



IMAGINATION

The

2020 CHALLENGE



*Evolutionary
Bounce
or
Crash?*

CHOICE



Duane Elgin

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The
2020
CHALLENGE
EVOLUTIONARY
BOUNCE
OR
CRASH?
BY
DUANE ELGIN

2020 CHALLENGE REPORT PROJECT at Union Theological Seminary, 1998–99

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JOURNEY

WE HUMANS HAVE COME TO A GREAT CHOICE-POINT IN OUR EVOLUTIONARY JOURNEY. OUR TIME OF APPARENT CRISIS IS, IN REALITY, AN INITIATION INTO A NEW RELATIONSHIP WITH ONE ANOTHER AND THE EARTH. THE COMING INITIATION REPRESENTS A TIME OF BIRTH—A STRESSFUL BUT ENTIRELY NATURAL PROCESS.

► ***We humans have come to a great choice-point in our evolutionary journey.***

Humanity has become so powerful that we appear to be doing irreparable harm to our home, Earth. Although humans have been faced with challenges throughout history, we have never before been confronted with a challenge together. Our time is unique in one crucial respect: the circle has closed—there is nowhere to escape. For the first time in our history, the entire human population is confronted with a predicament whose solution will require us to work together in a common enterprise that respects our rich diversity.



► ***Our time of apparent crisis is, in reality, an initiation into a new relationship with one another and the Earth. The coming initiation represents a time of birth—a stressful but entirely natural process. Reaching this stage does not represent an evolutionary failure but rather is an expression of our great success as a species.***

► ***The human family has been on a long and purposeful journey, working toward our early adulthood. Metaphorically, we seem to be in our teenage years as a species and on the verge of a new stage of maturity as we become a planetary civilization.***

► ***Two sets of trends and forces are considered in this report. The first set is called “adversity trends” because they present unyielding challenges to further growth along historical lines (for example, global climate change). The other set can be called “transforming factors” as they present humanity with extraordinary opportunities for development along new lines (for example, the global communications revolution).***

► ***Many of these driving trends seem to reach critical thresholds in the decade of the 2020s.***

Difficulties that may seem relatively isolated until then (such as poverty, climate change, world population growth, species extinction, and water shortages) could coalesce into a tight and unyielding web—a whole-system crisis.

THE 2020 CHALLENGE—SUMMARY

► **Reaching the stage of an environmental, social, and spiritual crisis—hitting an “evolutionary wall”**—does not represent an evolutionary failure as it is a result of our great success. Failure or success will hinge upon the choices we make on reaching this turning point in human evolution.

► **An evolutionary wall presents humanity with an identity crisis at least as great as our ecological crisis:** Who are we as a species? What is our larger story? What is the relationship we want with one another and with the larger web of life?

► **Changes at every level are needed for us to realize an evolutionary leap forward—such as** sustainable patterns of consumption at the individual level; new approaches to poverty eradication; new types of housing and community at the neighbourhood level; new policies with regard to energy, the environment, the economy, and education at the national and global level; and new partnerships among people from the local to the global level.

CHANGES

*CHANGES AT EVERY
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FORWARD—SUCH AS
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THE INDIVIDUAL LEVEL
AND NEW PARTNERSHIPS
AMONG PEOPLE FROM
THE LOCAL TO THE
GLOBAL LEVEL.*

ACKNOWLEDGMENTS

With The 2020 Challenge Report, Duane Elgin has tackled—in a brief time and with a limited budget—the enormous task of collecting and synthesizing vast amounts of existing research to tell the story of this extraordinary moment in our evolution. He has created a context for this information that not only inspires hope but also generates possibility. He has taken on this task with enormous integrity, grace, and generosity. We especially thank Duane for his patience, guidance, good humor, and exceptional contribution as we developed the initiative from a concept to a seedling enterprise. We also want to thank the many leading thinkers from whom Duane solicited comments and suggestions in developing this report. Their names are listed in the appendix.

We also acknowledge the skillful and meticulous editing of this report by Deborah Gouge. The abridged text presented here was edited by Deborah Stern.

For further insight into these ideas, please read Mr. Elgin's book, *Promise Ahead: A Vision of Hope and Action for Humanity's Future*, and visit Mr. Elgin's excellent website: Awakeningearth.org—knowledge for a sustainable and compassionate future. Mr. Elgin is author of *Voluntary Simplicity*, *Awakening Earth* and many other leading books, articles, and reports. Mr. Elgin can be contacted at Duane@Awakeningearth.org.

Ideas need energy and resources to become manifest. We wish to acknowledge the support provided by Sam and Mary Mills, and by Vincent and Anne Mai. Their financial and moral support helped turn a big idea and dream into a first step project.

As special personal acknowledgement, Deborah Stern wishes to recognize Thomas Berry: *"Tom was the first person I encountered who articulated the question—as well as a meaningful, inspiring response—to the question: 'What is the paramount challenge for humanity in our times? And how the heck does that fit within the larger picture of creation's unfolding story, not to mention one's own personal story?' In their book, The Universe Story, from an enormous well of scientific and historical knowledge and wisdom, Tom Berry and Brian Swimme pose and answer questions such as these. They have been generous in offering that thinking to the world^{*}. It was out of a series of private conversations with Tom between 1991 and 1995, and later with many others, including Holland Hendrix, Lynne Twist, Vincent Mai, Duane Elgin, Sam Mills, and Doug Miller that the idea and opportunity for a generational initiative to achieve a sustainable future was seeded. The idea is called Campaign 2020".*

^{*}For access to these ideas re: the nature of evolutionary dynamics in the Universe and the role of the human with the Earth community see www.brianswimme.org and www.TheGreatStory.org.

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The 2020 CHALLENGE

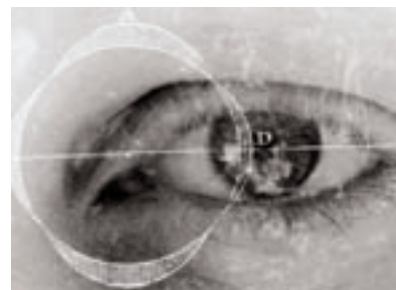
FORWARD

What follows is the abridged version of Duane Elgin's report that was commissioned in the spring 1998.

CHANCE AND
NECESSITY ARE THE
FIRST TWO POWERS
THAT SHAPE LIFE.
THE THIRD IS NICHE
CREATION, OR MORE
GENERALLY, CONSCIOUS
CHOICE.

—BRIAN SWIMME AND
THOMAS BERRY, *THE
UNIVERSE STORY*

This report is the first step in what we hope will help define a whole-systems context for the evolutionary moment of choice that humanity is facing. When the “race to put a man on the moon” was declared in the 1960s, extraordinary breakthroughs in science, technology, business, and education resulted. In a similar manner, the 2020 challenge can serve as a strategic focus for generating breakthroughs in humanity’s collective awareness, investments, and actions toward creating an ecologically and socially sustainable future. This report begins to build the case for creating a strategic “whole system” organizing effort designed to meet the challenge to humanity’s sustainability that many experts expect to develop by the decade of the 2020s. We call this *Campaign 2020*. The initiative was first incubated at Union Theological Seminary, and is aligning leading businesses, NGOs, and commercial and philanthropic investors to enhance strategic planning, resources, media, and coordinated action to “get the job done,” to consciously birth the world we want to bequeath to our great-grandchildren.



The 2020 Challenge Report synthesizes the trend data describing the severe dimensions of the coming challenge, as well as the countervailing opportunity trends that—if sufficiently leveraged through conscious choice and investment—can engender an ecologically and socially sustainable world civilization. This working-draft report was presented at the Ecumenical Earth Conference held at Union and Auburn Theological Seminaries with the intention of encouraging the dialogue, building awareness for the needs and opportunities that the Campaign 2020 Initiative can address, and cultivating the leadership team required to ensure its success.

THE 2020 CHALLENGE—FORWARD

If we face up to the challenges described in this report with appropriate strategic action, we have the historic opportunity to generate a planetary culture of harmony and justice among people, and between human beings and all of creation. The choices made and actions taken by those of us who are alive today will likely determine the future of our species.

Deborah E. Stern, Campaign 2020 Initiator

Dr. Holland L. Hendrix, Principal Collaborator, Campaign 2020
President (1990-1998), Henry Sloane Coffin Professor of Divinity (1998-99)
Union Theological Seminary

POSTSCRIPT #1

In Fall of 2001, as part of the 2020 Initiative, Environics International, Ltd. – a leading global survey research and strategy company – asked experts from over 30 countries if the transition to sustainable development was occurring fast enough to avert major, irreversible damage to human, social, and ecosystem health. ***One in two expressed the view that without faster progress it is unlikely that Humanity can avert irreversible damage, and another one in ten said it is already too late.***

GlobeScan experts think that ***sustainable development needs the special impetus that would come with a visionary objective and high-profile leadership (as described by Campaign 2020).*** When asked to rate the likely effectiveness of four possible initiatives to accelerate progress toward sustainable development, two-thirds say that ***declaring a time-specific generational objective on sustainable development (similar to Kennedy’s “man on the moon within a decade”) with measurable deliverables would be most effective.***

POSTSCRIPT #2

The 2020 Initiative is now undertaking an unprecedented “global listening project,” formally called The Global Stakeholder Panel on Globalization and Governance. This project will establish new social metrics to help guide the social investment decisions that are shaping the future. It utilizes the Internet, and the global communications, issues research, and management tools developed by GlobeScan Research, Ltd. (formerly Environics International, Ltd.) to engage stakeholders throughout the world, and from across all sectors, in a local-to-global “conversation” for the world we want. As suggested in this report (page 18), our goal is to use the transformative power of global communications to stretch across historic human divisions and emerge a working consensus about the pathway forward to a sustainable future – using the year 2020 as a milestone.

CAPACITY

WHAT ARE THE
ESSENTIAL STRATEGIC
OBJECTIVES THAT MUST
BE MET BY THE YEAR
2020 IF WE ARE TO
CREATE A SUSTAINABLE
PATHWAY FOR OUR
GREAT GRANDCHILDREN?

HUMANITY'S EVOLUTIONARY JOURNEY

The 2020 CHALLENGE

The purpose of this report is to provide a larger context or perspective



from which to view the environmental, social, and spiritual challenges facing humanity. A more spacious context can reveal new possibilities for action that were not visible before. Our problems will be no less serious. Plant and animal species are still being destroyed at a frightening rate. Our population is still expanding at a pace that our planet cannot support. We are still gobbling up natural resources with virtually no concern for future generations. We are still waging war against one another.

What a new perspective can do, however, is alter who we think ourselves to be in the face of these intertwined difficulties. We can shift from being the victims of these problems to becoming the pioneers of a sustainable and meaningful future for ourselves and our planet.

As a way to begin creating this new perspective, let us briefly review the evolutionary road that we humans have travelled thus far. Since awakening in the infancy of our species as hunter-gatherers in the harsh environment of the ice ages roughly 50,000 years ago, humanity has been embarked on a long journey of learning and discovery. Even in this early phase of modern life, humans explored and settled virtually every part of the Earth. With the end of the ice ages roughly 10,000 years ago, we began to settle down. Small villages came into existence. The focus of life was farming, and the food surplus that peasants produced made possible the eventual rise of small cities. Then, roughly 5,000 years ago, city-states and empires abruptly began to form in the Middle-East, Egypt, India, and China. At this time, all of the basic arts of civilization were developed, such as writing, mathematics, astronomy, civil codes, and a central government. Still, the vast majority of humanity lived with no expectation of material progress. Then, around 300 years ago, the industrial revolution began in Europe and has since spread around the world, particularly in the last half-century. Our ideas about human progress became linked with progress in material production and consumption. The old ideas have run us into undeniable limits to growth.

Now, at the turn of the millennium, we find ourselves in an unprecedented situation. Humanity has become so powerful that we appear to be doing irreparable harm to the Earth. We are being

1

CONTEXT

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OUR PLANET.*

HUMANITY'S EVOLUTIONARY JOURNEY

1

CHOICE POINT

FOR THE FIRST TIME IN
OUR HISTORY, THE
ENTIRE HUMAN
POPULATION IS
CONFRONTED WITH A
PREDICAMENT WHOSE
SOLUTION WILL
REQUIRE US TO WORK
TOGETHER IN A
COMMON ENTERPRISE
THAT RESPECTS OUR
RICH DIVERSITY.

called on to develop a new level of maturity and responsibility. We also see the positive stirrings of a sustainable future in countless experiments at the grassroots and institutional levels around the world. We have come to a great choice-point in our journey. Although humans have been faced with challenges throughout history, we have never before been confronted with a challenge together. Our time is unique in one crucial respect: the circle has closed—there is nowhere to escape. For the first time in our history, the entire human population is confronted with a predicament whose solution will require us to work together in a common enterprise that respects our rich diversity.

How can we make sense of this journey? Is humanity living out a larger story whose outlines we are only now beginning to recognize? Joseph Campbell, a world-renowned scholar who invested his life exploring the myths and stories that have brought meaning to people and civilizations throughout history, discovered a common story at the heart of the world's cultures. He called this story the “hero's journey.” The standard pathway of this journey has three stages: separation, initiation, and return.¹ The hero begins by leaving his home; he sets out on a journey of learning and discovery, with many trials and tests along the way. This is the **separation** stage. There comes a point in his journey where the hero undergoes a supreme test and **initiation**—crossing the threshold of the limitations of a former life and discovers a new and larger possibility in life. With that hard-won, sacred knowledge, he **returns** from his adventure with the capacity for personal renewal or even, says Campbell, “the means for the regeneration of society.”²

Applying this simple model of separation, initiation, and return to the journey of homo-sapiens, we might assert that humanity is in the waning hours of separation and preparing to make the initiation—making the transition from one kind of life to another. ***Our time of apparent crisis is, in reality, an initiation into a new relationship with one another and the Earth. The coming initiation represents a time of birth—a stressful but entirely natural process.***³

Reaching this stage does not represent an evolutionary failure but rather is an expression of our great success as a species. It has taken roughly 50,000 years for us to pull ourselves free from absorption in nature and stand apart in our uniqueness—able to reflect on ourselves and our universe through the tremendous scientific understanding and technical sophistication we have gained. ***Ironically, this same sophistication allows us to witness—through a whole system view—the very ways in which our hard-won separation dramatically threatens our very survival.*** As T.S. Eliot wrote, “And the end of all our exploring, Will be to arrive where we started and know the place for the first time.”⁴

1

INITIATION

AND THE END OF ALL
OUR EXPLORING, WILL
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THE FIRST TIME.

—T.S. ELIOT,

FOUR QUARTETS



HUMANITY'S INITIATION: AN EVOLUTIONARY WALL

2

Here is how William D. Ruckelshaus, the former director of the Environmental Protection Agency, describes the evolutionary task that we are facing:

Can we move nations and people in the direction of sustainability? Such a move would be a modification of society comparable in scale to only two other changes: the Agricultural Revolution (of 10,000 years ago) and the Industrial Revolution of the past two centuries. Those revolutions were gradual, spontaneous, and largely unconscious. This one will have to be a fully conscious operation ... If we actually do it, the undertaking will be absolutely unique in humanity's stay on the Earth.⁵



To accomplish this unique task will likely require a combination of the **push of necessity** and the **pull of opportunity**. If humanity feels the pull of realistic visions of a sustainable and meaningful future and, simultaneously, feels the push to respond to mounting difficulties, the combination could move us forward with breathtaking speed.

Today, we appear to be pushing up against an unyielding barrier to historical patterns of development. We can clarify this time of initiation and turning by distinguishing between an “ecological wall” and an “evolutionary wall.”

An **ecological wall** refers to the physical limits of the global ecosystem to support our species. We are fast approaching these limits because we are consuming more resources than the Earth can renew and polluting the environment with more than it can absorb. Nearly every organism will exploit its ecological niche to the fullest extent; thus, overshoot and collapse are a common occurrence in natural systems. We learn through experience, and since we have never encountered this situation before it seems only natural that humanity would reach, and then extend beyond, the limits of the Earth's ecosystem. Since we have never before had such powerful access to the entire planet as our ecological niche, we have no experience exercising restraint as a species and caring for the overall biosphere.

PUSH AND PULL

IF HUMANITY FEELS
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AND, SIMULTANEOUSLY,
FEELS THE PUSH TO
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DIFFICULTIES, THE
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HUMANITY'S INITIATION: AN EVOLUTIONARY WALL

An **evolutionary wall** refers not only to the physical limits of the Earth's ability to sustain humanity, but also to our own social and spiritual limits to sustain dysfunctional and destructive behaviors. Modern, industrial civilization is breeding pathological behavior—alienation from others and from nature, extreme competitiveness and greed, cynicism in politics, and despair for the future. How much poverty, alienation, and misery can humanity experience without eventually damaging our collective psyche and soul? ***An evolutionary wall presents humanity with an identity crisis at least as great as our ecological crisis: Who are we as a species? What is our larger story?*** What is the journey we are on, and where are we going? What is the relationship we want with one another and with the larger web of life?

We are not simply headed toward an ecological wall of physical limitation, but toward an even more demanding evolutionary wall that will test the invisible factors of humanity's consciousness, compassion, and creativity. We will hit the ecological wall when we run up against nature's outer limits, and we will hit the evolutionary wall when we run up against humanity's inner limits.

This report is focused on the evolutionary wall that humanity faces and on our challenge not only to maintain ourselves (by avoiding a destructive crash) but to surpass ourselves (by deliberately creating an evolutionary bounce). An evolutionary bounce could be viewed as a leap forward in the unfolding of humanity's potentials. Given the challenges we are facing, an evolutionary bounce would probably involve working together to build a way of life that is:

- **Sustainable**—in harmony with the Earth's biosphere (the **physical ecosystem**);
- **Satisfying**—in harmony with others humans (the **social-cultural ecosystem**);
- **Soulful**—in harmony with the "life force" (the **spiritual ecosystem**).

To develop our lives harmoniously in these three areas, the human family would be doing much more than reacting to an ecological wall. We would be making a conscious turn toward a higher level of maturity, community, and evolutionary opportunity. Two compelling reasons for making this turn are, first, it is eminently desirable and leads to a higher quality of life; and, second, it is necessary if we are to avoid creating a planet that is hotter, hungrier, poorer, more racially, socially, and economically divided, more polluted, diseased, and biologically impoverished.⁶

Although our future is uncertain, we already have all the resources and capacities we need for a successful journey to a sustainable, compassionate, and creative planetary civilization. The choice is in our hands. As biologist Lewis Thomas describes:

2

WALL

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COMPASSION, AND
CREATIVITY.

HUMANITY'S INITIATION: AN EVOLUTIONARY WALL

2

...If we can stay alive, my guess is that we will someday amaze ourselves by what we can become as a species. Looked at as larvae, even as juveniles, for all our folly, we are a splendid, promising form of life and I am on our side. ⁷

CONSCIOUS TURN

*ALTHOUGH OUR
FUTURE IS UNCERTAIN,
WE ALREADY HAVE ALL
THE RESOURCES AND
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FOR A SUCCESSFUL
JOURNEY TO A
SUSTAINABLE,
COMPASSIONATE, AND
CREATIVE PLANETARY
CIVILIZATION. THE
CHOICE IS IN OUR
HANDS.*

The balance of this summary report, considers two sets of trends that will create the context for our initiation into a new level of maturity. Both sets of trends reflect circumstances of our own making. The first set reveals humanity's vulnerabilities and are called "adversity trends" because they present unyielding challenges to further growth along historical lines (for example, global climate change). The other set can be called "transforming factors" as they reveal our strengths and present humanity with extraordinary opportunities for development along new lines (for example, the global communications revolution). Finally, the convergence of these two powerful sets of forces is considered.

ADVERSITY TRENDS

The 2020 CHALLENGE

No one can predict the future with certainty, but we can make educated guesses



about how the major trends—population, resources, environment—will unfold in the decades ahead. There is, however, a spectrum of views regarding the meaning and impact of those trends. On the one hand, there are some who believe that, with engineering, biotechnology, and human ingenuity, we can solve the problems we face and realize an ever-improving future. On the other hand, there are others who conclude from these same trends that humanity has already

over-reached our relationship with life on our planet and that to secure a sustainable future for ourselves, we will need a change in human culture and consciousness, as much as a change in technology.

In 1992, over 1,600 of the world's senior scientists, including a majority of the living Nobel laureates in the sciences signed an unprecedented "Warning to Humanity." In this historic statement, they declared that "human beings and the natural world are on a collision course . . . that may so alter the living world that it will be unable to sustain life in the manner that we know." They concluded with the following statement:

We, the undersigned senior members of the world's scientific community, hereby warn all humanity of what lies ahead. A great change in our stewardship of the earth and 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.⁸

Is this a valid warning? Do we truly face the "push of necessity" referred to earlier. Are we on a collision course with nature and perhaps our own human nature?

To explore this important question, we shall look one generation into the future—the next 20 to 30 years. That will give us a rough idea of the kind of world that a child born today will likely inhabit as a young adult. There are dozens of trends that we could consider; to keep the inquiry

3

WARNING

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3

CONSEQUENCES

manageable, we shall consider only five: climate change, population growth, species extinction, resource depletion, and global poverty. (The data concerning these trends is greatly summarized in this abridged version of the report; a full amplification of the information is available in the complete report.)

GLOBAL CLIMATE CHANGE

It is no accident that, of the 10 warmest years on record, all have occurred in the last 15 years. In 1995, the Intergovernmental Panel on Climate Change (IPCC)—the authoritative international body charged by the United Nations to study global climate change—reached the conclusion that “there is a discernible human influence on global climate.”⁹ They found that the primary cause for these climate changes is the increase in greenhouse gases that trap heat in the atmosphere. The principal greenhouse gas is carbon dioxide, which comes from burning gasoline, coal, and natural gas. They have determined that we can expect at least a doubling of pre-industrial levels of carbon dioxide by the middle of the next century.¹⁰ Yet, there is growing scientific consensus that anything more than a doubling of greenhouse gas concentrations poses an unacceptable risk.¹¹ Humanity is conducting a global experiment that could have catastrophic consequences. When the atmospheric carbon dioxide doubles, the impacts could include:

- Widespread disruption and dislocation of agricultural growing regions
- More rain in some areas, more drought in others
- Stronger storms, more floods, stronger hurricanes
- Stronger effects from El Nino
- Heat waves that kill people, animals, and crops
- Expansion of the Earth’s deserts
- Melting of the polar ice caps, with a rise in the sea level impacting coastal areas
- Spread of infectious diseases that endanger human and animal health
- Stress on the rest of the ecosystem (forests, wetlands, natural habitats)
- Enormous financial burdens placed on individuals, communities, nations, insurance companies, and other public and private financial institutions.

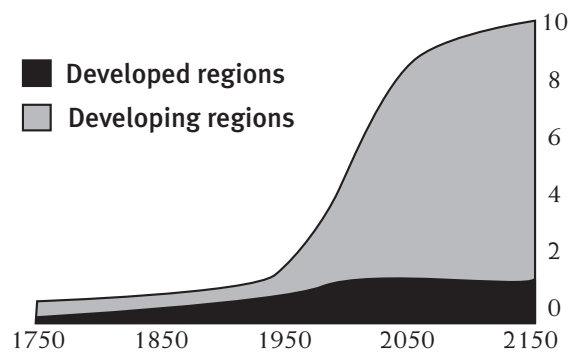
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CONSEQUENCES.*

WORLD POPULATION GROWTH

Current trends in world population growth give reason for both optimism and concern.¹² There is cause for optimism because we seem to be moving in the direction of population stability. There is cause for concern because there remains considerable momentum in world population growth and stability is still many years away. Mid-range estimates are that population will grow for another 50 years before it peaks at around 10 billion—four billion more people than the number alive at the year 2000. (The predicted range in global population in 2050 is between 8 and 12 billion people, with 10 billion being in the mid-range.)¹³

Figure 2 shows world population growth in both developed and developing regions from 1750 (the beginnings of the industrial revolution), with projections to 2150.

Figure 2: Trends and Projections in World Population Growth: 1750-2150
(in billions of persons)



Source: World Resources, 1996-97

Within the time-frame covered by this report (roughly until the end of the 2020s), middle-range estimates are that two to three billion people will be added to the Earth's population.¹⁴ It is important to note that 95 percent of this growth is expected to occur in the poorest countries, which can least afford it, putting enormous pressures on natural resources and already overburdened cities. **At the turn of the millennium, the world is half rural and half urban; it is estimated that by 2050, however, two-thirds of the world's population will be urban. The shift to a predominantly urban world will produce a radical change in humanity's cultural consciousness.** According to U.N. estimates, by the year 2050, there will be 93 cities in the world with more than five million inhabitants each; 80 of them (86 percent) will be in developing countries. In the Third World, huge

3

TRENDS

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3

MEASURE

PERHAPS THE MOST
DIRECT MEASURE OF
THE HEALTH OF OUR
PLANET'S BIOSPHERE IS
THE STATUS OF ITS
BIOLOGICAL DIVERSITY.
THE HEALTH OF THE
PLANET IS IN JEOPARDY
AS INDUSTRIAL ACTIVITY
IS CAUSING MASS
EXTINCTION OF ANIMAL
AND PLANT SPECIES
AROUND THE WORLD.
... PROGRESSIVELY
DEGRADING THE
RESILIENCE AND
INTEGRITY OF THE
WHOLE BIOSPHERE.

urban slums are emerging which lack paved roads, sewers, clean water, health care, fire and police protection, and space to grow food. With overcrowding and a lack of sanitation, epidemics of the past—like cholera, dysentery, and typhoid—are returning. If these U.N. estimates prove to be correct, we will see an enormous burgeoning of these places of misery, pollution, and disease.

MASS EXTINCTION OF SPECIES

Perhaps the most direct measure of the health of our planet's biosphere is the status of its biological diversity. By this measure, the health of the planet is in jeopardy as industrial activity is causing mass extinction of animal and plant species around the world. This also represents one of the most confronting ethical dilemmas of the current ecological crisis. In 1998, the American Museum of Natural History in New York commissioned a survey of 400 scientists; nearly 70 percent of the biologists polled said they believed that "mass extinction" is underway, and predicted that up to one-fifth of all living species could disappear within 30 years.¹⁵ Nearly all of the loss of plant and animal species is attributable to human activity. Ellen Futter, president of the Museum of Natural History, commented that:

*This survey is a dramatic wake-up call to individuals, governments, and institutions that we are facing a truly formidable threat not only to the health of the planet but also to humanity's own well-being and survival—a threat that is virtually unrecognized by the public at large.*¹⁶

Mass extinctions are progressively degrading the resilience and integrity of the whole biosphere. As plants and animals disappear, their absence can affect the entire ecosystem, particularly with regard to natural services such as pollination, seed dispersal, insect control, and nutrient cycling.¹⁷ In addition, a larger pool of species insures that there will be more candidates to take the place of those species that cannot weather catastrophic droughts, freezes, pest invasions, and diseases.¹⁸ Biodiversity is also important to health care; for example, roughly 25 percent of the drugs prescribed in the U.S. include chemical compounds from wild organisms.¹⁹

DEPLETION OF NATURAL RESOURCES

We are depleting important renewable resources such as water faster than they can be replenished, and we are consuming precious non-renewable resources such as petroleum with little regard for future generations.

Sandra Postel, who does research on international water and sustainability issues, estimates that, **by 2025, nearly 40 percent of the world's population will be living in countries whose water**

supplies are too limited for food self-sufficiency.²⁰ Among other reasons, supplies are short because ground water is being over-pumped and water is being redirected from agriculture to cities. Her study concludes that “water availability will be a serious constraint to achieving the food requirements projected for 2025.”²¹ Looking ahead even further, to the year 2050, former U.S. Senator Paul Simon has this to say about the consequences of depleting water resources:

It is no exaggeration to say that the conflict between humanity’s growing thirst and the projected supply of usable, potable water could result in the most devastating natural disaster since history has been recorded accurately, unless something happens to stop it.²²

We are depleting cheap oil as well as water. The industrial era has fueled much of its growth on a one-time gift from nature: the fossil fuels that accumulated over millions of years. In an article entitled “The End of Cheap Oil” in Scientific American, Colin Campbell and Jean Laherrere, who have each worked in the oil industry for more than 40 years, predict that conventional oil production will begin to decline within a decade.²³ They write, “There is only so much crude oil in the world, and the industry has found about 90 percent of it.”²⁴ Even optimistic projections of remaining reserves suggest that conventional oil will top out by 2020.²⁵ While there are new technologies for locating and extracting oil, and substitute forms of energy for a petroleum-based economy, it will take some time to make the transition and there is no concerted global effort to implement a sustainable energy system. Therefore, it seems likely that the end of cheap oil will cause serious dislocations as we make the transition to more renewable sources such as solar, wind, and geothermal.

An often overlooked but important consequence of the end of cheap oil will be an increasing cost for maintaining high-productivity agriculture that relies on petroleum-based pesticides, herbicides, and fertilizers. As will be discussed in a later section, ***at the very time the Earth will contain an added two to three billion people to feed, the skyrocketing cost of petroleum could undermine the ability of the poorest countries to feed those additional billions.***²⁶

POVERTY AND DIMINISHED OPPORTUNITY

The late Prime Minister of Canada, Lester Pearson, observed: ***“No planet can survive half slave, half free; half engulfed in misery, half careening along toward the supposed joys of an almost unlimited consumption ... Neither ecology nor our morality could survive such contrasts.”***²⁷ If the world is increasingly divided into the rich and the impoverished, those who are relatively protected and those who are directly threatened by environmental decay, then it will produce a volatile situation that is ripe for revolutionary movements. It is also important to note that divisions along

3

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3

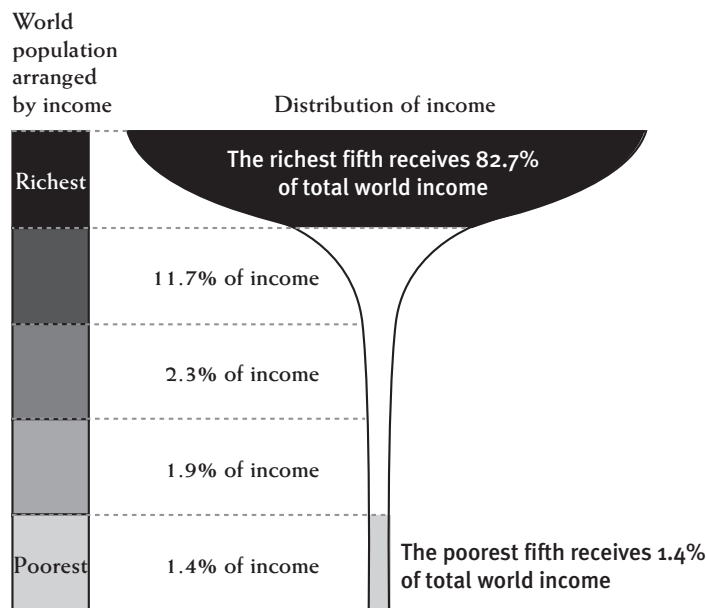
DIVIDED

IF THE WORLD IS INCREASINGLY DIVIDED INTO THE RICH AND THE IMPOVERISHED, THOSE WHO ARE RELATIVELY PROTECTED AND THOSE WHO ARE DIRECTLY THREATENED BY ENVIRONMENTAL DECAY, THEN IT WILL PRODUCE A VOLATILE SITUATION THAT IS RIPE FOR REVOLUTIONARY MOVEMENTS.

race and ethnic lines are growing as a result of economic disparities the world over. Additionally, we now have mounting evidence that environmental threats are disproportionately falling on racial and ethnic minority groups. ***If the world is profoundly divided materially, there is little hope that it can be united socially and spiritually. Figure 3 vividly illustrates how far we are from an equitable distribution of global income.*** It shows the percent of global income distributed among five equal segments of the world's population:

According to World Bank estimates, if the poverty line is set at \$1 a day, 1.3 billion people (or roughly 20 percent of humanity) live in poverty. If the poverty line is set at \$3 a day, 3.6 billion people (or roughly 60 percent of humanity) are poor. (By comparison, the official poverty line in the United States is approximately \$11 a day or \$4,000 per year, per person). What this means is that grinding poverty is the condition of life for a majority of the people in the world. While they do indicate how widespread poverty is in the world, these aggregate statistics do not reveal the depth of that poverty in our world. For example:

Figure 3: Global Income Distribution⁴⁵



Source: UNDP, *Human Development Report 1992* (New York: Oxford University Press, 1992)

- In Indonesia, the number of people living in absolute poverty (living on less than a \$1 per day per person) has suddenly doubled from 20 to 40 million people, with the recent economic crisis. The

poverty is so extreme that doctors at two clinics said the number of patients had fallen by half because they could no longer afford to pay the consultation fee, the equivalent of five cents in U.S. currency.²⁹

- Although China's economy is growing rapidly, the World Bank estimates that "more than one-quarter of all Chinese—about 350 million—are in substantial deprivation, subsisting on less than \$1 a day. Of these, 60 to 100 million are on the edge of starvation with less than 60 cents a day."³⁰

Nothing reveals the vulnerability of the world's poor more than the prospect of widespread food scarcity. For these billions, even a small rise in the price of food can be a serious threat to survival. ***When food production falls behind population growth, however, then how food is allocated becomes an intense and immediate political issue.*** As Lester Brown says, ***while there are substitutes for oil, there are no substitutes for food.*** China—which contains one-fifth of humanity—has recently become a net food-importing nation, illustrating that we are entering a new age in which relative food abundance is being replaced by one of scarcity.³¹

Compounding this situation, by the 2020s, billions of people will be living in urban slums without clean water, sanitation, telephones, transportation, health care, or a place to grow food—and yet most will have access to television which shows them in vivid detail the high-consumption lifestyles that will never be theirs. ***To have a majority of humanity struggle all day to make a meagre living and then to view on television each evening a flood of advertisements from the affluent world is to create a schizophrenic planet that is divided against itself. A world in which a majority of people are both "wired and poor" is likely to be a highly unstable situation.***³² It would be a world in which neither peace nor sustainability would be possible.

The human family is in a real quandary as we pursue economic growth following the historic development model. On the one hand, if poverty and famine grow in the world, then our collective future will be in doubt as we descend into resource wars and the weapons of the powerless—terrorism. On the other hand, if consumption grows unrestrained, then our collective future will also be in doubt as we overtax the limits of the Earth's ecosystems.

A World Bank report released in 1997 projects that five developing countries—Brazil, China, India, Indonesia, and Russia—will become economic superpowers by 2020.³³ To this situation, Lester Brown poses the obvious question: ***"If the global economy is already overrunning its natural capacities, what happens as China, India, and other fast-developing countries strive to emulate the American lifestyle."***³⁴

3

IF

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3

INTERDEPENDENCE

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-LARRY RASMUSSEN, EARTH
COMMUNITY EARTH ETHICS

The only path through this dilemma—of increasing poverty on the one hand and natural limits to unrestrained consumption on the other hand—seems to be a middle way of conscious balance, with a new kind of justice. In *Earth Community Earth Ethics*, Larry Rasmussen writes that ***to a great degree, we now share one another's fate, so our choice is whether to promote one another's well-being as a way to promote our own.***³⁵ Basic justice and fairness are essential if we are to live peacefully on this planet. Recognizing that, we could work to create the local conditions around the world that enable people to provide the food, shelter, education, health care, and other essentials needed to realize their potentials as productive and respected members of the human family, and to be able to contribute to building a sustainable future.

A GLOBAL CHALLENGE

The driving trends of climate change, population growth, loss of biodiversity, resource depletion, and poverty are not disconnected from one another. We are using up precious natural resources to fuel a global economy whose success is changing the global climate and supporting an unprecedented increase in world population. In turn, a dramatically larger population and expanding industrialization are consuming an increasing proportion of the Earth's biosphere and causing the most massive extinction of species in the last 65 million years. One by-product of industrialization is that several billion human beings now live in destitute poverty in urban slums.

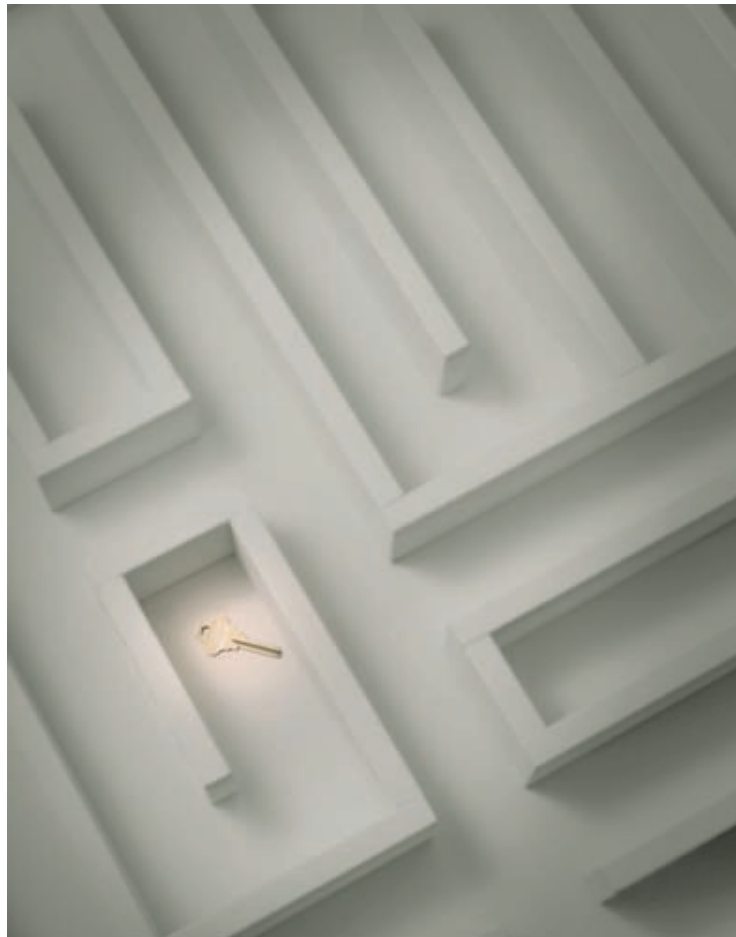
When individual adversity trends interact and amplify each other's impact, the result can be a challenge to the entire planetary system. How critical this world-system challenge will become is uncertain, but there seems little doubt that it will be sufficiently powerful to provide the rite of passage required for humanity to move to a higher level of maturity and community. At a minimum, the combined impact of adversity trends seems sufficient to motivate us to begin an earnest dialogue about where we go from here.

This brief review of adversity trends presents a distressing picture of life one generation from now. Still, it tells only half the story. In the next section we shall consider another set of forces that could transform adversity into trail-blazing opportunity for the human family.

3

CONNECTED

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4

POWER

THERE ARE AT LEAST
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 SOULFUL

Albert Einstein observed that we cannot solve problems at the same level at which

they are created; we must view them in a larger context in order to solve them. A larger perspective can simplify that which seems complex and allow new opportunities to present themselves. There are at least four contextual factors that have the power to transform both human relations and human-Earth relations, and thereby to foster a future that is sustainable, sociable, and soulful: a new perceptual paradigm or mindset that sees the universe as



alive; a global communications revolution; a shift to post-materialistic values: choosing to live sustainably; and a growing appreciation of the power of love and requirement for justice.

As these four factors become increasingly alive in human experience, the potential for an evolutionary leap forward is amplified dramatically. Each of these factors is explored in more detail below.

A NEW PERCEPTUAL PARADIGM

The most sweeping changes in human life have occurred when our sense of reality and identity have changed—specifically, when we made the transition from a hunter-gatherer existence to farming, and then from farming to urban-industrial society. In its simplest terms, **we are now opening our view of reality and human experience—from thinking that the universe is dead to directly perceiving that it is alive.** Different ways of living are engendered by these distinct paradigms.

- **If the universe is unconscious and dead at its foundations,** then we are the product of blind chance among materialistic forces. It is only fitting that we the living exploit on our own behalf that which is dead. Because the universe is lifeless, it does not have a larger purpose or meaning, nor does human existence. It is only natural, therefore, that we focus on consuming material things to minimize life's pains and maximize its comforts. Because we are ultimately separate beings in a

lifeless universe, there are no deeper ethical or moral consequences to our actions beyond their immediate, physical impacts.

- ***If the universe is conscious and alive at the foundation***, then we are the product of a deep-design intelligence that infuses the entire cosmos. A living universe has generated a living Earth from which conscious, living human beings have emerged who can look back at creation with wonder, awe, and curiosity. If life is nested within life, then it is only fitting that we treat everything that exists as alive and worthy of great respect. We shift from feelings of existential isolation to a sense of meaningful connection with the entire community of life, both present and future generations. The focus of life shifts from a fascination with high-consumption lifestyles (intended to provide both material pleasures and material protection from an indifferent universe), and toward sustainable and simple ways of living (intended to connect us with a purposeful and living universe of which we are an integral part).

This idea of a living universe is expressed through the scientific discoveries of the “new physics” and through society. Less than a hundred years ago, Einstein thought that the universe was a static, unchanging system no larger than our galaxy. Today, we know that, as physicist Brian Swimme explains, “The universe emerges out of an all-nourishing abyss not only 15 billion years ago but in every moment.”³⁶ It is an integrated system in which everything in the cosmos is a flowing movement that arises with everything else, moment by moment, in a process of continuous regeneration.

Turning from science to society, national surveys in the United States indicate there is a shift in perception underway that is congruent with this changing view of reality. Here are several examples of the shift that is underway:

- A 1975 survey of U.S. adults found that 25 percent had the “sense that all the universe is alive.”³⁷ Contrast that finding with a 1994 survey that found that 55 percent of Americans considered nature to be sacred or spiritual.³⁸ In another survey that year, one-third of the respondents reported having had a “mystical experience,” including a sense that “love underlies all things” and other qualities congruent with a living universe.³⁹

- The business literature is filled with articles and books viewing organizations as living and learning systems. For example, Tachi Kiuchi, past chairman and CEO of Mitsubishi Electric America, suggests: “If we ran our companies like the rain forest, imagine how creative, how productive, how ecologically benign we could be. We can begin by operating less like a machine and more like a living system.”⁴⁰

4

LIVING

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4

COMMUNICATION

*IT IS OUR ABILITY TO
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The paradigm shift from a dead to a living universe transforms the human story. We move from a secular journey in a fragmented and lifeless cosmos without apparent meaning or purpose, and into a sacred journey through a unified and living universe whose purpose is to support the emergence of self-organizing beings and communities at every scale.

THE GLOBAL COMMUNICATIONS REVOLUTION

It is our ability to communicate that has enabled humans to evolve from tribal societies to the verge of a planetary civilization. Because we are in the midst of an absolutely unprecedented increase in the scope, depth, and complexity of global communications, the impact of the communications revolution on our future will be equally unprecedented. The raw power of these new technologies is like nothing we have known before, as these examples show:

- a single advanced satellite or fiber-optic cable currently has the capability of sending the entire Encyclopedia Britannica with all its illustrations every three seconds.⁴¹ “In another quarter of a century these are likely to be . . . systems that could send the equivalent of the entire U.S. Library of Congress in less than 10 seconds.”⁴²

- the computing and communications industry “shows every sign of continuing its breathtaking pace for at least one or two decades more (e.g., doubling performance every one or two years), implying a revolution in capability every five to ten years.”⁴³

- Internet growth has been extremely rapid and is anticipated to escalate from an estimated 40 million people who used the internet in 1996 to nearly 200 million by 1999, and then to 500 million by 2001.⁴⁴ By 2010, there will be an estimated one billion people continuously connected to the World Wide Web.⁴⁵ Mark Pesce, writing about the internet, says that “it is not an overstatement to frame the World Wide Web as an innovation as important as the printing press—it may be as important as the birth of language itself . . . in its ability to completely refigure the structure of civilization.”⁴⁶

When a planetary scope of human connection is combined with the functional intelligence of computers, a new level of human awareness and communication—a “global brain”—could potentially emerge in which “billions of messages continually shuttle back and forth, in an ever-growing web of communication, linking the billions of minds of humanity together into a single system.”⁴⁷

How soon might the emerging global brain achieve some sort of critical mass and turn on? One important assessment comes from a report by the Institute for Information Studies:

*The universal global telecommunications network will serve as the main . . . telecommunications conduit for economic, social, cultural, and political exchange among the peoples of the planet Earth in the 21st century. This network may start to come into place around the second decade of the 21st century.*⁴⁸

Expanding the reach of the internet will be hundreds of satellites that will be launched over the next few years to form the infrastructure for a wireless communications system.⁴⁹ With satellites and cellular phone networks, developing countries will be able to bypass the need to “hard wire” telephone lines strung along poles. According to Lester Brown, “it enables developing countries to literally leapfrog into the future, avoiding investment in traditional equipment and networks.”⁵⁰ The internet could also have a very positive impact on developing countries.⁵¹ For some people, it offers the opportunity of global telecommuting; there are now software programmers in India, for example, who commute daily to work in Silicon Valley. For others, the internet offers tele-medicine— low-cost, online, medical assistance even in remote areas of the world. The internet can also help isolated groups find markets for goods and services, and empower local activists by linking them with supporters across the globe. The internet and communication satellites are weaving developing and developed nations into an integrated fabric of communication.

Combining all these communication trends, it seems likely that, within 10 to 20 years, the human family will have in place the communications infrastructure that could support a quantum increase in the collective intelligence—and the collective communication—of our species.

Like all powerful technologies, however, the tools of global communication present humanity with profound choices. On the one hand, these tools could enable us to communicate with one another about the design of a sustainable future; on the other hand, these are the primary vehicles that are injecting a consumerist mentality and consciousness into the world’s psyche. At present, we are programming the mass media for commercial success and our public consciousness for evolutionary failure. Depending on the spirit and intention with which we use these powerful communication tools, we will create radically different pathways into the future.

If the transformative power of global communication is combined with study circles and other forms of grass-roots dialogue, then a local-to-global conversation could emerge that grows a working consensus about a sustainable future.

4

INTEGRATION

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4

PATHWAYS

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A SHIFT TO POST-MATERIALISTIC VALUES: CHOOSING TO LIVE SUSTAINABLY

In the U.S., consumer purchases account for nearly two-thirds of economic activity. If a significant percentage of Americans were to turn away from consumerism, the effects would be dramatic, including enhanced social and spiritual satisfaction. Indeed, a new set of priorities is emerging in the world, as shown by scientific surveys:

- a Spring 1998⁵² survey by Environics International, Ltd. found that “majorities of people in the world’s most populous countries want sharper teeth put into laws to protect the environment.” The survey report concludes: “Overall, these findings will serve as a wake-up call to national governments and private corporations to get moving on environmental issues or get bitten by their citizens and consumers who will not stand for inaction on what they see as key survival issues.”

- The Health of the Planet survey, conducted in 24 nations by the Gallup organization in 1993⁵³ indicates there is “virtually world-wide citizen awareness that our planet is indeed in poor health, and great concern for its future well-being.” The survey found that residents of poorer and wealthier nations express nearly equal concern about the health of the planet, and there was little evidence of the poor blaming the rich for environmental problems, or vice versa. Instead, there seems to be a mature and widespread acceptance of mutual responsibility.

- Evidence of the beginnings of a global shift to “post-materialist” values emerges from the massive World Values Survey, conducted in 1990-1991 in 43 nations, which represent nearly 70 percent of the world’s population and cover the full range of economic and political variation. Over the last 25 years, the study indicates that a major shift in values has been occurring primarily in the United States, Canada, and Northern Europe. In these societies, the earlier emphasis on economic achievement is shifting to post-materialist values that emphasize individual self-expression, subjective well-being, and quality of life concerns. At the same time, people are placing less emphasis on organized religion, and more emphasis on discovering their inner sense of meaning and purpose in life.⁵⁴

- A 1995 survey of Americans’ views on the issue of consumption suggests that a deep change is occurring in the culture and consciousness of the United States.⁵⁵ Commissioned by the Merck Family Fund, the survey found that respondents’ deepest aspirations are non-material. Twenty-eight percent of the survey respondents said that, in the last five years, they had voluntarily made changes in their lives that resulted in making less money, such as reducing work hours, changing to

a lower-paying job, or even quitting work. The most frequent reasons given for voluntary downshifting were: Wanting a more balanced life (68 percent); Wanting more time (66 percent); Wanting a less stressful life (63 percent). In summing up the survey's findings, the report states, "People express a strong desire for a greater sense of balance in their lives—not to repudiate material gain, but to bring it more into proportion with the non-material rewards of life."

- Paul Ray's random national survey in 1995⁵⁶ found that there is a core group of roughly 10 percent of the U.S. population (roughly 20 million adults) who are choosing to live in a way that integrates a strong interest in their inner or spiritual life with an equally strong concern for living more in harmony with nature. As a group, these people are living more simply, working for ecological sustainability, and willing to pay the costs for cleaning up the environment. They also are largely unaware of one another and feel relatively isolated.

- Finally, a growing interest in "socially responsible business and investing" (\$2.3 trillion per year in the US market alone⁵⁷) as well as philanthropy (\$212 billion in 2001 in the US alone⁵⁸) indicate an emergence of new values about the use of private wealth to create a better world. In writing about "Strategies for a Sustainable World" in The Harvard Business Review, Professor Stuart Hart states, "Over the next decade or so, sustainable development will constitute one of the biggest opportunities in the history of commerce."⁵⁹

A flood of creative invention could occur over the next generation if supported by the market forces and a new consumer consciousness. Such innovations (again, with a principal focus in the U.S.) would be accelerated by economic innovations such as:

- Investing pension and insurance funds in sustainable technologies and industries;
- Rezone cities for eco-villages and sustainable neighborhoods;
- Mobilize the internet to help people find the tools, knowledge, and skills needed to recreate their lives for sustainability;
- Change the tax laws to favor sustainability;
- Shift from production of things to services, according to principles of "natural capitalism";
- Redefine business success through creation of revised accounting standards.

4

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4

LOVE

THE DEEPEST
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DEBATE ABOUT
WHETHER HUMAN
BEINGS ARE ABLE TO
OPERATE
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BASIS OF LOVE.

RECONCILIATION AND TRANSFORMATION OF RELATIONSHIPS

There is a fourth contextual factor with the power to transform our collective initiation from an evolutionary crash into an evolutionary bounce: the conscious respect and regard for others that ultimately comes from a foundation of love.⁶⁰ Love is an invisible, transformative power that is impossible to quantify and measure. Yet it brings the possibility of forgiveness, and it heals relationships. In their book *Beyond the Limits*, Donella Meadows and the other authors looked at human attitudes toward the future and reached the striking conclusion that “the deepest difference between optimists and pessimists is their position in the debate about whether human beings are able to operate collectively from a basis of love.”⁶¹

A world divided against itself is a recipe for global collapse. A hallmark of the emerging era could be the reconciliation and healing of many fragmented relationships: between men and women, between races and ethnic groups, between humans and the rest of life on Earth, between religious groups, between the rich and the poor, and between generations. Unless we bring these divisions into our collective dialogue about our common future, it seems unlikely that we will pull together as a human family.

Reconciliation does not mean forgetting the suffering and injustices of the past; rather it means not letting the past stand in the way of opportunities for the future. When injustices are collectively acknowledged and realistic remedies sought, all parties are freed from the need to continue blaming and feeling resentful and can focus instead on cooperating to build a better future. It is promising to see how, around the world, humanity is beginning to bring a spirit of reconciliation to gender, racial, religious, and ethnic relations. Many important examples exist, including: South Africa’s Truth and Reconciliation Commission, Australia’s “Sorry Day” to express people’s regret and shared grief for the tragic treatment of the Aboriginal people by European settlers.

One of the most fundamental revolutions of our times is the changing relationship between women and men. Because the relationship between men and women is so basic to the human experience, a shift in gender relations from domination to partnership dramatically increases humanity’s potential for living more cooperatively and sustainably. As Susan Davis, former executive director of the Women’s Environment and Development Organization, states:

Gender equality is not a luxury. It’s not an after thought. It is a prerequisite for anything that can be fashioned and (legitimately) called sustainable development. We’re talking not just about ending oppression. We’re talking about unleashing leadership, creativity, and real wisdom. We will not get there without achieving gender equality.

Ecological reconciliation means living in harmony with the entire community of life on Earth. We are today in a race between massive extinction and taking our first steps toward a conscious relationship with the larger community of life. At the grass-roots level, a quiet revolution has been underway for decades; innumerable non-profit organizations are working on behalf of the many different components of the global ecosystem—from rainforests and migrating birds to eco-tourism, sustainable energy, organic agriculture, and eco-villages. In addition to taking action to stop destruction, an increasing number of efforts are generating spiritual rituals and prayer to reconcile with the life forms that we humans have been destroying.

Enormous and growing disparities exist between the rich and the poor. At the same time, there is a growing recognition that living sustainably will require that these economic differences be narrowed and that a reasonable, minimum standard for economic well-being for all people be established. Economic reconciliation implies that wealthier people and nations will begin to simplify the material side of life voluntarily and shift increasing energy and attention into both non-material growth and assisting developing nations. Numerous surveys show that there already exists considerable sympathy in developed countries for more sustainable ways of living and that, in the U.S., a small but significant part of the public is experimenting with simpler ways of living.

Philanthropy is one direct way by which individuals are able to take personal, voluntary action toward economic reconciliation. In 1997, \$143.5 billion was contributed in the United States in private philanthropy (this figure rose to \$212 billion by 2001.) Individuals gave \$109.26 billion in philanthropy, representing 1.6% of total personal income. In U.S. alone, there are 170 billionaires. Today's wealthy have a distinctive opportunity to use private, voluntary philanthropy more strategically and aggressively to create a sustainable world for future generations. Recent major commitments from billionaires Ted Turner and George Soros can be viewed as setting important examples for world-changing philanthropic leadership.

The communications revolution makes the world a much more transparent place, creating new opportunities for reconciliation. When the media bring injustice and violence before the court of public opinion—we may see a marked shift toward greater justice and harmony in human relations.

4

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A GLOBAL OPPORTUNITY

The four contextual factors that we have just examined are powerful enough to transform great adversity into even greater opportunity. They are essentially invisible and have to do with who we are as human beings, rather than technological “fixes.” Together they may bring a new “common sense” into the world—a new sense of reality, identity, and social purpose that humanity can hold in common as a foundation for a workable and meaningful future.

When these four contextual factors are combined with one another and with important new technologies (such as fuel cells, micro-turbines, and solar cells) and approaches to production (such as alternative farming techniques, urban greenhouses, industrial ecologies as closed systems, and telecommuting), it seems clear that we have the real opportunity to achieve an evolutionary bounce. But what happens when adversity trends intersect with opportunity trends?

4

INVISIBLE



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INITIATION: THE COMING EVOLUTIONARY INFLECTION

5

REALITY

BENEATH THE
COMPLEXITY OF
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NATURE.

While recognizing that sincere disagreements exist, the conclusion reached in this report is that beneath the complexity of different trends and forces, a simple reality is at work: humanity is on a collision course with nature and our own human nature. Whether the collision occurs is our choice. The exact timing of the full encounter is unclear. **Many of the adversity trends and transformational forces considered in this report seem to reach critical thresholds in the decade of the 2020s. Difficulties that may seem relatively isolated (such as climate change, poverty, water shortages, species extinction, and the depletion of cheap oil) seem likely to coalesce into a tight and unyielding web. The result would be a whole-system crisis.** Like a rubber band stretched to its limits, our planetary system will likely be stretched to its limits, becoming inflexible and brittle, losing its elasticity and ability to cope with more disruptions. This is a condition ripe for breakthrough and transformation.



The irony is profound—we are initiating ourselves. Our own actions are rebounding back upon us and are creating the circumstances that will initiate us into planetary consciousness and responsibility. Our historic behaviors are now the catalyst for global changes that are, in turn, spurring us on to new heights of evolution – to discover a new and larger possibility for life.

This process seems to be further awakening the potentials described by our scientific designation as a species—*homo sapiens sapiens*. Technically, we are more than sapient or “wise,” we are *sapient sapient* or “doubly wise.”⁶² Where animals “know,” humans “know that we know.” In that subtle but profound extension of consciousness, a revolution has occurred that is transforming the Earth. Teilhard de Chardin describes this in his book *The Phenomenon of Man*. He says that, when the first living creature consciously “perceived itself in its own mirror, the whole world took a pace forward.”⁶³ The capacity for self-observation or double wisdom is not a trivial enhancement of evolutionary potential. It is an explosively powerful capacity that has given a supercharged boost to the evolutionary process. “The being who is the object of his own reflection, in consequence of that very doubling back upon himself, becomes in a flash able to raise himself into a new sphere.”⁶⁴

INITIATION: THE COMING EVOLUTIONARY INFLECTION

Turning from the personal to the collective, when a group “knows that it knows,” it has the ability to be self-observing and to take responsibility for its actions. The ability to observe or witness our knowing collectively—as a tribe, nation, or entire species—represents a powerful evolutionary advance because it enables us to take charge of our behavior with greater clarity and intentionality. When the human family consciously recognizes the damage we are doing to our biosphere and our future—when we “know that we know” unambiguously—we will then cross the threshold into our time of initiation and the quest for a new adulthood.

To move successfully toward the evolutionary bounce, we must identify a **sustainable direction**, gain **sufficient speed** to match the swiftly changing situation, and **pursue strategies and tactics that cause changes of adequate scope and depth**, to effect the evolutionary adaptation required in the next generation.

5

KNOWING

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6

HUMANITY

*THERE IS SUBSTANTIAL
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WE ARE THE SOCIAL
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This report began by looking at the story of humanity's journey. For roughly 50,000 years, we have been on a purposeful journey that has required that we consciously separate from nature in order to develop our unique capacities. That path of individuation and differentiation is generating a global rite of passage for humanity that, in turn, may open up a new evolutionary opportunity—consciously reconnecting with the natural world and with one another to create a sustainable and meaningful future for the community of life on Earth.



There is substantial reason to believe that humanity can make this evolutionary leap forward. We have the means and the opportunity. The motivation to make this happen is up to us. ***We are the leaders that we have been waiting for. We are the social innovators and entrepreneurs that we have been seeking. We are the ones who are challenged to self-organize and pull ourselves up by our own bootstraps.***

Our time of initiation is not an evolutionary failure, but is a result of our great success. ***We are entering a time of great opportunity—and great peril. In the coming generation, a momentous initiation and a great turning will occur with consequences that will reverberate into the deep future. Future generations will look back on the legacy of these years and reflect on how this generation met the challenge of living through one of the most stressful, turbulent, exciting, and important times in human history.***

APPENDIX



REVIEWERS

Duane Elgin is extremely grateful to the talented and thoughtful reviewers who gave feedback on early versions of this report. Their comments and reflections have greatly improved this study.

- Alan AtKisson, researcher, musician, writer, consultant, workshop leader, Boston, MA
- Clem Bezold, president, Institute for Alternative Futures, Alexandria, VA
- David Brown, businessman; president, Hidden Leaf Foundation, Berkeley, CA
- Lawrence Chickering, program director, State of the World Forum, San Francisco, CA
- Susan Davis, director, Women's Environment and Development Organization, New York, NY
- Elizabeth Dowdeswell, former director, United Nations Environment Program, Toronto, Canada
- Dave Ellis, author of *Creating Your Future*, life coach, president, the Brande Foundation; Rapid City, SD
- Peter Eisenberger, vice provost, Columbia, Earth Institute, Columbia University; New York, NY
- Hilary French, vice president for research, Worldwatch Institute, co-author of numerous State of the World reports and other books; Washington, D.C.
- Hazel Henderson author of *Paradigms in Progress* and other books, consultant, speaker; St. Augustine, FL
- Holland Hendrix, former president, Union Theological Seminary, co-founder of the Campaign 2020 Initiative; New York, NY
- Brooks Jordan, director, Pathfinding Project, Institute of Noetic Sciences; Sausalito, CA
- Robert Johansen, president, Institute for the Future, author, researcher, Menlo Park, CA
- Michael Marien, author and editor, *Future Survey*, LaFayette, N.Y.
- Donella Meadows, author, *Limits to Growth*, global citizen, speaker, professor, Plainfield, NH
- Nicholas Parker, senior vice president, Technology Development Corporation, Toronto, Canada
- Wendy Parker, consultant in organizational leadership, Larkspur, CA
- Larry Rasmussen, professor of social ethics, Union Theological Seminary, New York, NY
- Richard Rathbun, president, Foundation for Global Community, Palo Alto, CA
- Paul Ray, survey researcher, author, and president, American Lives, Inc., San Rafael, CA
- Keith Reinhard, chairman and chief executive officer, DDB Needham, New York, NY
- Vicki Robin, co-author with Joe Dominguez, *Your Money or Your Life*, president, New Roadmap Foundation; Seattle, WA
- Deborah Stern, senior management consultant, Payne, Forrester & Olsson; co-founder, Campaign 2020 Initiative; New York, NY
- Mary Evelyn Tucker, Center for the Study of World Religions, Harvard University; Cambridge, MA

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APPENDIX—NOTES

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