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RELIGION, EVOLUTION, AND THE QUEST FOR GLOBAL HARMONY

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(Essay original to this volume)

Introduction

This essay is an effort to bring together aspects of human existence that have proceeded more or less separately, and even antithetically. They are (1) religion, in its principal components, and comprising the most widespread, divergent, and tenaciously authoritative defenses of morality; (2) organic evolution, as the science of all life; and (3) by far the most important and difficult, the effort (or at least, a hope or desire!) to work toward world-wide social harmony. It seems to me that the relationships of these and several other problems need to be considered together if humans in general are to moderate their hyper-competitiveness and hyper-patriotism, their theatrical attraction to violence, murder, and destruction, and the world's continuing scourge of deadly conflicts. On the one hand is the universal and familiar coordination of personal and collective musings, beliefs, and efforts by which humans have for centuries sought to understand themselves and their associates; and on the other hand are the results and consequences of the more recently recognized and analyzed process of organic evolution. To every indication the evolutionary process has

been responsible for the nature of all life, including the scope and diversity of human sociality and the consequences of the myriads of never-ending split-second and unexpected environmental changes that continually modify our performances by relentlessly racing across our human lifetimes.

The several questions I am setting out to discuss in this essay are, I think, more difficult and more important than any others I have ever even imagined undertaking. I am essentially certain that I will be unable to bring solutions to my questions together in ways that will create satisfying syntheses. But the questions are intertwined with one another, and they might well be the most important set of questions anyone can try to put together on almost any topic. I have started parts of this project repeatedly, and I continue to regard my efforts as inadequate. For example, I have tried to identify what might be termed the concept of God. But, at least until now, my efforts (my fantasies!?) have failed to convince me that a universal concept of God—whether judged natural or supernatural—can ever be applied globally, faced as we are with continuing limited or local maps of disagreement that cannot serve comfortably in scatterings of differently organized parts of the world, let alone any that can change the world as a whole. I have also tried to think about pathways that could lead the more than seven billion people of the world to reduce the continuing development of ever more horrendous and, almost certainly, someday, irrevocably catastrophic weapons, and instead spread congeniality and cooperation that could direct us away from the bitterness of serious competitions. Of course, my thoughts about those pathways have always been less than adequate. The size of the human population and its potential and willingness to engage in wars and genocides seem continually to leave only hopeless discouragement. But perhaps we can at least mull over the seeming inescapability of our fate.

So I am trying again. Perhaps there will be readers who can transform some of the problems that have stymied me, and enable us all to realize what wonderful times the world could experience if the lives of people in general could be changed in directions of cooperativeness that over-ride their opposite competitiveness, wars, senseless murders, and bullying. I apologize for my inadequacies, but surely we should not be reluctant to open the doors for whatever potentially satisfying future the people of the world may someday contemplate to build for us.

THE SCIENCE OF EVOLUTION AND ITS

RECENTNESS

The three introductory topics, and questions about them, have had their beginnings buried in such different backgrounds, and across so many millions of years that, despite an almost endless literature, we can scarcely imagine their specific origins. Within the last century and a half, however, evolutionary biology has splashed new knowledge of human social life on the scene, initially with Charles Darwin (e.g., 1859, 1871, 1872), and subsequently with Sir Ronald A. Fisher (especially 1930, 1958), in particular discovering how the evolutionary process works (i.e., what adaptation means, and how it takes place). Approximately a century after Darwin, several important and broadly credible additional steps were presented (e.g., Williams and Williams 1957; Hamilton 1963–1971; Williams 1957, 1966; Trivers 1971). And of course there has been a long-continuing explosion of an incredibly prolific literature, some of which is referenced both directly and indirectly at the end of this essay.

Unfortunately, evolution has failed to become widely accepted as the central aspect of human understanding. Nevertheless, despite its neglect—or reluctance—by humanity in general, organic evolution indisputably continues as the universal process underlying and shaping the existence, nature, and patterning of all forms, constituents, and divisions of life, including religious and other human social endeavors, many of which remain unexplained. Across most or all of history, humans appear to have been largely oblivious to the workings of organic evolution. Many have consistently shunned approaches to evolution, partly because they have gained few opportunities to comprehend and use evolution to contemplate the adaptive processes influencing and shaping the lives of the enormous human population. Perhaps it is also partly because many humans, especially those who are strongly religious, simply believe that we have been getting along just fine without assistance from a great deal of scientific knowledge (e.g., excerpts and references from Alexander 1967–2011).

Charles Darwin's 1859 Challenge

> If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down.

—ON THE ORIGIN OF SPECIES BY MEANS OF NATURAL SELECTION: *P. 189*

Despite many efforts to deny Darwin's magnificent challenge, or declare it

wrong, it has not been dismissed or falsified across the past 152 years of its existence. In a no-holds-barred challenge to the entire world of humanity, and with hundreds of thousands of non-human species living in every direction, all of them presumably available for endless testing, Darwin placed his entire theory in complete jeopardy. He announced an incredible bet that, if it held, would be telling every honest and open-minded person how to consider and identify the truth about organic evolution—about the background of all living creatures—including humans. After more than a century and a half without a misstep, Darwin's daring challenge has been demonstrated unequivocally. In the process he laid out for us the basic nature of organisms, from genes to fertilized eggs, genomes to individuals, and including populations predicting and describing the whole of humanity that lies before us.

Although Darwin did not generate the permanent name for what we now call genes, he carefully and brilliantly posited precisely the requirement of "*numerous, successive, slight modifications,*" a remarkably special set of conditions. In 1859, Darwin could not have gotten much closer to the later-arriving concept of genes and mutations. Ironically, a packaged copy of Gregor Mendel's paper on the patterning of the genetics of garden peas was found on Darwin's desk after his death, still unopened. Mendel referred to "factors" that behaved appropriately to Darwin's challenge, and were also references to what would later be labeled as "genes." But Darwin evidently never learned about all of that, and as a result the concept of the gene did not acquire its permanent label until around the turn of the twentieth century.

CONCEPTS OF GOD AND THE ANTIQUITY OF RELIGION

Natural or Supernatural: Does It Make a Difference?

In this essay I suggest a possible origin, and usefulness, of the concept of God that (1) is based on natural causes, with or without requirements matching supernatural causes; (2) is reasonably consistent with historical and current usages, interpretations, and beliefs about the concept of God (there is no reason to expect complete correspondence at this point); (3) is entirely in agreement with what we know about the sometimes distressing outcomes of natural selection via organic evolution; (4) is consistent with all that we know about how the human species has evolved; and (5) proposes a concept of God as a universal entity, or spirit, that—we can hope—is capable eventually of serving

the entire human population, without unduly restrictive ceremonies, narrowly ritualized authority, or onerous opposition to widely acceptable and reasonably fair and improvable tenets underlying established laws and social behavior.

I suggest further that, with mindfulness, the science of evolution and the concept of God may be linked to make useful contributions to acceptable versions of the formidable question: What is the meaning of life? As well, part of the key to reducing hostility and divisiveness among religions, and between religious and non-religious people, may derive from active attempts to generate tolerance of a greater acceptance and diversity in concepts of God. I have tried to make my thoughts on these and other topics include efforts to reflect some of the similarities and differences between religion and science, and between religion and secularism, in ways that relate to the structure of this essay.

Although everything I will say here has been touched upon by countless thinkers across a long history, not surprisingly it is difficult to locate arguments that begin from the relatively recent process of evolutionary selection, with the consequence that few combinations of arguments arrive at syntheses similar to those presented here (see references, including the appended volumes). After all, from long before knowledge of organic evolution, the world has been filled with people who know religion, think religion, and do so alongside most of the rest of the human population, imbedded in many aspects of life, in practices of honesty, cooperativeness, congeniality, all the rest of positive sociality and comradeship; and, of course, many less comfortable features of humanity. But formal science is not only far more recent than is religion; much of its working is also extremely slow, compared to the flow of rapid changes in human behavior, while, perhaps ironically, religious morality tends to cling to constancy. The fairly recent disciplines of biology and evolution are often misinterpreted by their connections to the long-term histories of religions, as with, to a lesser extent, the social sciences. The significance of natural selection is often ignored or judged negatively for that reason.

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There are at least two alternatives that may explain the nature of religion and God. One possible alternative is that religious ceremonies and beliefs tend to be accurate and factual, deriving from the pre-existence of a supernatural God, everlasting life, and other special features, including the value of adhering to moral rules imposed by authority figures accepting supernatural causes.

A second possible alternative is that religious ceremonies and beliefs have

been generated gradually and cumulatively, by straightforward expansions of the extraordinary imagination and foresight of the human collective, or its leaders, in the absence of anything that can legitimately be regarded as necessarily supernatural, and therefore understandable as more or less metaphorical, and useful and effective as such.

Either alternative may have been generated by people, not necessarily formally religious, who had begun to live in organized groups for social reasons, because of loneliness or uneasiness about proximities of neighboring aggressive or resource-competitive groups and rising beliefs in the powers and values of willingly single or combined authorities.

It is entirely possible that today's various claims of religious significance have generated, survived, and persisted—indeed, thrived—because they enabled people to succeed, especially in closely-knit groups created by adding and enhancing changes religious in nature.

It is not difficult to find ourselves paying close attention to unusually capable group members willing to discuss serious questions and as a result becoming leaders. Modern human groups have little trouble identifying outstanding leaders in virtually any situation involving groups needing assistance and guidance. Such leaders are most likely older men such as fathers or grandfathers, well known for their special abilities (and without accounting for the curious asymmetry of access between the sexes!). When such leaders die, it is not surprising that group members may continue thinking about the advice they had received prior to the deceased person's loss. Nor is it surprising that the reputations of deceased leaders tend to grow. I suspect that virtually everyone pays special attention to the thoughts that may be passed around almost indefinitely by group members. Offspring, grandchildren, or other close relatives of a deceased leader may take up examples—both old and new—from a deceased leader, and either become a new leader themselves or continue to elevate a deceased relative. Examples may begin to derive from relatives of a deceased leader, or sometimes from almost any members of the group. It seems likely that the more elevated the reputation of a deceased leader, the more likely it becomes that, especially in close-knit or small groups, the deceased leader continues to lead, by virtue of tightly-knit group actions that elevate the deceased leader even further. How difficult should it be, then, for alert or apprehensive group members to begin to honor their deceased leader as a Spirit or a God? Nor is it surprising that supernaturalism can be accepted in such situations, strengthening the wills of group members to maximize the capabilities of their group and determining to build even further on the image of the original

leader. I am sympathetic, and in no way surprised, that any and all versions of God have the potential to be generated—and to be exceedingly useful—as elevated and effective leaders, whether regarded as single or multiple, or metaphorical or supernatural, at least in the confident minds of the seekers of peacefulness and successful group cohesion.

* * *

I reiterate that, despite its neglect by humans in general, and some negative social (and other) results deriving from novel environmental effects and evolved consequences of gene effects, organic evolution indisputably continues as the universal process underlying all aspects of life, including religious and all other human social endeavors. It is scarcely plausible to assume that the increasingly well studied and well understood human organism has little or nothing to do with the straightforward facts of organic evolution; single organisms beginning, as they do, from combinings of tiny and complex particles, reasonably well understood through the decades of development of the human individual's lifetime, and including myriad expressions of social behavior across the everyday interactions of human throngs, to finally comprehend the inexorable deterioration of the later lives of individuals.

GROUP-LIVING: ITS REASONS AND CONSEQUENCES

If we wish to understand ourselves, across all of our history, we must eventually consider the reasons why human populations live in diverse special groups. There is much to understand about different forms of group-living, and there have been many efforts to describe and explain their variations (e.g., Flannery 1972; Alexander 1979; Ember and Ember 1990; Diamond 1997; Boehm 2003, 2012, and many others; see also the appended list of relevant books on these topics). It will profit us to learn much about different behaviors of group members under different conditions of life. It will also be necessary to review the known and likely histories of population variations, the availability and accesses of particular forms of environments, and how group-living has changed across the centuries. These ancient, extraordinary, and frequently changing topics have become virtually complete journeys—indeed, complete sets of diverse journeys.

It seems almost customary to describe and explain the long period of human distribution and social organization by starting with the earliest and least well understood of historical questions, then working toward the present situation. It may sometimes be more effective, however, to begin by examining the currently existing diverse, abundant, and accessible human patterns of social life, then work backward toward whatever can be gleaned from the necessarily less obvious, less well understood stages from early patterns of human social life. I will attempt to discuss a few aspects of early group-living by early humans, but I cannot provide a detailed review of the history of human groupings across millions of years.

The kinds of group-living across the span of human history surely have been extremely variable and distinctive, with the behavior of current groupings dramatically different from the estimates of early humans. Early humans almost certainly lived in small, separated, perhaps scattered groups, and would have been required to be extremely cautious about predators from other species. When humans managed to reduce their problems with serious large predators, as they quite obviously have done, their groups expanded and became more mobile, and also more concerned with restricting barriers, such as rivers, lakes, mountains, and other physical obstructions. Eventually, such barriers came to be crossable, allowing increased movements and expansion of groups. Separated groups, especially those coming from distant or different places, can be expected to view the continuing flow of human migrants as alien or dangerous whenever they looked or acted significantly different. Later on, barriers would have become less significant, sizes of groups would have increased, and competition between groups, in at least some cases, would have been more likely to treat other groups as serious adversaries or enemies. Because humans have been able to reduce threats from non-human enemies, allowing humans to attend more closely the presence of strange humans, human groups have more or less covered the earth, and have both fought and mixed in such ways as to live and hybridize with humans from different locations, habitats, tribes, and other groups. Various visible or other differences among the members of other tribes or groups created the current populations of mixed groups and diverse nations as people moving into new locations began to live together, producing many varieties of hybridized humans from different areas and backgrounds. Such trends will surely continue to diminish tendencies for humans to reject or shun individuals from other parts of the world.

The results from these rather simple suggestions have ultimately produced what we are seeing today: crowds of diverse people, with many groups still

tending to separate themselves from other groups. Such groups have continued to overlap extensively in regions across much of the world. It would seem that humans would have done exactly what we might presume from our everyday observations of appearances and performances of the people around us. It is also clear that many or most of the different human forms, sometimes considered to be distinct species, have been able to hybridize with groups initially from other locations. Finding small differences in the remains of ancient anthropoids, however, is not necessarily evidence of separate or distinct species. Nor are groups of people who suppose that others who look or act differently, or come from distant or quite different places, likely to represent distinct species. Our modern world demonstrates unequivocally pitched battles, deadly fights, extended warring periods, and striking differences between unusual people from different locations; but this is not convincing evidence or demonstration of evolved and completed speciation. Humans from all over the world have come together and hybridized, producing astonishing (and eventually comforting!) mergings of different peoples that have mingled from the ends of the earth, and now comprise the general world population of ordinary human beings. As a result we may be moving toward behaviors favoring global social harmony, while nevertheless living with constant anxiety about the current and future development of increasingly devastating weapons of war.

Today, we modern humans think mostly, I suspect, that we are simply spending our lives in quiet, peaceful, and enjoyable social groups. It is indeed possible to converse almost continually in many comfortable places, with congenial, friendly people enjoying the pleasantries that surround them, and only infrequently engaging in tense or serious conflicts. We tend to accept such situations almost as if they represent the entire spectrum of human existence. Under such circumstances, for example, everything about wars, genocides, or murderous attacks seem far away, sometimes even absent everywhere, especially, perhaps, in our everyday thoughts. All too often we don’t feel a necessity to dwell upon war, or other kinds of upcoming or ongoing conflict, although sometimes across long periods large numbers of human beings just like ourselves are being slaughtered by dozens, hundreds, thousands, or more, somewhere else. We think of ourselves as different because of our separateness from such situations, and we mostly imagine ourselves to never again be involved in serious negative confrontations. Many of us do indeed pass through our lifetimes without being required to participate in military conflicts, or without having to seek frantically to avoid the pain and deaths of innocent individuals threatened by opponents, or others threatening to use the terrible

devices we humans have constructed and applied. But we continue to invent, modify, extend, and accept new weapons in efforts to be ever more prepared to kill small or large numbers of people, in either wars or genocides—or perhaps as attacks or defenses against individuals and groups regarded as villainous and evil, and small groups that continue using the same weapons created and utilized in both defense and offense, within our own societies. We cannot rest as if what appear to be new conflicts will continue according to well-known strategies and changes in weaponry.

Although humans in general are scarcely aware of it, they are somewhat like the thousands of other species that can change dramatically between different patterns of development, quickly and definitely, in ways that fit different life patterns of peaceful harmony in different environments. Unfortunately, humans have also evolved to make incredible changes, but all too often as part of attacking and destroying others of their own species and their own phenotypes. Our largest problem may be to eliminate that second, militant version of the human phenotype.

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> *Let us understand, once and for all, that the ethical progress of society depends, not on imitating the cosmic process, still less in running away from it, but in combating it.*
>
> —THOMAS H. HUXLEY, *1894*

* * *

Different kinds of group-living have special significance in their relationship with other human groups, or with individuals that do not live in groups. We might find ourselves, in turn, in (1) small, two-generation families, (2) large families with multiple generations and large numbers of family members, (3) mixed, out-breeding groups—including unrelated or less closely related families that include members of other families—and eventually (4) mixtures of large numbers of individuals among distant relatives and non-relatives. As already noted, human groups appear at first to be peaceful cooperative members of tightly knit groups that rarely exhibit the negative attributes listed earlier. But when members of such groups are faced with hostile forces from other groups living relatively close by, inter-group strife obviously can break out and result in devastating conflicts. If natural selection tends to increase reproductive success, then we should expect to find ways to either avoid group conflicts or else identify (not necessarily consciously) other ways to use group conflicts to

increase reproduction. This is not because we can only function to increase reproductive success; obviously, we can consciously reduce our own rates of reproduction. But the slow-acting, more or less unconscious changes that maximize reproductive success, even without extreme competitiveness and deliberate killing within our own species, may not be sufficiently obvious to us (e.g., Chagnon 1968; Kelly 2000, 2005; Boehm 2012; Pinker 2011; and many others).

All organisms may be expected to do whatever gives them the greatest possible advantage over other organisms that might compete with them, perhaps by displacing or banishing them, or by seeking to destroy them. In other words, any behaviors that disturb other organisms in ways that are sufficiently severe may identify the winner—and the loser—thereby influencing the results of the conflict. In these respects, humans exceed what non-human organisms can do because humans have evolved extreme abilities for considering the future, calculating, and pondering. They have evolved such abilities as consciousness, foresight, scenario-building, planning, and long-term memory. Such traits have enabled humans to increase continually their abilities to improve and expand almost every potentially advantageous capability of importance to other humans —some traits that we all admire and regard as our most distinctive and effective features, and others that we rarely if ever are able to consider such features consciously. Across time, individuals, and later small and large groups of humans, have been able to depend on their increasing capabilities in finding better ways to acquire food, shelter, and clothing, and to identify, improve, and learn how to create and modify weapons and other ways to win. The human ability continually to expand understanding and skills to overcome other organisms, and sometimes members of their own species, has enabled humans to evolve the ability to change in directions that create serious competitions against other members of their own species. As long as these competitive races continue, and concentrate on group-living, situations involving wars and their relatives may continue to become increasingly unsettled, along with either hostile neighboring groups or, in today's world, even distant groups. Such differences, no matter how trivial, have often become the machineries that have triggered, stimulated, and conducted the worst of our wars.

It is also obvious that humans, still living in groups, have expanded across virtually the entire earth. During these expansions, various barriers have separated families, clans, and other groups, often in ways that reduced or ostracized different groups. When long periods of time separated groups, people in different groups could differentiate, not merely in appearance, but also in their

arrays of weapons and competitive strategies. These different groups were sometimes composed of people recognizable because of their historical backgrounds. Such differences could come about because small migrating groups had diverged as results of being isolated across lengthy periods of time.

Why do we apply such extraordinary varieties of different terms to modes of deliberate killings? Groups did not always combine, and, as noted earlier, were sometimes more likely to treat the members of different groups almost as if they represented distinct species. Examples come from such as the Europeans migrating to North America and Australia, where the immigrants believed that they had to attack and try to destroy the American Indians and Australian Aboriginals. Ember and Ember (1990) have estimated that 30 per cent of human males in early groups have been killed by other males. In these and in other instances, earlier and more distinctive or unusual inhabitants may have forced into extinction.

From early beginnings, humans have subsequently generated a virtually worldwide variety of large and small, stable and unstable, most often overlapping populations. It is this “sea” of people that has by now exceeded more than seven billion human individuals in the world. Such abundance of varyingly contiguous, overlapping, and separated populations is extremely complex in its overall structure. Nevertheless, virtually every kind of human population now can be identified and arranged from within the current world.

Modern people who function in groups have developed social control via numerous organizations: governments, religions, clubs, military and administrative organizations, unions, courts, teachers, farmers, businessmen, team game players, scientists, artists, musicians, families, academies, clans, nations, kindreds, protest groups, political societies, schools, selfish herds, and alliances of any of these and many others. The members of such groups continually change and divide, overlapping multiply, typically in many different arrangements. Such overlapping groups give opportunity for connections and cooperation of numerous groups to respond successfully to one another, and to the collection of groups as a unit. One result is that very large groups can be formed, as when modern nations compete and often combine to engage in warfare as a single unit. Such expansions can result in extensions of positive sociality and the potential for ultimate global harmony.

Note regarding positive sociality: The somewhat indefinite but frequently used concept of “altruism” implies that a gift-giver is prepared to contribute to others without reciprocation. But the shakiness and early termination of one-way flows of benefits make little sense, except to “free riders.” Sense takes hold

when gifts begin to be reciprocated—when altruism is converted to reciprocity. Reciprocating positive interactions tend to become the rule in successful social life. Perhaps we can simplify and clarify by considering somewhat different terminologies. Thus, *net-cost altruism* straightforwardly offers little or no likelihood of return benefits, as its name acknowledges; it is the definite version of a solid concept, but not a useful vehicle in the organization of sociality, and not likely to represent expanding and cooperative sociality. S*ocial investment*, as a replacement for the ambiguous "altruism" (used frequently in quotes because of its vagueness), is obviously prepared, and is expected to pass benefits to needy or willing reciprocators. Net cost altruism turns into social investment when either reciprocators or incidental observers of social investment decide to give or return benefits to social investors. Reciprocating partners, providing *return beneficence* to social investors, create return flows of benefits to apparent or obvious social investors. Social investments, in responses with return beneficence, can support extensive, or even vast, networks of continuing and ever-expanding positive sociality that may have the wherewithal to generate and expand pockets of cooperativeness and unification as prospects building toward global harmony. *Mutualism* is the term applied when individuals gain from uniting (or cooperating), or when members of different species do so, because in each of such cases the combined benefits of the involved individuals can contribute, without risk, to partners that produce reliably rewarding, useful evolved benefits.

MYSTERIES OF THE MIND, AND THE MUTING OF CONSCIOUSNESS

When people do spend most or all of their time peacefully, we are likely to ask two questions: First, why is it that wars and other serious conflicts seem always to exist, somewhere along the horizon, reminding us that even our most congenial friends may either succeed in war or disappear prematurely as a result of participation in war? Second, how and why do people often, or virtually all of the time, forget or ignore entirely the sometimes horrendous events that loom almost permanently somewhere along those personal horizons?

For a moment we can pause and remember that we humans have evolved in the same ways that other organisms have evolved. However, unlike the millions of individuals in species that maintain themselves despite diseases and predation,

along with high rates of accidental or incidental deaths across the lifetimes of individuals, large numbers of humans are all too likely to die from deliberate attacks at the hands of members of their own species. Why is it that we are so adept at forgetting or ignoring the trials, terrors, and truths that affect our fellow humans, and ourselves?

Surely, not everyone is prepared to argue that natural selection can reduce sensitivity or recall specific knowledge of previous unpleasant or deadly activities affecting ourselves or others. Most likely, we think that we simply forget. Or such activities may be removed from our consciousness because they are unpleasant, or because we become convinced that those events were not nearly as traumatic as it seemed when they were happening. But consciousness muted by natural selection is not likely to be a simple error, and it can be a much more significant change than is easy to comprehend.

Not long ago Dr. Billy E. Frye, former Provost of the University of Michigan and Chancellor of Emory University, wrote to me as follows (I have paraphrased slightly in some places):

> *A recent note from an elderly friend reminded me that many people, even well educated people whom I respect very much and who have no difficulty accepting the idea of human evolution (vs. miraculous creation), still cling to some sort of metaphysical idea about the mystery of humans, or the mystery of life. On several occasions this question has come out in a context that makes it clear that at some level people resent, or regard as futile and undesirable, attempts to explain human nature in evolutionary terms. They seem to hold on to the notion that there is something spiritual about us that cannot and should not be "explained away" by evolutionary considerations. In at least some of these instances, perhaps all, it is clear that people like and are wedded to the idea of grand mysteries that will never be resolved—to the notion that there are things about us that we will never understand.*
>
> *Two questions occur to me: First, why do people like the mystery of the unknown? In this case they clearly do not regard it simply as an exciting challenge. Is it because we can cling to the feeling that something is unchanging and will always be as it is now? If that is so, it strikes me that this is religion in its most basic essence. It seems to me that mystery in this sense may be a way of preserving as untouchable some sentiments about a spiritual realm without ever naming it as such, without becoming literal about religious belief in the way that, say, biblical fundamentalists do. I have the impression that some of us want our universe ultimately to be infinite and unchanging, and in a way the notion of the grand, unsolvable (perhaps spiritual?) mystery puts a finite boundary around the universe of our imaginations and our intellectual probings.*
>
> *Second, is it possible that part of the resistance to acceptance of evolution by many*

> *social scientists and humanists originates in this kind of desire for mystery—for unsolvable, unapproachable mystery? In support of this notion I will only observe that at least some of those who have resisted the recent emergence of evolutionary explanations have exhibited overt resentment, and even hostility and anger, toward both these ideas and the people who expound them, and sometimes have openly scoffed at the very idea of trying to explain the "inexplicable mystery" of humans. It is in this sense that I ask, why do we cling to mystery with so much passion?* (Dr. Billy E. Frye, personal communication)

My first response to Professor Frye's relevant and provocative comments is that everyone may, in fact, have some realization, expectation, desire, and capacity for mystery. Perhaps that is part of the feeling expressed by a minister who declared that he was not interested in a concept but the real thing—the real God. Perhaps he meant, at least in part, "a persisting and unchanging mystery," perhaps the concept of God that has been accepted and formed mentally as matching the understanding of the minister's own life, and seeming to hover continually over all of humanity. In my view it is part of the argument for acceptance of diverse concepts of God that our feelings about the mysteries surrounding religion—and our uses of such concepts as God, Eternity, Heaven, Hell, and Purgatory—deserve the attention of anyone interested in the topics of this essay.

For me the next question is whether there is a relationship between the mysteries of religion and its various contexts, and the everyday activities, thoughts, and wonderings associated with the life activities of humans, in particular their kin interactions and other kinds of social affiliations. I think there is such a relationship, and I also think it is not entirely a consciously accepted or analyzed phenomenon—hence, perhaps, in that sense it may remain a mystery that can potentially serve the combined interests of all people via a universal or global version of God—or via prominent and influential individuals or groups that have incorporated such universal or global mysteries under the rubric of a supernatural God.

We are strange organisms, both immensely social and intensely confrontational within our own species—indeed, within our own social groups. It is as if humans have evolved to maximize two phenotypes, in the way that thousands of organisms have been able to emerge as either of two (or more!) different phenotypes, sufficiently distinctive that the different forms often have been regarded as different species. Humans, too, have evolved so as to be knotted up in the differences and significance of dualities—not merely war and peace, but such as conscious and unconscious, honest and dishonest, other-

deception and self-deception, and with kin-group and friend-helping of our “in” or “we” group, as contrasted with the competitive and adversarial “they” parts of other groups—we-they or amity-enmity axes. Biologists have been able to explain the dualities and otherwise different phenotypes in terms of environmental differences, but they have not yet clearly and completely explained how humans can change themselves more or less suddenly from gentle, helpful, congenial people into extreme military warriors.

Part of the reason for thinking about mysteries derives from the fact that the kin circle or any social group is itself likely to be somewhat mysterious, perhaps because it is a social unit composed of numerous genetically or socially connected individuals. Trying to cause any such social group to function as a unit can involve many kinds of agreements and disagreements, influenced by overlapping social or kin relations, and reflecting as well the hierarchically arranged organizations and other elaborations of religious demands.

Part of the mystery of such social groups exists because, other things being equal, humans are evolved to treat their kin or their associates according to the extent of their social history or their overlap in genes identical by immediate descent; but the people involved may or may not be entirely aware of the relationship. Considering kin, we can know the order by which familiar relatives are in fact related to us; and we can be conscious that the more generational links that descend between us, the more distant is the genetic relationship. In this sense, and in the sense that a kin group consists of genetic relatives, the mystery is not so deep. But, to repeat, a good deal of what makes a kin or other social group function surely is not consciously grasped by all of its members.

When one considers these topics, it becomes obvious that we humans are always thriving on mystery—in part at least mysteries within ourselves that we typically do not wish to reveal completely. In some sense those mysteries relate back to that “nasty hoard” in the “secret cellar” that Stanley Elkin (1993) mentioned when commenting on the incompleteness of all autobiographies, and what we don’t want to reveal (cf. Alexander 2010). And we are back to the fact that we do not always know what to do or why we (or religious leaders) do certain things. We don’t know consciously how much or what to reveal to others, not even to close kin, and not even if we sense unconsciously what maximizes the quantification that was never known to us before the recent rise of the sciences of biology and evolution—and that quantification is a consistency in the behavior of genes, termed the maximizing of inclusive fitness. There are many situations, indeed, in which the biological principles of organic evolution are the only way to explain how organisms, including the human

organism, can be understood.

People may want the concept of God to be true, at least partly so, because God is a concept that has come to represent the holder of secrets about ourselves —actually, is typically considered the keeper of the secrets—the source of confidentiality, the reasons for almost every aspect of accepted knowledge, and the means of making everything right for us when the time comes. I have used "secrets" here in a very broad way, but the word "mystery" is probably better. Take that concept away, and we may believe we have somehow diminished the quality of existence. Kin groups can have similar effects (leave aside, for now, the rest of our lifetime associates). Examples can be a slight or great mystery, a "storehouse" of knowledge that can be used either against or for nearly anyone in the group, depending on circumstances and the interactions of members of the kin group. Perhaps it is merely that we are acutely aware of our continuing inability to enter, absorb, and fully understand the workings of the minds of our individual and congenial companions, not to mention hordes of acquaintances, passersby, and complete strangers. After all, human individuals function constantly, necessarily mysteriously, and in domineering and moral elaborations within the continuing performances of their own uniquely extensive, and always to some extent, private desires and intellects; their extensive, complicated, and long-lasting memories surely function unlike the members of all other species.

I think there is a way to understand why we don't want ourselves to be entirely non-mysterious, even for the people to whom we are closest, and certainly with respect to everyone else. Our hesitance can be partly as if, should we reveal ourselves to anyone (or everyone) completely, we would also be "completely" vulnerable—for example, to reputational derogation, whether justifiable or not (we are good at manufacturing the unjustifiable kind!); and scorn and the opportunity for all of our associates and potential enemies to threaten our ruin by telling our enemies about everything negative or demeaning about us that they can muster, along routes that affect us in the worst possible ways. Perhaps some people are convinced that science will "out" all of their personal privacies, and all of the special (good and bad) things they think about themselves. It becomes a global proposition to protect ourselves from that kind of competitiveness and one-upmanship, although protection is also available because of revealed knowledge of demeaning actions susceptible to open disclosures.

I think people see as threatening—direly threatening—any possibility of complete unraveling of our individual complexities, such as many people may think will happen if scientists keep probing the nature of humans. My view,

however, is that the probing can never be completed, and one reason is that the probing—the continuing exploration within the human mind—will inevitably extend, with hope, and beneficially, the array of cloistered, sequestered, changing mental strategies and subterfuges. This is a pattern that returns us to the realization that we have evolved to compete—literally to outcompete others attempting to outcompete ourselves.

It may be slightly disheartening that individuals of any species have evolved to control or outdo other individuals, despite group cooperation, and in humans, despite denials. *After all, the intentions and consequences deriving from the evolutionary selection that continually influences us all as individuals are, in some way, whether clever or clumsy, evolved to outcompete any and every other associated individual that does not provide return beneficence satisfying the silent and potentially negative or critical thoughts of affiliative but also secretive individuals*. This is a basic relationship of all individual humans, whether or not it is recognized or accepted widely, and despite the parallelism in the congeniality of profitable group-living. It is a relationship that may explain the universality of both human mysteries in general, and the consequences of utilization of such mysteries by those who may seek reasons for promoting group behaviors that can develop hierarchically domineering and extravagant ceremonies. Included are the almost universal establishments of lavish and ostentatious houses of worship, generated and operated by individuals behaving as morally superior leaders representing themselves as God's close aides and collaborators—and with little doubt considering themselves to be special individuals interpreting messages transmitted directly and frequently from a supernatural God.

I do not wish that the aspects of religion just described, or religion in general, should wane or disappear. Instead I wish that church officials and members alike can begin to regard themselves and their particular religions and activities as potentially students of social and universal success, as results of science as well as religions, and including concepts of a universal God that serves a universality of social success, and does not fragment the world of religion into prideful factions, sometimes bitterly disagreeing and war-like.

In any case, it seems clear that humans demonstrate multiple features that are collectively relevant to the questions of religion: mystery, human consciousness and its changes, and human competition and cooperation. Natural selection has caused human individuals not only to work together in appropriate circumstances, but as well to compete with other individuals, and to compete group-against-group. Competition among humans has surely caused natural

selection to continually expand and magnify human mental activity. Unlike most other species, and in some ways like all other species, humans have become capable of unique, complex, and continual mental activities. Some of such mental understanding and activities of humans are likely to be withheld from other humans, withholdings that maintain and influence much of the information in the mental activity of humans. This combination of hidden human traits will always create and maintain mystery. As long as the brains of humans continue to expand their views, and their understanding of themselves and their associates and competitors, no one will escape the presence and continuance of mystery—the mystery of personally functioning human minds, working both singly and collectively in their own local environments.

It therefore seems entirely possible that mysteries which puzzle us, and confront us continually, are results of (1) the competitiveness of everyday ordinary individual humans, and (2) congenial groups of cooperative humans and congenial groups of competitive humans. Even more fascinating is the probability that the current mysteries of humanity were absorbed and became—or expanded into—the mysteries that have generated and continued to elaborate the basis of religion and the concept of God.

It should not be surprising that people, as individuals or in groups, have been ready to accept special individuals with skills to claim knowing of attractive and unworldly mysteries, presumably from their own experiences and backgrounds; special individuals that use their special qualities to connect with people that in some circumstances wish to control while making others into subordinate beings, thereby generating organized systems of domination, explicitly glorifying differently special individuals or groups that can be made unusually useful. Can we deny that virtually the entire program of religion could have originated from the value of its organization of the various groups that have spread across the planet? How might we discover whether such effects have served the elevated and impressive ceremonies that have persisted and spread since, explicitly because they were attracted to the mysteries that have been carried always within the souls and consciences of humans? Is it not possible that these arguments, these not merely particular but as well universal human mysteries, may be constantly reflecting a mixed combination of secular and formally religious backgrounds that together could become parallel services across the entire population of the world?

* * *

Humans collect within their brains all manners of learning that they hold on to

indefinitely, without necessarily thinking about them—items of knowledge that people can bring back to their consciousness, but do not always do so. Examples are foresight, memory, cognition, reflecting, itemizing, organizing, storing, combining, interpreting, scenario-building, and many additional intellectual capabilities that can remain functional across impressive portions of the durations of our active lives.

* * *

WARS, GENOCIDES, AND MURDERS

The Most Important Failures of Humanity, and What Can Be Done about Them

As readers look through this essay, I would wish to be able to ask a series of questions about the topic of this section. Specifically, I would like readers to (1) ask themselves to estimate the numbers of population deaths in various different situations known to involve wars or genocides (for examples, see below); and (2) continue to ask other people the same question. See for yourselves the accuracy, or absence of accuracy, from those situations, and consider reflecting on the topic of muted consciousness (see also, Pinker 2011).

* * *

Humans are collectively, uniquely, and by far the most ferocious, hyper-competitive, hyper-patriotic, war-mongering, genocidal, and murderous species on earth. Unlike all other species, we humans have become (or maintained ourselves as) our own worst enemies. We have made it so by dramatically diminishing the significance of other-species enemies and increasing the numbers, crowding, competitiveness, and conflicts of members of the human species. As an example of one such consequence, one study of deaths from wars and genocides alone, during the twentieth century, has yielded a maximum figure of 150–160 million such deaths, averaging approximately 4,000 deaths per day—counting every day of every year across those 100 successive years (Scaruffi 2006; see also Goldhagen 2009; Pinker 2011). *During the United States' Civil War, a war with far fewer citizens, war deaths were calculated at 618,222* (Encyclopedia Americana).

* * *

In the Ann Arbor News *of March 29, 2012, The United Nations has estimated that more than 9,000 individuals have been killed in recent continuing disagreements between the Syrian dictatorship and its citizens. The UN has since increased the death*

count in Syria's civil war to at least 60,000 people.

* * *

On the morning that I wrote this paragraph, 74 people were reported to have died in Egypt during a relatively brief turmoil involving primarily a single controversial soccer game.

* * *

The city of Detroit, Michigan, reported on ABC television that, during the past year, 344 people were murdered—only 21 fewer than one person every day across the entire year.

* * *

Kill a man, and you are an assassin. Kill millions of men, and you are a conquerer. Kill everyone, and you are a god.

—BEILBY PORTEUS *(1731–1809) Bishop of London*

* * *

A hydrogen bomb is an example of mankind's enormous capacity for friendly cooperation. Its construction requires an intricate network of human teams, all working with single-minded devotion toward a common goal. Let us pause and savor the glow of self-congratulation we deserve for belonging to such an intelligent and sociable species.

—ROBERT S. BIGELOW, 1969: *The Dawn Warriors*

* * *

Movies, operas, fictional and nonfictional stories, books, and other accounts and documents demonstrate the hyper-competitiveness and hyper-patriotism that reflect the duality of geniality and ferocity, of loving and hating, which seem to be maintained, and in certain ways are not only considered acceptable, but are relished, at least sometimes, in the minds of most humans. Over and above wars, all across the United States, the morning news lists small and large numbers of recent deaths by murders of single individuals, families, or other small numbers of people, accomplished with definite purpose, despite the strange fact that most publicly revealed felony murderers have to realize, prior to their decision to kill, that they are predictably doomed to lifelong incarceration—or else lose their awareness of their

oncoming mistake(s).

* * *

How did this situation come about? What are the continuing reasons for it? How can it continue to be prevalent? Why do so many people tune in every day to trace ongoing, potential, and fictional(!) wars, and to hear about the details of morning and evening single or group murders, and attempts at murder? Why do humans multiply and sustain heinous and despicable behaviors, emphasizing and detailing endless varieties of films, fictional programs, and other performances in which multiple murders are made to appear as horrific and chilling as possible, using words like slaughter, assassination, lynching, decapitation, throat cutting, strangling, suffocation, drowning, bludgeoning, poisoning, disembowelment, serial killings, and many other incredibly diverse and sickening ways to vilify, nauseate, terrify, and destroy members of our own species? Why do real and imaginary happenings appeal so completely as to make even fictitious horror publications, movies, and shows simultaneously seem both devastating and thrilling? On what basis can we imagine movement toward a global harmony when so much of our interest is linked so frequently to such almost constantly negative, yet thrilling experiences?

Consider the great number of old-time western films, or “cowboy movies,” in which nearly every actor is likely to carry ostentatiously at least two guns, and maybe knives as well, and in which small and large numbers of seemingly unfortunate actors and actresses are taught to pretend that they are being slaughtered in the most horrendous fashions. Why are virtually all such performances so persistent, and so incredibly and abundantly popular? Is it simply because people have acquired deadly weapons, and have learned with practice, and in the absence of sufficient legal control? Or is it that they believe they can slaughter those who are apparently or potentially competitive, unfriendly, or vulnerable? What has caused the success that seems to represent repulsive, disgusting, and appalling aspects of human nature? Why do we apply such extraordinary varieties of different terms to modes of deliberate killings? Why do such attitudes continue to persist, and to be regarded as honorable or laudable? How do we also manage to erase temporarily, and so easily and quickly, the horrendous examples laid out before us in the news media and in nearly all forms of literature and diverse performances? Is it merely that the expansion of deadly weapons has magnified the likelihood of besting individuals and groups in particular situations to motivate use of every instrument and method to outdo other competitive individuals and groups?

I suggest that this situation can be partly understood by considering together several major aspects of human performance linked to events or circumstances that, evidently across most or all of human history, have generated combinations of human traits and tendencies that bring together diverse components of human nature, and produce the current and now essentially universal and deplorable human situations. Continual expansion of increasingly devastating weapons provides reasons for extending methods and plans for fighting individuals and groups, today including huge and sometimes multiple nations coming together to create incredible havoc in war. Differences in power and motivation from changing weaponry and strategies can continually reinforce tendencies to bully, attack, batter, kidnap, rape, eject, banish, and kill potential or actual competitors. Is it really an exaggeration to say that all we have to do in group-against group confrontations is to change to our rules and proceed?

Aside from bonding of male-female interactions, parent-offspring and other kin relations, and the clustering together of non-relatives in the interest of saving themselves via the strength of their group against other hostile groups, the members of all species seem to have evolved to do their best to outcompete all others in one way or another within their vicinity. It would appear that the members of no species anywhere can even remotely match the “grandly” intelligent members of the human species with respect to continually revising and rendering weapons and strategies increasingly more devastating, and magnifying temptations to kill, bully, or drive away other humans.

Team Competitions in Sports

If humans have become their own principal hostile force of nature, we might easily understand how humans have also become the only species known to play competitively, group against group, in team sports—in groups that win or lose as groups (Alexander 1967–2011). Team sports are forms of play. Most biologists regard play as having evolved as practice—practice for something other than play—instead, for the “real thing,” which in this case can only be competition and conflict, perhaps—ultimately—direct or indirect contributions to warfare between human groups.

It is not easy to deny that the raging excitement of such games, including, for example, deliberate distractions by fans (enthusiasts) with loud noises and raucous actions, for example, rapidly flapping devices that create a virtual

“field” of noise and confusion in front of a player who is attempting “free”(!) throws. Such devices are designed to confuse and thwart players on the other team.

Teams competing in sports are exhorted to think only of the team, not of themselves as individuals. That is precisely what takes place in the military, in which individuals are dramatically, necessarily, and cleverly (especially when war is imminent or current) subordinated to the service of their functional units and trained to perform as members of closely-knit, single-purpose groups. They are individuals prepared to give their lives to save the group, all of it or part of it. In some sport arenas, the intensity of team sports results in more than 100,000 on-site spectators.

We can consider whether it is possible for widespread and intense team sports to remain true to their apparent original purpose. One question is how to generate such considerations in the interest of promoting social harmony. Games and other activities, including both individual and team sports, may have replaced and reduced the incidence of serious, intense, and negative forms of competition. But hateful conflict, too-frequent killings, and other negative encounters—the latter curiously more often by over-zealous fans than by team members, and with equally avid appetites for increasingly horrendous cinema, radio, and literature—have shown little evidence of receding or disappearing from competitive team sports, or from shocking or gruesome theater in all of its variations.

It might be enlightening to rank the frequencies of incidental or accidental injuries to players and fans in the different sports of basketball, football, hockey, and soccer, and compare them with the frequency and severity of injuries from physical altercations to players and fans. A significant example is the recent report of instructions, or tutelage, by coaches, about pre-arranged attractive cash rewards, offered to professional football players who are then expected deliberately to cause disabling injuries to opponents.

Surely, we all hope and expect that the positive excitement and enjoyment of team sports will continue, and thrive, and that serious team and spectator tensions will continue to identify methods and reasons to soften and adjust their actions without eliminating the excitement and enjoyment of competition. There are reasons for team sports to minimize the potential for generating extreme actions and attitudes that expand and direct the shadows of serious conflict and warfare. It seems possible—and of great significance—that, with care and thoughtfulness, large increases in sporting competitions, on international scales, can become extraordinarily valuable contributions to continuations of positive

cooperative and competitive sports, and to reduction or elimination of seriously negative consequences.

Humans Have Created Their Own Principal Hostile Forces of Nature

Unlike members of other species, humans living in groups are extraordinarily—probably in some ways uniquely—competitive within their own species. Wars, genocides, murder, bullying, injustices, dishonesty, deceit, fraud—all such results of hyper-competitive, hyper-patriotic behavior—are "hyper-prevalent" in humans. Again, we are reminded that natural selection tends to maximize reproduction, and that we accomplish this by as nearly as possible out-performing everyone but ourselves.

Following, in some respects, Sir Arthur Keith (1949) and Robert S. Bigelow (1969), I have suggested that modern humans have, for better or for worse, considered other humans, especially in groups, to be their most important hostile forces of nature. Part of my argument began with the possibility that only this feature can explain why the expensive human brain has evolved—or persistently increased in size and complexity—so far beyond the brain sizes of its closest primate relatives (cf. Alexander 1967, 1968, 1979, 1987, 1990, 2008). If this argument is correct, then we can see another way that humans living in groups can be behaving selfishly when they save or help members of their own groups but not those in other groups. When we realize the rates at which people have been killed in wars and genocides, even during the 20th century alone, the emergence of larger human groups and more deadly and catastrophic weapons may become more devastating than we might have anticipated (e.g., Ember and Ember 1990, Scaruffi 2006, Goldhagen 2009, Pinker 2011). If we turn away and simply accept the manner in which differential reproduction functions—and if selflessness, cooperativeness, and social reciprocity do not function so as to build social harmony—we will be yielding to the relentless slow changes of natural selection, and failing in the effort to enhance the possibility of roles for effective social investment and return beneficence in our societies.

Balance-of-power races between different groups of the same species may be uniquely important in human evolution (Alexander 1979, 1987, 1990, 1993, 2005). The particular forms and sizes of group-living to which humans have been driven by this unusual situation have caused dramatic changes in entire

collections of related traits, suggesting that whatever caused the human kind of group-living were dire and continuing threats. The organ most dramatically affected is likely the human brain, because of the usefulness of social cleverness and expertise in interactions among individuals of the same species.

SCIENCE AND RELIGION

In my view, it is not necessary, or useful, to disparage the concept of faith. All of us conduct our lives with a large complement of faith. There is no effective alternative because we simply do not have the means to learn for ourselves about everything we would like to understand. The difficulty with the concept of faith is that, particularly in religious contexts, most expressions of it seem to require absoluteness. Thus, by claiming a basis in eternal verity deriving from an unchangeable supernatural source, faith sometimes takes forms that call for permanent incontrovertibility. This assumption is closely related to permanent assumptions of value in the moral rules of humanity. It inevitably becomes adversarial to all of the ways—all of the formal and informal procedures—according to which we learn by exploring the nature of the physical and living universe. Science, whether formal or informal, necessarily changes continually as knowledge accumulates, while moral rules tend to be enforced and maintained, therefore tend to be lasting and unchanging, sometimes by declaration, whether right or wrong. This, and the difference between morality and reality, is a source of conflicts between a science of discovery and a faith supporting agents of supposed unchangeable immortality.

Scientific procedures are effective because they eschew attitudes of “blind faith” in favor of testing repeatedly—and continuing testing—until results are obtained that can be verified by repetition. But we do this not merely in formal scientific investigations but also in all of our ordinary activities. In everyday life even the most devout persons employ “scientific method” almost continually. When problems are encountered, we generate guesses, or ideas, about possible answers, then do whatever is necessary to see if the idea is correct. If it is demonstrated to be in error, a new idea has to be generated and tested. If we are preparing a meal, we may taste the results repeatedly so as to try to improve what is cooking, testing and retesting to get the desired results. Exactly the same procedure is used in trying to find out why our automobile has stopped running, or why a child is brought to a physician to analyze and diminish or remove a serious ailment. As soon as an idea passes all the tests, one by one, the person

doing the testing can proceed, using the new knowledge. That is precisely the kind of procedure that is used by scientists at work. Typically, this simply means generating the next hypothesis, or guess—as suggested by the Nobel Prize–winning physicist, Richard Feynman (see Sykes 1994)—and continuing, or else starting the whole testing process again. The more complicated the problem, the more complicated the process of generating worthwhile possibilities and testing them. Willingness to seek alternative explanations, and to revise our understanding of every investigatory process are the hallmarks of success in finding the truth—of discovering how to "get things straight." As already suggested, insistence that faith has to be absolute and permanently unchanging because it derives from supernatural forces—and that science is therefore the enemy of faith (and in this sense, the enemy of rigid and unchanging authority—derived morality)—is probably the most serious conflict between religious and non-religious practices (see the extensive and provocative discussions by Dennett 2006, on religion as a natural phenomenon). This set of conflicts is likely to increase as scientific knowledge expands, while religious faith may risk clinging to long-continued but perhaps no longer acceptable claims.

THE MEANING OF LIFE

Acceptance of the arguments made earlier enables us to repeat two related propositions about the effort to characterize God and the mysteries of humanity: (1) the concept of God as an outcome or consequence of human evolution, derived from the flow of human intelligence; and (2) the meaning (or purpose) of life can be to serve, and probably always has served, as what may be termed a universally acceptable metaphorical spirit, by many thought of as God, and generated via the mystery that is the "hoard" of more or less unstated and unrevealed knowledge that persists, each with its own uniqueness, within every human being's special mind and imagination. The first-numbered statement above has been characterized in such a way as to clarify what is meant. The second statement, however, deserves further discussion.

When the concept of meaning is explored, as by returning to the dictionary (repeatedly!), one finds it treated as mainly synonymous with purpose, aim, and intent. In other words, meaning is virtually always treated as anthropomorphic—as requiring motivation of the sort that humans exhibit when they set out consciously to achieve something, projecting alternative behaviors into the imagined future in a testing way. If one asks "What is the meaning of life?" the

answer will be quite different if “life” is meant to refer to all of human life, as opposed to the individual life of a human being. We cannot easily answer the question of meaning for non-human forms of life or nonliving parts of the universe unless or until we accept the idea that the same concept that “created” humanity (using either of the common meanings of humanity) also created the physical universe and non-human life. Otherwise nothing could give meaning to non-living objects or non-human life, other than evolved function *per se*, to all indications never conscious or self-perceived except in ourselves. This is so because, even if we can work out evolved function, we cannot easily translate into intent or purpose the ways in which nonhuman forms of life, especially those apparently lacking anything even remotely resembling consciousness, use environmental stimuli to respond appropriately to events as they arise. As a concept associated with conscious thinking in humans, meaning is possibly without any counterpart among non-human living forms. Only human life can confidently be said to have conscious purpose—or at least very much of it.

Purpose could be ascribed to a human life from two backgrounds. First, I might ask myself what is the meaning of my personal life. In some sense I could make it anything I please. But I suggest we would all agree this would be a difficult attitude to assume and maintain. I think we have to assume that this difficulty is a consequence of the tendencies and capacities allotted to us by our evolutionary history. Thus, it is likely that difficulty would arise because we are not evolved to have such a motivation, or to give such an intent or purpose to our lives. We may not be evolved to answer the question of personal meaning at all, at least in any general or long-term sense—even if we seek it plaintively sometimes. On the other hand many of us have been exhorted at one time or another to give our lives to God—to consider our lives as service to God. But it is difficult to do this—to imagine any meaning for life—unless we accept that an anthropomorphic spirit or attitude formed our lives, or governs them—said differently, created a universal phenomenon, embodying intent among ourselves. This requirement can be met, or accepted and used, not only potentially by a traditional, personified, and in our best thinking, universal God; but also by the spirit or thought process generated out of the human moral capacity, historically residing in the collective minds of the kin group or minimal defensive unit, and expressed from that collection of minds.

Second, and following arguments given earlier, the purpose or meaning of human life as a more general proposition becomes a question. Purpose is something that individuals have so that, as said, we can think about our own lives as having whatever purpose we choose to give to ourselves, whatever

purpose we can mount under the *a priori* thrust given to our lives by our personal experiences and by the evolutionary process (*a priori* in the sense of pre-dating or using our personal consciousness to inject purpose or intent). We can also consider the purpose of any outcomes of confluences of interest with other individuals, or group interests, to which we subscribe or accede. Nathan Hale must have been an extreme example when he supposedly said: "I regret that I have but one life to give for my country."

So life *per se* (or in general) probably never had anything legitimately termed a *conscious* purpose until we generated something that could give such purpose to it. As already noted, that "something" was probably generated as an anthropomorphic cause for life—a Creator, designated or named as "God." It is a spirit that gives purpose to life—for many or most people now, but potentially, and most effectively, for all people, as a universal concept (See also, Dennett 2006).

We can wonder if portions of the arguments made here were sufficiently available to the psyches of an ample number of humans across the appropriate portions of history for them to realize consciously that they might have to come up with an anthropomorphic God if they wanted to assure themselves (or others—e.g., potential Nathan Hales) that life in general has purpose—in the same sense as human purpose. That is, there had to be purpose from some source other than the "mereness" of ourselves as individuals or the slightly larger mereness of our local groups—the competitive (defensive, aggressive, warring) and cooperative units.

Further testing of the approach presented here lies partly in persistent efforts over long times to apply the proposed concept in every life situation: (1) to ask in every instance in which God is mentioned or invoked how apt in that instance is the concept of a universal spirit of beneficence; and (2) to see if the concept of such a universal spirit ever becomes impossible, or how often it is more awkward or more reasonable than its alternatives: whether it appears to explain each and every situation, excepting those which turn out upon closer examination to have been based on factual error.

Understanding of the group morality concept of God, and its effective use, also requires that we seek a better understanding of the moral capacity—or its expression as conscience or as willingness to invest socially (and even to hone such willingness by practice in solitary or in anonymity)—that surely characterizes all humans everywhere. Assuming that as individuals we start out socially naive, how do we change under different social stimuli so as to mature what is likely to be regarded as a "normal" concept and effective practice of

morality? How can we accomplish this increased understanding so as to promote a concept of God (or a set of such concepts) that can be truly universal? How can we move toward world peace rather than, ironically, primarily enlarging the sizes and frightening capabilities of a smaller number of more horrifically willing and aggressive nations? We need to reflect on how difficult it might be to deny that this is the most we wish to understand about what God and democracy-loving folks have been able to accomplish, while continuing to lack significant prospects of universal peace from the directions taken so far.

I have not discussed the deterioration that causes the invariable termination of the human lifetime. It is well known from biological science that this deterioration results from complex changes in the survivability of the genes and cells of organisms under negative environmental influences across the later parts of life, and that reproductive potential loses its effectiveness as the organism ages (cf. Williams and Williams 1957; Williams 1966; Alexander 1987; and many others). It would seem that being aware of the sad certainty of the end of life may have accounted for the ancient religious belief that death could be turned into a mere transition to a supernatural place called heaven. As biological studies continue on an ever-broadening scale, and are increasingly well understood among the complexities of the evolutionary process, the connections and relationships between the organization of life's *recently analyzable processes* and the assumptions of religion, *generated centuries ago*, will certainly continue to modify our views of life.

MORALITY AND THE EFFORT TO PROMOTE UNIVERSALITY OF GOD

The evolutionary approach to human behavior continues to have serious problems. As suggested earlier, the most obvious one is that evolution is accepted by only a minuscule proportion of the world's population. Even within that minuscule proportion, too many academicians and intelligentsia tend to wall evolutionists off as if they were malignant tumors. This happens partly because only a minority of thoughtful people are extensively educated in biology, and this in turn is partly because the interaction of heredity and development (the generation of the individual) is still poorly understood. Also contributory is the convoluted nature of human efforts to self-understand, not only because we must use the properties we wish to understand to carry out the analysis, but as well the

nature of the biological history that few wish to contemplate. It is not easy for anyone to believe, from his or her thoughts about personal motivation and that of other humans, that humans are designed by natural selection to seek their own interests, let alone to maximize their own genetic reproduction. Natural selection appears to have designed human motivation in social matters in such fashion as to cause its understanding to be resisted powerfully.

We lose in analyzing such problems, if we restrict ourselves to discussing only the brighter side of human nature or pretend that the topic is cooperation, and not competition as well. Some moral philosophers and other academicians seem to travel mainly in pleasant worlds, as if with little opaque clouds that tend to admit only the delightful aspects of human intentionality (or their shadows) floating above their heads as they move along the sidewalks of Urbania between their offices and their homes. But the misery in the world is not all there because of pathologies easy to understand or proximate causes easy to remedy. Nor is it all owing to those "other" kinds of people whose motivations (unlike our own, of course!) are sometimes pernicious and self-serving. Moreover, technology and civilization (weapons and war) have created circumstances in which virtually all human striving, designed as it is to better the current quality of life, nevertheless continues to threaten increasingly the future of humans, even that of our planet and life itself.

Analysts of morality must retreat from their subject far enough to examine the reasons for its convolution. We will gain from understanding that the kindness, beneficence, and good fellowship that occurs or remains only locally tends to be selfish, and we must also understand why the idea is repugnant and what to do about that. To solve the problems that human evolutionists have glimpsed so far, we will gain from enlisting a far greater proportion of the world's thinkers. If, as knowledgeable people increasingly suggest, massive beneficence by our generations will be required to ensure the survival of later generations, then unless we don't care we have to know how to reverse the relevant aspects of the striving we have evolved to accomplish. We have to know how to use the fact that no part of biological theory has ever legitimately implied that humans cannot employ their evolution-given traits to set and accomplish goals that are entirely incidental—even contrary—to negative aspects of their history of natural selection. I would suggest that these things will happen only when evolution-minded people have overcome resistance to evolutionary analysis of behavior by explaining, much better than has been accomplished so far, the nature of human motivation and the reasons for its partial concealment and seeming withdrawal.

The capacity to generate an effective moral sense is surely a criterion for all-privileges membership in our species. Suppose that the concept of God does indeed arise out of cooperation and good will, and our reciprocating confidence in the existence of the people involved; and suppose that in the mind of every individual the concept actually stands for that collective of cooperation and good will (whether entirely consciously or not). This would mean that beneficence and charity derive from our sensing of the social power, will, and value of, not an extrinsic human-like being, but the mind (and minds) of the collective itself. Surely, then, it is a reasonable speculation that the existence and presence of the concept of God—or the overall effect of the existence of a universal moral capacity in the human psyche—created humanity at the "moment" across history when that universal moral capacity, and the appropriate responses to it, became a reality within some of our ancestors, and was on its way to becoming a functional potential within all of us. Perhaps the concept of God was cemented into kin groups all across the human species as a result of feedback from a spreading grasp of the universality of the human moral capacity, even if that understanding was never fully conscious. Perhaps this is the sense in which God (the concept of God) can result in an unusually broad understanding of universality in humanity.

Anyone taking this view can cheerfully—even enthusiastically—accept virtually all phrases in which people currently include the term "God" in social circumstances. Examples are "Thank God," "God bless," "In God's eyes," "With God's help," or "One nation, under God" (more appropriately, from the reasoning being promoted here, "One *World*, under God"—see also terms earlier in this essay). For example, using the above concepts, it would matter little how explicitly thankfulness seems to be attributed to God by an individual for his or her own personal success in any socially significant activity or competition. Whenever, as individuals or subgroups, we invoke or thank a universal God, we would not be acknowledging the will of an entity that for some arcane reason enabled us to win by favoring us personally over all others. We would be hoping to be acknowledging or thanking the collective morality and good will of "All the People." We would be recognizing the value of the fellowship that characterizes our entire social group, including, again, "All the People." We would in a sense be thanking everyone, or everyone in the group producing or overseeing the particular activity or competition under consideration. It is surely difficult to fault anyone for thanking a large number of people collectively for all of their different contributions that happen to bring about a particular successful outcome. The effect is instead likely to be heart-warming and reassuring, and I

daresay that this is what people who view themselves as cooperative believers, or who are for other reasons unusually tolerant, tend (and wish) to experience in such situations. Thanking God as the spirit of collective morality would become a unifying and reassuring statement, as it demonstrates itself, rather than a potentially divisive one implying competition for favorable attention from a God that in any way bestows special favors on selected individuals.

The situation just described, though it could include bitter competition between individuals, teams, or cliques, would not meet the requirements of the hypothesis being developed here unless it were part of a larger group interaction that—unlike interactions between individual competitors—could be characterized by a potentially over-riding feeling of unity and cooperativeness among its members. Such a local group would in turn have to be one of several or many competitive groups. It becomes immediately interesting that this problem of how social collectives are constructed and maintained, and how such collectives interact with each other, is the most important and—for some—potentially dismaying consequence of the characterization of God here being described. Yet this problem is consistent with the failure so far of humanity to succeed in promoting the concept of a unified and universal God theme for all humans—or more precisely, since all humans live in social groups, for all of the various internally unified groups of humans on earth.

The apparent match of a large array of terms used traditionally to characterize God, the nature of which might be called a universal concept of moral capacity unique to humans, and the additional match between this hypothesis and the desperate difficulty in using the concept of God to work steadily toward world-wide harmony, may alone demonstrate and justify proceeding further with hypotheses such as those presented here.

I hope it is abundantly clear that I do not seek to disparage the concept of God, at least when it can be understood in the ways described earlier. I began this pursuit with a strong bias that God has to be real in some important (if unusual, unique, and, with hope, universal) sense, that the most important thing to learn is precisely what that sense is, and how the concept of God can apply universally, and merge with the rest of humanity. I also began with a bias that the concept of God, and the views and approaches that underlie it, are central to human existence and human endeavors, have been evolutionarily adaptive to the humans that have appropriated them, and must be clarified if we are to understand ourselves. Obviously, it is my view that the most useful and acceptable version of God is universal, and it ought not to be limited to narrow and proscriptive claims. Nevertheless, considering God as universal raises

questions about the likelihood and effectiveness of any version of our efforts to build and support universal beneficence and cooperativeness.

ARE GOD AND EVOLUTION IN CONFLICT?

A Response to The Reverend Gordon Hyslop

I share The Reverend Gordon Hyslop's feeling (*Ann Arbor News*, February 14, 2007) that viewing a new baby grandchild is an awesome experience, and that the human body is indeed a marvel. But one does not have to set the magic and intricacy of human beings against anything at all, as in his statement: "A human life is a miracle from God, not a process of evolution." I would like to convince Reverend Hyslop, and everyone else, that it is not useful to think of God and science as adversarial to one another.

Our evolutionary background and our religion are together anciently responsible for both social cooperation and the extremes of social competitiveness, including internecine battles that have caused immeasurable pain, misery, and suffering all over the world. Perhaps, to reduce serious conflicts and expand harmony, we should join rather than separate our knowledge of evolution and our religious attitudes and beliefs.

As an evolutionary biologist, I have sought for more than 50 years to understand better how evolution has primed our behavior for particular situations. It is a difficult problem, partly because much of our knowledge is not automatically conscious, or has only recently been made conscious. For example, much of what Reverend Hyslop cites—or can cite—as aspects of human complexity could have been discovered only within the last few decades by social, biological, and medical scientists. We became aware of the evolutionary process a mere century and a half ago, and of genes slightly longer than a century ago. So, unfortunately, it is not surprising that we like to think that all of our social attitudes and actions are borne from consciousness, and that genes—as invisible, manipulative, and seemingly alien forces recently brought into our consciousness—do not in any way influence how we behave.

Our uses of the concept of God also involve aspects of our makeup that we do not fully understand. If the concept of God has a real basis—as I believe it must, because of its virtual ubiquity and the passion we associate with it—then surely it behooves us to explore everything about the concept and its influences on our lives, including effects not easily made conscious. Perhaps, rather than continuing to accept that the concept of God can only refer to a supernatural,

anthropomorphic, fatherly being, we should ponder straightforward examinations of alternative ideas about the origin and nature of the concept, its role in the mysteries of the human mind, and its significance.

For example, what if the power, guidance, and permanence of God derives, not from a supernatural anthropomorphic being, but from a human-generated and highly effective use of metaphors referring ultimately to the ancient and ubiquitous human kin group, and its replacements and diverse forms in modern society? Thinking of God in our everyday lives evokes primarily emotions such as love and cooperation. So does kinship, and as well the exchanges of reciprocal altruism, the risk of net-cost altruism as potential social investment and return beneficence. God is treated as a concept or spirit, regarded as a source of strength, authority, morality, and protectiveness. So is the kin circle and the sociality of the local community. We expect and wish our families, or kin groups, to continue indefinitely. So is there an assumption that God is eternal. To my knowledge none of the approaches to God rejects that, even if we must attach our affection and our passions through our kin and our collections of cooperative support. The members of every group, or religion, would like to think that their particular view of God will eventually prevail, but this may be true only as long as humanity survives. Members of different groups, on the other hand, sometimes view God so distinctively that intense competition and we-they confrontations are prevalent. Both of these attitudes apply also to our view of kin and benevolent social groups. The desire for wise and infallible leadership, and the roles of older and more influential individuals in kin groups —given reluctance to accept death and the value of believing in communication with deceased leaders or family heads—are possibly long-ago facilitators of the envisioning of God as a supreme individual being with powers beyond our experience in the natural world, including that of negotiating the prospect of eternal life.

The old “local hubrises” of kin groups and religious groups are indeed enemies of broader-scale social accord, and they are sufficiently parallel to suggest a common if not equally ancient background. Local hubris surely has its usefulness, and not merely in the past. But today’s environment of calamitous destructive powers—and increasingly rapid and effective world-wide communication and travel—denies us justification for the destructiveness of continuing regional separatism and chauvinism—of extreme-we-they confrontations on pride, stubbornness, economics, politics, religion, kin relationships, unfamiliarity, or even resource distribution.

Returning to Reverend Hyslop’s microcosm of grandchild effects, the

several adopted grandchildren of my wife Lorrie and myself, whose diverse genetic ancestors derive from the far corners of several different continents, have given us confidence that appropriate social learning—assisted by evolutionary understanding of early imprinting and bonding, and continuing positive association—can yield the pleasures and strivings associated with kinship as surely and as completely as do the usual life situations of formally genetic kin. We are fortunate indeed that the directing of human cooperativeness and competitiveness is largely socially learned, for such learning, as we know, is subject to manipulation by deliberate changes in the circumstances of life. No matter how social learning has worked in the past, knowledgeable application of it in the modern world thus has the possibility of bypassing or minimizing the sometime foibles of our histories with regard to social and religious variations.

Evolution is not the enemy, even if it has not made us perfect. The sciences we use to explain evolution—or anything else—are no one's enemies. Nor is religion, although it may seem surprising that interpretations of God have seldom led religious assemblages to bless everyone, everywhere, equally (as noted later, one minister in my childhood church puzzled me, while I was still a child, by consistently limiting his prayer to, "God bless everyone in this congregation and all those too ill to attend!").

Although I am not a fan of supernaturalism, I am also not surprised that others find it useful or reassuring. Members of my own kin circle rely on a supernatural concept of God, many of them worshipping in the small country church I attended as a child, and where Lorrie and I still visit at every opportunity. Our mutual affection there remains. But for me it is difficult to witness and condone extraordinary and extreme ceremonies, elaborate structures, and assertions that sometimes channel morality and unsupported impressions narrowly, and even pompously, in the effort to accept as factual beliefs that supernatural declarations should override common sense.

I appreciate Doris Lessing's (1992) insight in *African Laughter* that, "Myth does not mean something untrue, but a concentration of truths." But there is cause for concern when myth is used as a weapon against other concentrations of truths. Art, poetry, music, and fiction all utilize myth, and they rarely promote their business by attacking science. Is it too much to expect that novel and ingenious cooperative approaches between science and religion can help lessen the worldwide scourges of unnecessary pain, misery, and suffering, and the continuing sad parade of deliberately premature deaths from human conflict?

SEEKING GLOBAL HARMONY

Considering Efforts to Alter the World's Greatest Problem

> *Try to imagine the complexity of more than seven billion individual humans, divided among nations and uncountable forms and sizes of groups, all assiduously pursuing an endless variety and complexity of their separate and collective interests, and simultaneously trying to think about achieving the goal of global harmony. Try to imagine the problem of seeking to cause all of those more than seven billion individuals to remove any significant conflicts of interest among their various collectives and groupings, or even merely striving to lessen the worst consequences of their conflicts.*
>
> *To a large extent, partial solutions to the problem of global harmony depend today on the governed units termed nations. Organized religions, in different countries and situations, can also exercise potent influences in the machineries of nations. Something similar can be said of scientific progress, because scientists and engineers generate and perfect the paraphernalia of medicine, business, and much of everyday life, and as well the instruments and practices of war. As loyal citizens of their nations, and sometimes as staunch members of religious or other authoritarian groups, scientists can also be influential seekers of rewards for the creation and use of increasingly horrific weapons of war.*
>
> *How can we increase the informing of our populations with regard to willingly competitive and potentially destructive groups in ways that will diminish or terminate devastating conflicts? How do we escape the hyper-competitiveness that we all too often praise, beginning with strong advice, praising the most extreme competitive behaviors to even our young children, as the only effective route to lifetimes of accomplishment? How do we disentangle ourselves from the pernicious influence of diversely and competitively sacrosanct hyper-patriotism, or the divergent and unyielding forms of religions? How do we free ourselves from the view that our readiness for deadly confrontations outweighs the priceless value of our military men and women as we hurry to proclaim and cling at all cost to the sacredness of our essential motherlands? How can we negotiate and modify governments (and ourselves) to seek successfully the means to settle conflicts without acrimony, and with an absence, or at least a minimum, of force or dissension? How, indeed, can we escape from what Abraham Lincoln, in referencing actions during the horrendous U.S. Civil War, referred to "the attractive rainbow that rises in showers of blood"?* (Alexander 2011: 286)

Several decades ago I found myself thinking that, in spite of the unique

complexity of our brains and our behavior, we humans don't really know who we are or how we came to be as we are. The reason, perhaps, involves evolved tendencies to forget or suppress unpleasantness, and as well be aware of the effects of habit and non-conscious but well-understood practices and actions (Alexander 2011, Trivers 2011). As suggested earlier during comments about mysteries, many such tendencies may be evolved mutings of consciousness, carried out by natural selection, and scarcely available to the contemplation of most persons or situations. It seems clear that we have not evolved to wield all of our prodigious mental capabilities freely and effectively. Nor do we seem continually tuned to understand and contemplate our willingness to engage in serious conflicts that destroy large numbers of our own people. If we don't know who we really are, or how to deal with sometimes galling human extremes, efforts to approach global harmony are likely to fail. We cannot continue to allow the questions that damp or conceal our conscious knowledge to pass fleetingly and unmanaged across our minds. This is why I believe that the most important change that can contribute to global harmony is for humanity in general to learn to know itself better, individually and collectively, as products of our personal backgrounds, including what is derived from the unambiguous, never-ending process of organic evolution.

Natural selection, the principal force that changes us, tends to move slowly —so slowly, and sometimes so imperceptibly—that we cannot easily perceive what is happening or has happened. This has to be one of the reasons for the evolutionary process and its results being more or less overlooked on an everyday basis. But we cannot fully understand ourselves unless we are willing and able to examine and learn how our current life circumstances have come about, and, from that knowledge, how to adjust our lives effectively and profitably. We need to investigate and lay open our capacity for understanding the ways natural selection has manipulated the patterns of our consciousness, canceled our wayward memories in directions that favor reproductive success, **a**nd prevented, modified, and all too often warped our potential for the warmth of truly widespread friendliness, empathy, and cooperativeness. We need to support, to whatever possibilities are reasonable and available, all of the members of our world and our species.

The manipulations of consciousness that virtually block human self-understanding, presumably consequences of natural selection, leave us with an astonishing prevalence of horrific attitudes and behaviors that, sadly, to many or most people seem either not to exist, or are only moderately and temporarily noticeable. Team competitions, warfare, genocides, and Beilby Porteus's one-murder at a time villains

(see earlier) are among the many human conditions that natural selection has apparently modified by manipulating consciousness, causing us to respond almost carelessly and forget quickly when confronted by dramatic and sometimes radical or even monstrous actions of members of our own species. We seem to live in bubbles of awareness alongside non-conscious or distortedly conscious strivings, and quick forgetting, the latter effects products of what Williams (1993) *called "The Wicked Witch" of "Mother Nature", demonstrating the selfishness of evolution's differential reproduction* (Alexander 2011, *p. 279–80)*.

It is not an accident that several of the best-known scientists and thinkers in the history of the world have understood that evolution has been responsible for the worst of humanity's activities. Thomas H. and Aldous Huxley, George Williams, Richard Dawkins, and numerous others have understood that the process of evolution is based on "selfishness," the "selfish" clustering of the tens of thousands of genes that build the organisms we become, and as well can follow a course that mainly generates power and increases access to resources. It would seem that if humanity is to move toward global harmony, it must modify its fate by understanding our human selves deeply, and by building strong desires and capabilities to focus on the positive aspects of humanity, reducing the extreme negatives deriving from hyper-competitiveness and hyper-patriotism, and turning the future of humanity in new directions concentrated on extensive webs of social investment and return beneficence—in other words, on the workings of direct and indirect reciprocity made available by the workings of organic evolution (Hamilton 1964, Trivers 1971, 2011, Alexander 1978, 1987, 1990, and many others; see note on an earlier page, concerning "altruism"). To accomplish this, we must find ways to overcome some of the effects of natural selection, and thereby understand ourselves much more completely, such that we can use all of the knowledge available to us to serve our own interests.

What else can we do to change ourselves—on a global scale—to reduce our ever-ready tendencies to compete at nasty levels, or to commit murder, even in the face of lifetimes in prison or a death sentence; or to wage wars? We surely cannot lose by striving collectively and mightily toward congeniality and negotiation rather than hyper-competitiveness and conflict, and by seeking reduction of aggression, using all reasonable means.

These and other suggestions may have positive possibilities. But it does not seem likely that efforts at such changes will quickly capture our imagination or yield compelling or worldwide outcomes. It is as if everyone believes that she and he are already working as hard toward such outcomes as is reasonable or possible. If that is so, it will not do to expect that the efforts that have been tried so far can solve the problems. Thus, large numbers of small, local, non-

overlapping groups, socially close-knit and catering to authoritative moral pronouncements, are unlikely to foster global changes. Such efforts are not likely to solve the problems because humans have been doing these sorts of things more or less in vain for thousands of years. Perhaps we can gain by more effectively identifying broad questions, or knowledge, that can influence a higher proportion of the global population.

The greatest difficulty in seeking global harmony may derive from human groups targeting one another. Humans alone—among all the world's species—plot, plan, and organize massive conflicts to defeat or displace similarly organized and cooperative members of their own species. Can we learn to use the current consciousness of our human background to adjust team efforts of all kinds so that honesty, fairness, and negotiation can increase and lead us toward global harmony? Can we work profitably against the existing minimizing, reversing, and distorting of conscious knowledge generated by natural selection? Surely such efforts would contribute positively toward global harmony.

The curious prevalence of wars between conspecific human groups may have been encouraged by the isolation of human populations that, through extensive migrations during past millenia, became separated geographically but (thank goodness!) did not become so different genetically as to prevent increasingly extensive hybridization after establishment of population mixtures. At least among the distinctive populations forming recently, isolation did not persist long enough to give rise to different species. But early human populations may not have persisted in separations long enough to accumulate differences between diverging populations that increased serious intergroup strife—for example belittling populations living next to groups different in appearance, language, or cultural patterns (for a somewhat similar example in much simpler and different hybridizing [insect] species, see Alexander 2011: pp. 200–201, 205–206). At least during early amalgamations of distinctive populations, such differences almost certainly caused humanity to generate less opportunity and motivation to combine the diversities of our single species peacefully into mixed populations cooperative against the array of non-human enemies. Presumably, in some earlier stages of evolution, humans were still focused almost entirely on non-human enemies. At some point, humans were surely also less likely, or less well equipped, to treat other humans as primary enemies. However, as human population sizes increased, and ecological dominance became a more promising possibility, competition among humans for resources would have become more concentrated and begun to generate small closely-knit kin and social groups developing their own rules and desires to contest against one another.

Whatever the detailed reasons and timing for the incredible tendencies and devices that spawn war in modern humans, our current condition, as already noted, has obviously generated, elaborated, and persisted in supporting massive and horrific within-species, large-group conflicts, along with serial and copycat murders, bullying, and other destruction of humans at many levels and in different numbers. It is unlikely that these socially negative happenings can be easily or quickly reversed.

Any route to world peace, or global harmony, surely depends on a relaxed, tolerant, and unified approach to different attitudes and practices with regard to social life, religion, and the concept of God and, simultaneously, more critical attitudes (a) minimizing tendencies to be rigid or authoritarian about local or group-restricted concepts of right and wrong, and (b) treating more temperately other groups having different views from our own. I think this because it seems evident that people everywhere are inclined to invoke some version of God as a less than universal rallying point, too often in inter-group hostilities, giving us reason to suppose that in some form religion and God may have been involved in inter-group adversity for a very long time.

Most specifically, I hope that self-understanding will reveal to us pathways leading away from our current and evidently historically continuous state of being a world made up of destructively adverse groups and nations that consistently invoke religion and the concept of God as inspirations to social unity, apparently as both conscious and unconscious contributions to efforts to prevail over other similar groups. Part of uncovering such routes includes recognizing the function and sometimes dire correlates of intense patriotism, and the warmth and good feeling that go with the beneficence and cooperativeness that are too often restricted to within-group interactions.

We are not gentle people. But we can be several kinds of people, depending on circumstances. In congenial cooperating local groups, we are mostly kin-helpers, cooperators, and positive reciprocators. When engaging in wars, we frequently, even if only temporarily, become determined killers.

It will surely take all of the capabilities that humanity can muster to accept and complement the unpleasant parts of our collective nature, and to minimize or reverse the unfortunate effects of human history that primed us and set us up indefinitely to continue threatening extremes of human existence. The world’s options call for peaceful, casual, and deliberate amalgamations of historically tiny, introverted, and tightly-knit social groups, and, on the other hand, perhaps questioning huge nations unable to refrain from becoming armed beyond sensibility. The opposite outcome—the whole world a unified police state—may

or may not be tolerable. Peace may be the goal, but the means and maintenance of peace will require novel levels of statesmanship and, somehow, continuing floods of good will.

It would be wonderful if all of humanity could become sufficiently knowledgeable about its self—positive and negative—to begin to absorb the activities and attitudes of people living in tightly-knit social groups (whether religious or not), discovering ways to transform broadly and definitely the cooperative behavior of the individuals familiar within such groups, along with acceptance of social investment and the responses of return beneficence on a world-wide basis. To the extent that these changes can take place, we might find ourselves comprehending how the building of real cooperativeness and socially positive behavior can turn us toward a sociality reflecting global peace and harmony.

Many different levels and expressions of consciousness can be involved in human selflessness, and in compensating both directly and indirectly reciprocal interactions (Alexander 2011). Promoting the continuance of complex interplay of social investment and return beneficence in religious and other tightly-knit social groups is surely a positive approach to understanding how humans can work toward global harmony.

> *Why should we not encourage the diverse people around the earth to be freely inter-mixed and ready to strive to make all nations democratic—the latter meaning to attempt reasonable correlates, to call attention to the values of elections at suitable intervals, personal and confidential voting, multiple voting political parties, and parliamentary rules and courts that consistently make democratic institutions work for all people? How can we remove the indefinitely continuing and repeating dictatorships that begin to treat resources as the property of the government and as a result not only take up war with their own people but threaten all the rest?*

CONCLUSIONS

The several topics undertaken in this essay—religion, group-living, human minds and mystery, muting of consciousness, science and evolution, concept of God, meaning of life, explorations of natural and supernatural possibilities, universal or restricted moral sense, kinship, social reciprocity, competition and cooperation, and prospects of global harmony—are more than merely difficult. I do not imagine that I have created any broadly credible solutions to the problems I have sought to disentangle. Nevertheless, entering into searches for the purpose

of considering these difficult topics—or at least calling attention to them—can potentially be among the worthiest of investigative enterprises.

My effort in this essay has implied that the concept of God arose or became a dependable spirit of cooperativeness, morality, and beneficence, one that is perceived and acted on within groups to aid and protect the group, either directly or indirectly against other such human groups, and whether regarded as supernaturalism, or as a natural but jubilant outgrowth of the invisible clouds of effects and efforts that have generated and persisted out of the stored intellectual mysteries of the human spirit. Considering the concept of God as a universal spirit of cooperativeness within and between social groups should be a repeated and elaborated effort because it facilitates the evolved function of the lifetimes of individual members of the human species, through maximizing the likelihood of persistence of genes in one's own genome, ultimately through assistance to those genomes carrying genes in fractions reliably predictable among the relatives making up our kin groups. Such assistance also involves social investment in unrelated individuals, including spouses, and partners in social reciprocity, when such assistance eventually assists own relatives, and may assist all group members whenever individual and group interests are frequently or permanently similar or identical. The concept of a universal God, whether it be accepted as metaphorical or otherwise, would have become possible only with the evolution of a moral capacity, so, curiously, we might say that God (as the collective expression and coincident awareness of a universal moral capacity) created humanity, or that humanity created God—or both—when moral capacity was engendered, directly or indirectly, consciously or not consciously, by and during the process of organic evolution.

In the sense I have just described them, religion, morality, and attention to the concept of God are parts of what has been identified as kin selection and direct and indirect social reciprocity, in which the returns from acts of benevolence can emerge freely from individuals or groups other than the particular individual(s) being served. Expanding patterns of social reciprocity and kinship behavior can potentially continue moving toward global social harmony because they encourage universal cooperation and fairness (Trivers 1971; Alexander 1974, 1987; Alexander and Borgia 1978; Frank 1995; Irons 1996a, 1996b; Queller and Strassmann 2009; Strassmann and Queller 2010).

At the risk of being judged a hopeless megalomaniac, I repeat here that it is my

greatest regret, late in my lifetime of thought and research, that I have continued to be inadequate in my attempts to discover and explain how people everywhere might work to understand themselves sufficiently better from knowledge of evolution, so as to influence the sociality of global humanity in a positive way. Regardless of the pace of technological and other scientific advances, understanding of ourselves in evolutionary terms—understanding sufficiently profound that it requires at least a temporary ability to withdraw slightly and judge ourselves as if we were aliens, or members of a different species—may always be necessary if we are to recognize and accept the most important sources and reasons for change in the social lives of humans. I regret my inability to identify confidently even the first steps of a solution to the long-standing central problem of humanity that derives from the prevalence, throughout our history, of uniquely ferocious and frequent inter-group competitions, and continuing elaboration of ever more deadly and dangerous weaponry within our species (Alexander 2011, *slightly altered).*

Would that we could shift our attention away from the military, and toward other countries in the example that Paul Krugman has recently illustrated: *"What ails the Arab world is a deficit of freedom, a deficit of modern education and a deficit of women's empowerment. So helping to overcome these deficits should be what U.S. policy is about, yet we have been unable to sustain that. Look at Egypt* (cf. the *'U.N. Arab Human Development Report published in 2002 by some brave Arab social scientists…'*): *More than half of its women and a quarter of its men can't read. The young Egyptians who drove the revolution are desperate for the educational tools and freedom to succeed in the modern world. Our response should have been to shift our aid money from military equipment to building science-and-technology high schools and community colleges across Egypt."* (NY Times, and Ann Arbor.com, March 29, 2012)

Why not more such positive efforts that derive from social investment and the encouragement of return beneficence with the hope of fostering cooperativeness and peace, and the potential to establish a gentler and more peaceful world? Why not?!

It is surely time for the adaptive structures of religion and science
to begin adjusting, finally, into the long-needed partnerships
that can hone their respective capabilities
with the joined skills and emotionalism
of the tangled and still impotent searches
that someday will nurse the gathering fragments

of the potential for global social harmony

ALEXANDER, *2011B:312*

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References I

Some of the labels for the concept of God used in this essay were taken from *Roget's Super Thesaurus*, 2nd edition (Cincinnati, OH: Writer's Digest Books). Otherwise, some concepts and information used in this essay are widely familiar in biology, or for other reasons have not included specific references.

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14 }
Evolution and Religion

God, Most Recently

To every reason for cooperating uninhibitedly,
praise the power of the Lord, our useful
and admirable metaphorical Spirit Father Figure.
Yet be conservative about passing the ammunition,
brother: genocide, though not our stated aim,
has too long been a claim to fame.
With and despite God's existence and help,
unfortunately, we remain personally
and collectively engaged in changing
the measurements of the lifetimes
and comforts of our fellow beings in the species
that alone among the known apes of history
have gained the capability of traveling and living globally
but so far have been unable to cooperate globally
about anything at all—excepting, perhaps,
the worthiness, indeed, the seemingly shared necessity
of strong patriotism, patriotism that
continues to evolve and use its skills
and unwavering determination to destroy
every opposed and opposing side.
Asking for God's help as our collective guiding
spirit of cooperativeness, we may convince ourselves
that we persist only toward honorable outcomes.
Sadly, it appears that we may not for some time
find ways to desist from continuing efforts
to adjust the lifetimes of our fellow humans
so frequently in the wrong direction.

—ALEXANDER, *2011*, *P. 295*

INTRODUCTION

The Concept of God as a Metaphor for Social Unity: Richard Alexander's Hypothesis

William Irons

Richard Alexander's hypothesis about the core meaning of the concept of God is unique among evolutionary theories of religion and performs a valuable service to the evolutionary study of religion by focusing attention on something that most other theories of religion have ignored. This is the question of the central values which religion celebrates and reinforces.

There are numerous contemporary evolutionary theories of religion, but few have focused primarily on this question, the question of how religion defines the highest good. In a basic way, Alexander's theory is closer to Durkheim's (1915) theory of religion that was put forward in the early twentieth century. Durkheim defined religion as "a unified system of beliefs and practices related to sacred things… that unite into one single moral community all those who adhere to them" (page 62). Here the attention is clearly focused on what is valued most, and it is the unity of the local community of close kin and neighbors which is the primary vehicle for the maximization of an individual's inclusive fitness.

In my opinion, Alexander's concept-of-God hypothesis needs to be expanded to take into account how communities and societies with different social structures modify the concept of God (Wright 2009), and more importantly it needs a complimentary theory of how religions conceive of the greatest evil. Most, if not all, religions define not only the highest good, but also the greatest evil. Most contemporary theories of religion focus on one of two questions: (1) How do religious beliefs arise? (2) What are the social consequences of religion?

The first set of theories tends to explain religion by appeal to psychological mechanisms which cause a belief in something unseen: spirits, gods, or other invisible agents. A good example of such a theory is the theory that religion arises from a hyperactive agency detection device, a HADD (Dennett 2006). This has often been explained by exploring a hypothetical but probable situation in which evolving human beings had to decide whether they are encountering something with agency. While sleeping in a rock shelter, a member of an early human population might hear a noise outside the shelter that could be wind

blowing branches against the entrance to the shelter, or could be a large predator entering the shelter. Errors in evaluating this question had very different consequences. Falsely assuming it was wind when in fact it was a predator, could lead to death for oneself and one's family. Falsely assuming it was a predator would only lead to a restless night's sleep. The asymmetry of consequence favored the evolution of a psychological bias toward ascribing agency to phenomena that were not completely understood and might be hostile agents like predators. This bias, which is labeled a HADD, led to the cultural evolution of beliefs in elaborate unseen agent: spirits, gods, and so forth.

The second set of theories tends to see the consequence of religious beliefs as enhancing social cooperation within groups. Such a benefit is usually seen as beneficial to the survival of the social group and of the individual members of the group. Logically such theories can be seen as an extension of Alexander's earlier theory of morality in which he argued that intergroup competition in human evolution caused natural selection to favor traits that enhanced the cohesiveness of human social groups (Alexander 1987). He pointed to morality based on indirect reciprocity as the primary mechanism created by selection for larger and better-united groups that would be more successful in inter-group competition. Religion can be seen as a way of enhancing the signaling involved in indirect reciprocity.

Thus theories of this second variety tend to see religion as adaptive in ancestral environments and perhaps still in contemporary ones. Human beings have evolved psychological mechanisms that cause them to invent and maintain beliefs and rituals that unify social groups and encourage cooperation within them. The systems of religious beliefs, rituals, and sacred stories—the religious traditions—are complexes of interrelated memes resting on top of the evolved propensities to absorb and practice the religion of one's community of kith and kin. These meme complexes also evolve as individuals find variations in them more satisfactory in meeting the need to celebrate their most basic core value. Like other cultural institutions, they are continually changing as the members of various communities negotiate new understandings of what means the most to them in ever-changing circumstances of life. Thus Alexander's concept of God hypothesis nicely complements those theories of religion which see religion as a device for forming and maintaining cohesive social groups (Bulbulia 2004a, 2004b; Irons 2001, 2008; Sosis, 2000, 2005; Sosis and Bressler 2003; and Wilson 2002, 2005).

Most importantly, it calls attention to the core values contained in religious traditions—something which those studying religion from an evolutionary point

of view need to keep in mind. Being aware of the centrality of the concept of God to the most basic values of human communities should make us appreciate why religious beliefs are so persistent when faced by scientific challenges. This should lead us to see the foolishness of head-on aggressive attacks on religion and suggest instead that scientists troubled by the role of religion in discouraging acceptance of scientific findings should seek ways to minimize the conflict between science and literal, traditional religious beliefs.

Alexander's concept of God hypothesis should assume a central place in the further development of the evolutionary study of religion. It focuses attention on a central feature of religion which most other evolutionary theories of religion ignore.

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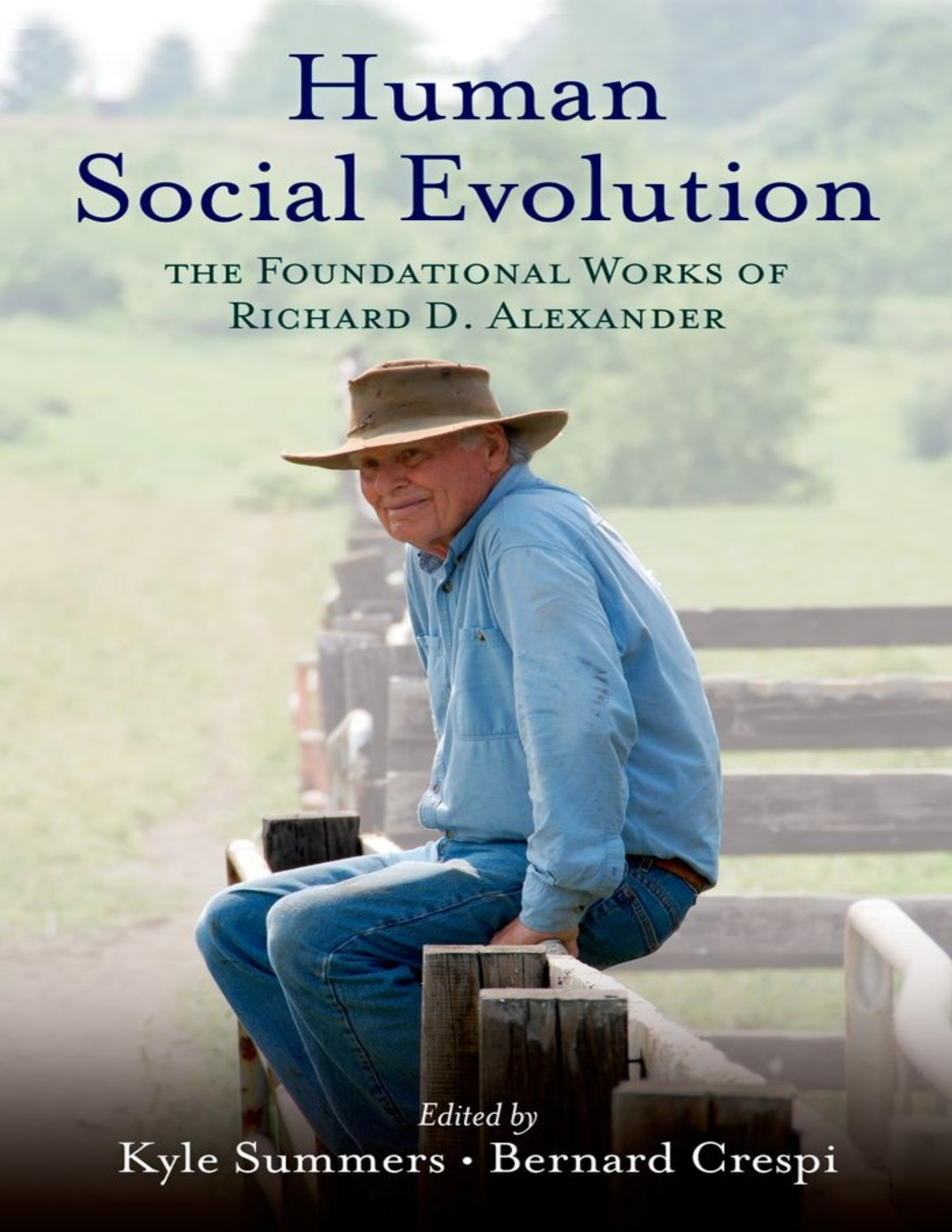
THE FOUNDATIONAL WORKS OF RICHARD D. ALEXANDER



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