

CAN SCIENCE HELP CONSTRUCT A NEW GLOBAL ETHIC? THE DEVELOPMENT AND IMPLICATIONS OF MORAL TRANSFORMATION THEORY

by David Loye

Abstract. This paper reports the results of a ten-year search for consensus among scientific findings on the nature of the origin and development of moral sensitivity and morality. Significant agreement on six underlying factors was found. Based on these foundations, a new theory of moral transformation and a scientific “global ethic” relating to the global ethic of Hans Kung and the Parliament of the World’s Religions is proposed. Fields surveyed include psychology, sociology, political science, economics, history, and gender and feminist studies in social science; physics and biology in natural science; and brain research, archaeology, and both old and new evolutionary studies and theory, including chaos, self-organizing, and other nonlinear theories, in systems science.

Keywords: biological evolution; brain research; cosmic evolution; cultural evolution; dominator morality; evolutionary theory; freedom and equality; gender relations; global ethic; love; moral sensitivity; morality; partnership morality; religion; science; social action; systems science; “two worlds”; values.

Within the same recent year, two remarkably similar statements calling for a new global ethic were issued, one by the Parliament of the World’s Religions and the other by the Union of Concerned Scientists.

“There will be no better global order without a global ethic,” observed a statement, based on the work of theologian Hans Kung, that was signed by one hundred leaders of the major faiths of this earth at the conclusion of the 1993 Parliament of the World’s Religions in Chicago. “By a global

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ethic we mean a fundamental consensus on binding values, irrevocable standards, and personal attitudes. . . . We need mutual respect, partnership, and understanding, instead of patriarchal domination and degradation. . . . We condemn sexual exploitation and sexual discrimination as one of the worst forms of human degradation. . . . Let no one be deceived. There is no authentic humaneness without a living together in partnership!”¹

And from the Union of Concerned Scientists: “A great change in our stewardship of the earth and the life on it is required, if vast human misery is to be avoided and our global home on this planet is not to be irretrievably mutilated,” warned a statement signed by more than 1,670 scientists, 104 of them Nobel laureates, from 71 countries of this earth. “A new ethic is required,” a new ethic that “must motivate a great movement, convincing reluctant leaders and reluctant governments and reluctant peoples themselves to effect the needed changes.”²

As a scientist and member of the Union, drawing upon the data of one hundred fifty years of science in a wide range of disciplines, over the past decade I have been working to develop the scientific basis for such a needed ethic. One result of this research—which I summarize here—is a new theory of the origin and development, through biological and cultural evolution, of moral sensitivity and morality. Based on the six foundations for what seems to me may best be called moral transformation theory, I have also developed a brief scientific moral code, which, although derived independently, is consonant with the global ethic of Hans Kung and the Parliament of the World’s Religions.³

I have also found this matter of relevance, which makes *Zygon* logical for this aspect of my report. Purposely working independently of either religion or philosophy, and focusing solely on a remarkable body of scientific work that for over one hundred fifty years has tended to be excluded from or shoved aside by the prevailing scientific paradigm, I arrived at this theory and code based exclusively on this “hidden” body of science. Only then, after this immersion in what I have come to see as the lost heritage of the great scientific explorers of goodness, in a second stage of my research I turned to look for correlations with the discoveries of the earlier great spiritual explorers of goodness.

What I found was, to me, inspiring beyond expression. For it seems to me that what has emerged from this search is an extremely useful new scientific perspective on the best and the worst in religion. On the one hand, these findings seem to provide scientific corroboration for what is psychologically, sociologically, economically, and spiritually healthy, or the best in religion. On the other hand, they provide new scientific criteria for what is corrupted, degrading, and sick, or the worst in religion. The best in religion seems to be consonant with, and the worst in religion a deviation or departure from, the inherent thrust of evolutionary process as

illuminated by a new look at Darwin's theory of the moral sense in the light of new findings in brain research, advanced biological research, and the archaeological rediscovery of our deep past.⁴

Before summarizing these results, three things should be said about them. First, the evolutionary perspective that lies behind this theory is an outgrowth of my association with the General Evolution Research Group, a multinational group of scholars from many disciplines headed by systems philosopher Ervin Laszlo.⁵

Second, while much out of this scientific search reveals a surprising resonance with spirituality, at the same time some data and interpretations may strike some with scientific backgrounds as not only new but here and there rather strange and even unacceptable. The problem of how the prevailing scientific paradigm, driven by an ideal of absolute objectivity, has rigorously excluded the question of values is well known. Hence, the bulk of the work done by scientists that bears on the subject at hand is practically unknown to most scientists today. Yet it is within this relatively unknown body of work—much of it by some of the greatest and best known of the founders of both social and natural science and a very small and generally ignored but persistent body of their successors—that I have found what I believe are answers to what seems to be a critical problem facing science and religion today. This is how both are to somehow work more closely together to construct and legitimate a new ethic for humanity at what the enlightened leadership for both science and religion is rapidly coming to see is the most critical juncture in the evolution of our species.

Last, it would be impossible in the space available here to attach the many hundreds of references in the wide range of fields that legitimize and support this theory and moral code and out of which both emerge. In lieu of this, in the notes I give some idea of the range of work bearing on each of the six foundations for moral transformation theory and provide a list of my own previously published papers as well as works in progress in which full references appear or will appear.

THE FOUNDATIONS OF MORAL TRANSFORMATION THEORY

Moral transformation theory is a scientific theory of how a multifaceted need, urge, or force for the expression and attainment of goodness originally burst out of cosmic evolution to work its way through biological evolution, then through cultural evolution, into ourselves. It is a theory of how, through an evolving system of moral learning, healing, and transformation, this evolutionary nudge seems to have quietly shoved through the madness of history to shape our species and other life forms in a developmentally positive direction.

It is further a theory of how, through the journey of our species through space and time, we have arrived at the most critical choice point in our

evolution, and of how we can tap into and align ourselves with what appears to be an evolutionary inbuilt healing force in the critical struggle with all that with increasingly fearful ferocity opposes this healing.

This theory rests upon six clusters of findings, or foundations. These consensual clusters emerge from a decade of the analysis of more than one hundred fifty years of discoveries in the fields of psychology, sociology, anthropology, political science, economics, archaeology, history, and gender and feminist studies in social science; physics and biology in natural science; and brain research and both old and new evolutionary studies and theory straddling both social and natural science, including chaos, self-organizing, and other nonlinear theories in systems science.

FOUNDATION 1: THE EXPECTATION OF GOODNESS. Rooted in and constructed through the long-span, stage-by-stage, sequential emergence of sex, parental feeling, sociability, emotion, and reason in biological evolution, there works within each of us an inbuilt urge toward goodness. This sequential development was first discerned by Darwin in what became the “lost” half of his theory of evolution—his view of the development of “the moral sense,” which has been corroborated by a widely neglected aspect of the pioneering brain research of Paul MacLean as well as the work of many other research scientists and theorists. Despite massive opposition to, disbelief in, and suppression of this urge, it seems to shape both our actions and seemingly evolution itself in the direction of greater goodness.⁶

Our transformational challenge is to open our eyes to, align ourselves to, and work with the healing force of all aspects of this goodness as it seems to operate within the four bodies of our immediately perceivable existence: personal, social, environmental, and cosmic.

FOUNDATION 2: PERCEPTION OF THE TWO WORLDS OF PARTNERSHIP AND DOMINATOR MORALITY. In the early stages of our cultural evolution, this urge toward goodness shaped the global development of a more peaceful, gender-egalitarian, essentially gentler and more environmentally sensitive “partnership” ethos, social system, and morality. As revealed in detail by modern archaeology and systems science, this stage of human consciousness and social organization was displaced by a cataclysmic shift to a violent, gender-inegalitarian, and essentially brutal dominator ethos and morality, which ever since has unsettled and unbalanced most social and environmental systems. With the emergence of the devastating technologies and alarming populations of the nuclear age, the pathology of the dominator ethos, systems, and morality now threatens the survival of our species.⁷

Our transformational challenge is to perceive the difference between these “two worlds” of morality that for thousands of years has been hidden within the confusion of the mix of the two that both clouds the consciousness of our species

and accounts for an astounding degree of psychiatric and social pathology. It is to then choose and work to advance the healing partnership ethos, system, ecology, and morality, rejecting the other.

FOUNDATION 3: THE COSMIC AND POLITICAL DRIVE OF FREEDOM AND EQUALITY. First initiating and now embracing both biological and cultural evolution is the force of cosmic evolution. Here, in the emergence of the particle and the wave of quantum astrophysics and the genetic dance of the DNA, can be seen the early appearance of a dialectical pairing of elemental thrusts, which—through an evolutionary process akin to the operation of transforms in mathematics—may ultimately be involved in the dynamics of attaining goodness. With analogues in biology, psychology, systems science, and many other fields—acting, one might say, as outriders or as horses to the chariot of goodness—these two thrusts in human social systems seem to culminate in the impact of the concepts and realities of freedom and equality at the level of social values and political action.⁸

Our transformational challenge is to understand and act on a perception of the evolutionary link between goodness and politics and economics, on a perception of the difference between the partnership politics of freedom and equality and the dominator politics of strong-man rule and inequality, and on the perception of the deeply embedded evolutionary requirement for the simultaneous valuing and advancement of both freedom and equality. This, rather than further veering off course into what social science now reveals is the social pathology of one without the other—that is, the valuing of freedom without equality undermining capitalism, or of equality without freedom undermining communism—has been too much of the story of our time.

FOUNDATION 4: THE IMMANENT AND TRANSCENDENT POWER OF LOVE. There is this force that seems to rise out of the same sequence for the emergence of sex, parental feelings, sociability, emotion, and reason that has operated in the biological evolution of moral sensitivity. It is further embodied within our interactions with other human beings and between ourselves and all of nature and the cosmos. The ethos that grows out of it seems to have generally prevailed during an early phase of our cultural evolution. Though continually threatened, blunted, and dismissed, it still prevails today in psychological oases, political and economic islands, and other protected pockets of the partnership ethos and ways of relating to one another. It seems to be further intimately linked to the urge of goodness as the sea is to a river, and to the sickness of our world as a vast touch of healing. It is the many-splendored energy field or force—the comprehension of which is still mainly beyond the reach of science—that we call love.⁹

Our transformational challenge is to exponentially increase our scientific investment in understanding the nature of this force within the context of

evolution as a whole. It is to use this wisdom to liberate love from the prison of the dominator mind, thereby exponentially increasing the power of love for evolutionary advancement.

FOUNDATION 5: THE GUIDANCE SYSTEM OF HIGHER MIND. We seem to flounder in and out of the madness of history for lack of an understanding of the power of a higher guidance system that, species by species, has been built up within us by millions of years of evolution of life on this planet. Religious visionaries, philosophers, and transpersonal psychologists detect higher spiritual levels to this guidance system. But on a more routine or everyday level, the basic or ground-level nature of this higher guidance system can be identified and tracked through brain research, systems science, and more traditional psychologies.

Primarily localized within the executive functioning of the frontal brain, this everyday guidance system, which operates at all times within the daily lives of each of us, seems to consist of a monitoring and analysis of the flow of all kinds of information through a sequence of six information-processing stages. These stages can be identified as our systems, social, futures, moral, evolutionary, and managerial “sensitivities.” Of critical importance in relation to goodness is that in the evolutionary programming for this guidance system—which, going beyond present theories, seems to constitute the central structure for both consciousness and intelligence in our species—*moral sensitivity is given a pivotal function*. It operates not in an isolated “take it or leave it” capacity but as a core component of a closely wedded whole system of intelligence for the purpose of personal and larger systems problem solving. The operation of this guidance system radically differs in people, groups, and even nations according to the degree to which they orient to the partnership or the dominator ethos, system, and morality.¹⁰

Our transformational challenge is to understand the nature of this higher guidance system, thereby gaining a potentially vast increase in the evaluating and decision-making power required of our species if we are to solve and move beyond the problems now in the early stages of an escalating threat to our existence.

FOUNDATION 6: EARTH AND THE ACTION IMPERATIVE. Until this maximally unsettled time of the late twentieth and the twenty-first century, moral sensitivity was optional in regard to how critical it might be for the survival of our species and, more generally, life on this planet. There could be great suffering and injustice, but life would go on. But now our nursery days have ended. The escalation in population and the power of the technologies and ideologies of destruction have forced the responsibility of maturity upon us. No longer can we just sink into the wide-eyed consumers’ trance in the malls, or worship in the great palaces of food, or bury ourselves in new gadgets. We are being forced to wake up and see

that in all practicality we have been given this single planet—no other—to trash, and perish thereby, or to glorify.¹¹

Our transformational challenge is to respond to the urge toward goodness within us, to opt for partnership rather than dominator ways and societies, to make attainment of freedom and equality a moral as well as a political and economic goal, and to call upon the healing power of love and the transformative intelligence of the guidance system of higher mind. Our challenge is to seize up and put to use these sidelined powers and justify the high calling of our place in evolution.

THE SIMILARITIES OF MORAL TRANSFORMATION THEORY,
THE MAJESTY OF EVOLUTION, AND THE ARC OF GOODNESS
THROUGH SPACE AND TIME

Long ago disillusioned by the failings of the religions of our world, I began my independent search for the nature of goodness. Throughout most of my adult life this search has been wholly from within the “don’t give me just words, show me” perspective of science. At first, immersed wholly and of necessity intensively in the discipline in which I am trained, these foundations seemed to me to form the grounding for a new and exclusively scientific theory of moral sensitivity and transformation. But on turning to religion to look for possible correlations, I was struck by a vision of the grand journey as a whole.

I saw what transcends the conflicts and the joy and agony of the evolutionary birth process for our moral transformation. First, leading up to and including the Enlightenment of the eighteenth century, moral philosophy cast off the chains of the inevitable corruption of the early vision for religion. Then in the nineteenth and twentieth centuries science—that is, the neglected comparative handful of social and natural scientists my research uncovered—sought to go beyond religion and philosophy to find scientifically verifiable moral anchoring points in our brains, minds, behaviors, societies, and evolution.

What is transcendent is the magnificent saga of the exploration of goodness that began with the great spiritual explorers, teachers, and healers to whom so many billions of us by now have resonated, such as Gautama and Jesus. This probe of what has been perceived as both our “higher” nature and the possibility of a “higher” destiny was picked up again by the great philosophical explorers and teachers, such as Plato and Immanuel Kant. Beginning with Kant—in the turn of the coin that opened up to us the vast new dimensions of modern mind—this exploration then entered its scientific phase.

Particularly arresting is the powerful continuity of this search over thousands of years. The differences between religion, philosophy, and science so magnified by history drop away before the greater majesty of evolution,

and we see the wide rainbow arc of goodness through space and time—this vision that over the ages so many in lonely ecstasy (Jesus, Gautama, Rumi, Hildegard of Bingen, Julian of Norwich, Immanuel Kant, Walt Whitman, and others) have so deeply wanted to share and to help the rest of us see.

While I can only present a glimpse here in this abbreviated form, in the books I am completing the continuity becomes clear in the earlier progress of the great spiritual explorers, teachers, and healers and the later progress of the great scientific explorers, teachers, and healers in the building of moral mind.

THE DIFFERENCES OF MORAL TRANSFORMATION THEORY

In these six tenets it can be seen that, while there is much that is familiar, representing no radical departure from what has been perceived by some and sought by many for thousands of years, at the same time there are definite departures from paradigms in both science and religion that our species is now shedding in the search for a new understanding of and alignment to its evolution.

Without exception these are fundamental differences between the partnership and dominator moralities that the second foundation for moral transformation theory differentiates, either as they have surfaced historically or as they now seem evident to me as a result of the development of this theory.

Within the context of twentieth becoming twenty-first century religion, this also seems to be the scientific face to the fundamental differences one may discern in the struggle involved in the emergence and shaping of the Parliament of the World's Religions between 1893 and 1993, and in Hans Kung's impassioned drive to forge the Parliament's statement of a global ethic.¹²

As the biological and chaos theoretical studies it is built on demonstrate, moral transformation theory is *organic* and *ecologically grounded* in being of a force embedded within and rising out of nature. It is not of a force that is imposed on us by something lofty and savagely demanding that must be placated and groveled before, transcending nature. It is of a force that is more like the leap of a dolphin from the sea than the collection of alms from the poor for a new gold dome for the cathedral.

As demonstrated by the archaeology and social science upon which it is based, it is *gender-holistic* in being rooted in the experience and perspectives of both halves of humanity. However magnificent, however noble, however enlightened, most of what has been known as moral theory, learning, or healing in the past has been distorted and undermined by the cultural biasing of male dominance and the exclusion or suppression of the female. This theory—and the ways of learning and healing it indicates—provides a rebalancing.¹³

It is *systems-scientific* in being based on a science of inclusion rather than exclusion. Moral theory in the past has been mainly confined within the boundaries of specific faiths, philosophies, or back rooms of the social sciences. By contrast, this theory draws on findings now scattered throughout the wide range of scientific fields that we must tap into if we are to pursue the chance the global healing crisis now offers us to gain abiding health out of sickness.

It is, I believe, potentially most important in being *trans-evolutionary*. It is grounded, first, in *biological evolution*. As first observed by Darwin, and since substantiated by modern brain and biological research, this theory is grounded in a specific and startling occurrence not too long after the beginning of life four billion years ago—in the emergence of sex as a part of the half of evolutionary theory that is accepted and certified. But it is also grounded in what happened thereafter according to the lost half of Darwin's theory and its widely ignored corroboration by brain research.

This theory, and the methods of education and healing it suggests, is further grounded in the emergence of primate, hominid, and human society that gave rise to our *cultural evolution*. Here, in sharp contrast to the traditional picture, modern archaeology, linguistics, primatology, and anthropology reveal the nature of the split into the two fateful paths that have made of this beautiful planet Earth either a combination of prison and insane asylum or a rare time and place for the fragmentary attainment of true humanity. Last—and this both first and last in evolutionary sequence—is the possibility that this theory may be grounded in the new understanding of our *cosmic evolution* that both astrophysics and the humanistic systems scientific perspective are beginning to uncover.¹⁴

This theory is fundamentally shaped by the perception of the difference between what I define in terms of general evolution theory as the *grounding* reality and the *emergent* reality. Scientifically expressed, for example in the work of Ervin Laszlo and Stanley Salthe, this emergent difference perhaps can be most quickly seen in terms of our crucial ecological situation.¹⁵ The grounding reality is of Earth and its atmosphere being degraded and polluted at a rate endangering the survival of our species. The emergent reality is of an escalating awareness of this problem and successful attempts to shift to new ways of functioning, such as the rapid growth of recycling as a profitable business venture.

In the books I am completing to report this search and its results—as well as in this paper, I hope—this theory can be *easily accessed*, because gone are the days when we could afford to let psychological, social, general scientific, and moral theory remain the exclusive province of small, highly educated but very narrowly bounded and non-action-oriented elites speaking highly specialized languages. Especially urgent is the need for wide and easy access to the often buried or ignored findings upon which this theory is based.

It is finally—and of critical importance in relation to the traditional *nonactivist* and *noninterventionist* stance of old paradigmatic science, and indeed the whole point for the Union of Concerned Scientists as well as scores of similar bodies throughout both social and natural science—*action-oriented*, because we do not have time for anything less. The old days in which we might leisurely pile up wisdom with the idea that now and then someone might put a bit of it to use are gone. We are under the environmental and the nuclear hammer, and we must now learn to know ourselves, think for ourselves, and heal ourselves in a hurry. This theory goes as quickly as possible to the heart of the moral logjam so that we may untangle this snarl and through informed action be on our way.

A SCIENTIFIC MORAL CODE EN ROUTE TO A GLOBAL ETHIC

The advantage of the moral and ethical codes of religion is that in most cases—for example, the Ten Commandments for Jews and Christians or the Rules of Right Livelihood for Buddhists—they have been reduced to relatively short and simple statements. After a time of learning, they can easily be remembered and thereby, with the backing of the weight of respected authority, influence us to abide by them.

The need for such codes, which both establish and express the norms for basic human relations, has been shown by literally thousands of social scientific studies. The norms to which such codes relate, these studies reveal, are a bedrock necessity not merely for the functioning but for the viability of human society. Yet, ironically, *nothing comparable has so far come to us from science, in particular from the fields of psychology and sociology best equipped to provide such a social necessity.*¹⁶

The dream of the development of such a code began with the Comte de Saint-Simon's vision of the mission of social science in the late 1700s. Saint-Simon was inspired by George Washington and the apparent success of the American political activists in bringing the dream of democracy to reality. Along with Lafayette, he had served in the American Revolutionary War as the lesser-known of the teenage generals from France. Now, having returned to Europe and fired up by the experience, Saint-Simon laid out the idea of building a new science for the guidance of social and political activists in the use of natural and general science in building the better world. This vision was picked up again and significantly advanced in the 1800s by Saint-Simon's secretary, the early founder of sociology, Auguste Comte. It was then picked up again and advanced during the late 1800s and early 1900s by Comte's admirer and successor, Emile Durkheim.

Throughout this development, the driving perception by Saint-Simon, Comte, Durkheim, Darwin, and others during the earlier years of social science was of the new moral responsibility of science. They saw that, as science swiftly displaced religion as the chief source of authority for modern times, the discrediting of God and religion as the source for morality

and ethics left a dangerous vacuum. Science, they saw clearly, *must* provide an alternative morality and alternative ethic. Yet, so counter to the prevailing ethos for old paradigmatic science has such a goal been that work in this direction has never gone far. Heavily opposed or wholly ignored, fragmented at best, it has never reached the point of sufficient consensus or sense of mission out of which might emerge this seemingly innocuous but potentially enormously effective tool of a short and simple moral code.

Can we now attempt it? However inadequate the try may be, the requirement is inescapable. Based point for point on the six foundations as outlined, here is an initial projection:

1. *For guidance, listen to the inbuilt voice of goodness rather than the imposed voices of brutality within you.*
2. *Relating as human to human and to the whole of nature and the cosmos, align yourself with the partnership ethos and reject the dominator ethos.*
3. *Act—and make this your standard for judging the actions of yourself and others—to advance both freedom and equality.*
4. *Seek and open your heart to the power of love.*
5. *Seek and open your mind to the power of the Guidance System of Higher Mind.*
6. *Be the torch that not only lights up the darkness but also shows and leads the way to the better future—or, more simply put, be and do good in the world.*

PROSPECTS FOR A GLOBAL ETHIC? A CRITIQUE AND MANIFESTO

No matter how well-intentioned they may be, all new formulations are suspect. Moreover, against the idea that science might have a place in the statement of a global ethic is the mountain of disbelief in religion as well as science that made it possible for both to ignore for more than a hundred years Darwin's long-ago attempt in this direction. But what do we find if we compare this independent venture out of science with the venture during recent years of Hans Kung and associates in religion?

At the core of the spare but indeed magnificent richness of the Kung/Parliament ethic can also, curiously, be found a statement of religious consensus making six points.

1. No new global order without a new global ethic.
2. Every human being must be treated humanely.
3. Commitment to a culture of nonviolence and respect for life.
4. Commitment to a culture of solidarity and a just economic order.
5. Commitment to a culture of tolerance and a life of truthfulness.
6. Commitment to a culture of equal rights and partnership between men and women.

The two ethics vary, certainly, in particulars, but in spirit are they not much the same? And wouldn't allegiance to the precepts of one imply the other? Isn't it further evident that, in the one case out of science, and in the other out of religion, they complement and reinforce one another?

Of both ethics—as well as of the scientific moral transformation theory outlined here—it could be said (for example, by deconstructionists, factionalists, and others) that they are too speculative, too arbitrary, the brief lists for moral codes too short and vague. By those comfortable only with obfuscating complexities, it could be said that these statements are neither comprehensive enough nor detailed enough to provide an adequate grounding for either the new global ethic for religion or the ethic the Union of Concerned Scientists statement calls for—which “must motivate a great movement, convincing reluctant leaders and reluctant governments and reluctant peoples themselves to effect the needed changes.”

Yet the fact remains that such efforts must have a beginning, and after several thousand years of the progressive refining of such statements within religion, and at least one hundred fifty years of the frustration of such efforts in science, here we may see the correlating result of attempts out of religion and science to achieve some workable degree of agreement that could be widely useful to society and to humanity.

As for what some may see as oversimplification, it is important to note that science, as religion before it, has increasingly become an insular game of complexifying specialists talking to one another, as well as talking subjects into the ground, while the world goes to hell in a hand cart. In both cases, the objective must be to reduce a surface of confusion to its core dynamics and to communicate simply and forcefully.

In doing so, we of course risk being further accused of belaboring the obvious. For example, of the last statement of the projected simple scientific moral code—*be and do good in the world*—it could be said that this is nothing more than another quasi-religious bromide, that in various ways it has been said so often as to become meaningless, that it is naive, that as a call to action it lacks fire. Yet, thinking of the kind of personal and social action that has in the past made a difference in our world—which now again must do so on the most challenging possible scale—I find myself coming back to it precisely as stated.

As the history of our species demonstrates, we have moved forward as there have risen among us those driven by the desire to *be* good: the exemplars, the people who, by their character and how they have conducted their lives, have inspired the rest of us to try to be, if not good, at least better. Celebrated in all religions, notably the core for traditional Buddhism, the force of this kind of personal impact on our evolution has been shown by thousands of scientific studies of the power of what in psychology we call modeling: the power of models, of modeling, of modeling behavior. *But this has never been enough—and most definitely and urgently it is not enough now.*

However we may balk against it, deplore, decry, and even crucify those who give it voice, there must be the impact of those driven to ruffle the feathers of the settled and disrupt the status quo. There must be those fired up to exhort, to confront, to march, to outwit, and to *change* what presently exists in its brutality, inequity, and injustice. Celebrated by the reformers and revolutionaries of every faith, notably the thrust that entered history with Judaism and Christianity, this is the stance of those driven to *do good*.

In science, this became the stance of physicist Albert Einstein, biochemist Linus Pauling, psychologist Kurt Lewin, sociologist Pitirim Sorokin, primatologist Dian Fossey, physicians Helen Caldicott and J. Everett Koop, economist John Kenneth Galbraith, general evolution theorist Ervin Laszlo, and in general those constituting the memberships of the Union of Concerned Scientists, no doubt many readers of *Zygon*, and similar groups for the encouragement of scientific as well as more general activism whose goal is a better world for all of us.

In this time of massive fear, massive regression, and the shattering of faith in established authority, it remains perhaps our greatest hope that progressive science *and* progressive religion still retain significant degrees of respect. Given this fact, it is the activist stance out of both quarters, shaped by and shaping the drive of statements such as these of a global ethic, that can pull us through.

NOTES

1. *Towards a Global Ethic*, statement by the 1993 Parliament of the World's Religions, 28 August–5 September 1993, Chicago, Ill., U.S.A. See H. Kung and K. J. Kuschel, eds., *A Global Ethic: The Declaration of the World's Religions* (London: SCM Press, 1993). An invaluable commentary, including the fascinating history of the development of this global ethic, edited by Kung, is *Yes to a Global Ethic* (New York: Continuum, 1996). Kung's own most recent extremely important venture, extending the global ethic into key areas of life, is *A Global Ethic for Global Politics and Economics* (London: SCM Press, 1997). Both earlier books are available in the United States from Continuum, with the latest scheduled for publication by Oxford University Press as of this writing.

2. *World Scientists' Warning to Humanity*, April 1993, statement published by The Union of Concerned Scientists, 26 Church Street, Cambridge, MA 02238.

3. My own published papers and writings relevant to this paper and the development of moral transformation theory include: *The Healing of a Nation* (New York: Norton, 1971); "Ideology, Belief Systems, Values, and Attitudes" (with Milton Rokeach), in Benjamin Wolman, ed., *International Encyclopedia of Neurology, Psychiatry, Psychoanalysis and Psychology* (New York: Van Nostrand, 1976); *The Leadership Passion: A Psychology of Ideology* (San Francisco: Jossey-Bass, 1978); "Moral Development and Peace," in Ervin Laszlo and Y. Yoo, eds., *World Encyclopedia of Peace* (London: Pergamon, 1986); "The Human Mind and the Image of the Future," *World Futures: The Journal of General Evolution* 23 (1987): 67–78; "Moral Sensitivity and the Evolution of Higher Mind," *World Futures: The Journal of General Evolution* 30 (1990), no. 1–2: 41–52; *The Partnership Way* (with Riane Eisler) (San Francisco: HarperSanFrancisco, 1990); "Cooperation and Moral Sensitivity," in Allan Combs, ed., *Cooperation: Beyond the Age of Competition* (New York: Gordon and Breach, 1992); "Moral Sense and the Partnership Vision," in Georg Feuerstein and Trisha Lamb Feuerstein, eds., *Voices on the Threshold of Tomorrow* (Wheaton, Ill.: Quest Books, 1993); "Moral Sensitivity and the Evolution of Higher Mind," in Ervin Laszlo, Ignazio Masuli, Robert Artigiani, and Vilmos Csanyi, eds., *The Evolution of Cognitive Maps: New*

Paradigms for the Twenty-First Century (Philadelphia: Gordon and Breach, 1993); "Charles Darwin, Paul MacLean, and the Lost Origins of 'The Moral Sense': Some Implications for General Evolution Theory," *World Futures: The Journal of General Evolution* 40 (1994): 187–96; "The Psychiatric Consequences of Androcratic and Gylanic Morality," *Pluriverso* 1, no. 3 (June 1996); *The Glacier and the Flame: The Rediscovery of Goodness* (work in progress); *Darwin's Lost Theory* (work in progress); *The River and the Star: The Lost Story of the Great Scientific Explorers of Goodness* (work in progress); *Moral Sensitizing: A Guide to Natural Process Moral Learning and Healing* (work in progress).

4. The track for a reconstruction of Darwin's morally oriented humanistic completion for his theory of evolution, the relevant brain research and advanced biology, and the cultural evolution-relevant archaeology is best laid out in my works-in-progress, *The Glacier and the Flame* and *Darwin's Lost Theory*, and in Riane Eisler, *The Chalice and the Blade* (New York: Harper and Row, 1987). See also my article, "Charles Darwin, Paul MacLean, and the Lost Origins of 'The Moral Sense': Some Implications for General Evolution Theory" (see note 3).

5. The General Evolution Research Group was founded in 1986 by Ervin Laszlo and a small group, including astrophysicist Eric Chaisson, chaos theorist Ralph Abraham, biologist and evolutionary theorist Vilmos Csanyi, cultural evolutionary theorist Riane Eisler, and myself. Most of the contributions of its members to the development of general evolution theory are published in the group's journal, *World Futures: The Journal of General Evolution*, published by Gordon and Breach. See "A Brief History of the General Evolution Research Group," in Loye, ed., *The Evolutionary Outrider: The Impact of the Human Agent on Evolution* (Twickenham, England: Adamantine, 1998, and Westport, Conn.: Praeger, 1998).

6. Based on work by evolutionary theorist Charles Darwin, neurologist and brain researcher Paul MacLean, biologist Lynn Margulis, primatologist Franz de Waal, astrophysicist Eric Chaisson, physicist Brian Swimme, psychologists Abraham Maslow, Carl Rogers, Martin Hoffman, James M. Baldwin, Jean Piaget, Lawrence Kohlberg, Carol Gilligan, Silvan Tomkins, William Damon, Eva Fogelman, Linda Silverman, Elizabeth Maxwell, Heinz Kohut, Marian Radke-Yarrow, Carolyn Zahn-Waxler, and Michael Piechowski, psychoanalyst Erik Erikson, and psychiatrists Kazimierz Dabrowski, Roberto Assagioli, and Daniel Stern.

7. This aspect of moral transformation theory is chiefly based on the cultural transformation theory of cultural historian and evolution theorist Riane Eisler and the wide-ranging data base confirming both this aspect of moral transformation theory and the archaeological and anthropological base for cultural transformation theory. This includes the work of neuropsychiatrist and brain researcher Karl Pribram, again Paul MacLean, archaeologists Marija Gimbutas, James Mellaart, Nicolas Platon, V. Gordon Childe, J. P. Mallory, and Gordon and Patricia Allchin, geographer James DeMeo, social theorists Karl Marx and Friedrich Engels, anthropologist Lewis Henry Morgan, economist and historian Alexander Rustow, ethnologist Robert Briffault, anthropologist Bronislaw Malinowski, psychoanalysts Alfred Adler, Wilhelm Reich, and Erich Fromm, anthropologists Ruth Benedict and Adrienne Zihlman, primatologists Suchisa Kuroda, Takayoshi Kano, Barbara Smuts, and Franz de Waal, philosophers Jean-Jacques Rousseau and Immanuel Kant, founder of systems science Herbert Spencer, psychoanalyst Sigmund Freud, sociologist Emile Durkheim, again Piaget, Gilligan, psychologist Jean Baker Miller, sociologist Jessie Bernard, and anthropologist Gregory Bateson.

8. Based on the work of Kant, physicists Heinz Pagels, Niels Bohr, and Paul Davies, systems scientist Erich Jantsch, naturalist Peter Kropotkin, microbiologist Werner Arber, DNA theorists James Watson and Francis Crick, thermodynamicist and chaos theorist Ilya Prigogine, biologists Humberto Maturana, Francisco Varela, and Vilmos Csanyi, cyberneticist Gyorgy Kampis, again Marx and Engels, John Stuart Mill, again Durkheim, Freud, Piaget, Fromm, Kohlberg, and Gilligan, social psychologist Milton Rokeach, again Spencer, psychologist Else Frenkel-Brunswick, again Eva Fogelman, and on my own work in the study of American history and the psychology of ideology.

9. Based on a variety of works yet to be assimilated and evaluated for a later book.

10. Based on the brain research of Alexander Luria, Karl Pribram, Paul MacLean, Ward Halstead, Walter Freeman, Walle Nauta, and many others, plus other works yet to be assimilated and evaluated for a later book.

11. Based primarily on the action research perspective of Kurt Lewin, and on other work by Lewin, sociologist Robert Merton, psychologists Robert Rosenthal and Jean Houston, one hundred fifty years of psychological studies of cognition, affection, and conation, Maslow, Assagioli,

Dabrowski, Riane Eisler and Jean Baker Miller again, general evolution theorist, activist, and futurist Ervin Laszlo, and futurists Hazel Henderson, Willis Harman, John Naisbitt, Patricia Aburdene, Donella Meadows, and Buckminster Fuller.

12. For points of relevance, see, in particular, Hans Kung, "The History, Significance and Method of the Declaration Toward a Global Ethic," and Karl-Josef Kuschel, "The Parliament of the World's Religions, 1893–1993," in Kung and Kuschel, *A Global Ethic: The Declaration of the Parliament of the World's Religions* (London: SCM Press, 1996).

13. The passion for attaining gender equality of Kung and his associates in the development of the Parliament's statement of a global ethic is perhaps the ethic's single most arresting quality. Given the fact that practically all the world's religions derive from a patriarchal base, with most still heavily mired in sexism, to get one hundred leaders to sign the statement was an extraordinary political as well as spiritual accomplishment.

14. See Eric Chaisson, *Cosmic Dawn* (New York: Little, Brown, 1981) and *The Life Era* (New York: Atlantic Monthly Press, 1987).

15. See Ervin Laszlo, *The Interconnected Universe* (London and Singapore: World Scientific, 1995) and Stanley Salthe, *Development and Evolution* (Cambridge, Mass.: MIT Press, 1993).

16. Attempts such as the fascinating fragment of a moral code that Erich Fromm outlines in *Man for Himself* (New York: Holt, Rinehart, and Winston, 1947) have rapidly passed from consciousness as merely odd anomalies.