as Konner's work portrays. This need not be any less uncritical than Konner himself is, e.g., in his critiques of what he calls the "tinker theory," but it can help to make a theological account intelligible to a nonreligious public, and it can provide other evidences, less intuitive ones, to support the theologian's positions. The theologian's concern for the well-being of life can be backed by, and in its details informed and also *corrected by*, such works as Konner's. They might function to shed distinctive light, like that coming from Brecht, et al.

Truthfulness about the human situation can be found in both scientific and religious sources, as well as other literary ones. An exchange between theology and the human sciences need not be a polarized confrontation.

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