

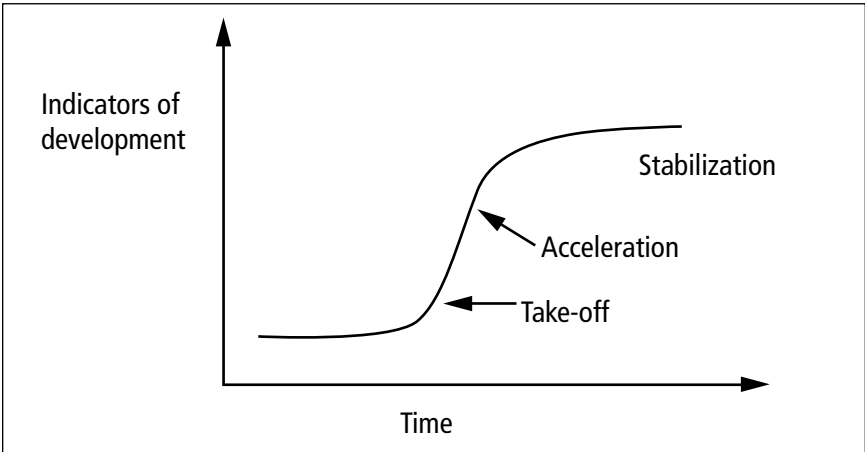
1. *Where Are We?*

Each generation understands its historic moment as unique, and its future as rife with novel perils and opportunities. This is as it should be, for history is an unfolding story of change and emergence. Each era is unique—but in unique ways. In our time, the very coordinates through which the historical trajectory moves—time and space—seem transformed. Historical time is accelerating as the pace of technological, environmental and cultural change quickens. Planetary space is shrinking, as the integration of nations and regions into a single Earth system proceeds. Amid the turbulence and uncertainty, many are apprehensive, fearing that humanity will not find a path to a desirable form of global development. But a transition to an inclusive, diverse and ecological planetary society, though it may seem improbable, is still possible.

Historical Transitions

Transitions are ubiquitous in nature. As physical or biological systems develop they tend to evolve gradually within a given state or organization, then enter a period of transformation that is often chaotic and turbulent, and finally emerge in a new state with qualitatively different features. The process of movement from a quasi-stable condition through an interval of rapid change to re-stabilization is illustrated in Figure 1. This broad pattern is found across the spectrum of natural phenomena: the forging of matter in the instant after the big bang, the phase shifts between different states of matter as temperature and pressure change, the epigenesis of individual biological creatures and the evolution of life's diverse forms.

With the emergence of proto-humans some 5 million years ago, and especially *Homo sapiens* about 200,000 years ago, a powerful new factor—cultural development—accelerated the process of change on the planet. Cultural change moves at warp speed relative

Figure 1. Phases of Transition

Based on Martens et al. (2001)

to the gradual processes of biological evolution and the still slower processes of geophysical change. A new phenomenon—human history—entered the scene in which innovation and cultural information, the DNA of evolving societies, drove a cumulative and accelerating process of development. With the advent of historical time came a new type of transition, that between the phases of human history that demarcate important transformations in knowledge, technology and the organization of society.

Naturally, the course of history is not neatly organized into idealized transitions. Real history is an intricate and irregular process conditioned by specific local factors, serendipity and volition. The historic record may be organized in different ways, with alternative demarcations between important periods. Yet, a long view of the broad contours of the human experience reveals two sweeping macro-transformations—from Stone Age culture to Early Civilization roughly 10,000 years ago, and from Early Civilization to the Modern Era over the last millennium (Fromkin, 1998). We are now in the midst of a third significant transition, we argue, toward what we shall refer to as the *Planetary Phase of civilization*.

Historical transitions are complex junctures, in which the entire cultural matrix and the relationship of humanity to nature are transformed. At critical thresholds, gradual processes of change working across multiple dimensions—technology, consciousness and institutions—reinforce and amplify. The structure of the socio-ecological system stabilizes in a revised state where new dynamics drive the continuing process of change. But not for all. Change radiates from centers of novelty only gradually through the mechanisms of conquest, emulation and assimilation. Earlier historical eras survive in places that are physically remote and culturally isolated. The world system today overlays an emergent planetary dynamism onto modern, pre-modern and even remnants of Stone Age culture.

Three critical and interacting aspects at each stage are the form of social organization, the character of the economic system, and the capacity for communication. Novel features for each of these dimensions are shown for four historical eras in Table 1.

Table 1. Characteristics of Historical Eras

	Stone Age	Early Civilization	Modern Era	Planetary Phase
Organization	Tribe/village	City-state, kingdom	Nation-state	Global governance
Economy	Hunting and gathering	Settled agriculture	Industrial system	Globalization
Communications	Language	Writing	Printing	Internet

In the Stone Age, social organization was at the tribal and village level, the economy was based on hunting and gathering, and human communication was advanced through the evolution of language. In Early Civilization, political organization moved to the level of the city-state and kingdom, the basis of economic diversification was the surplus generated by settled agriculture, and communication leapt forward with the advent of writing. In the Modern Era, political organization was dominated by the nation-state, the economy became capitalist with the industrial revolution its apotheosis, and

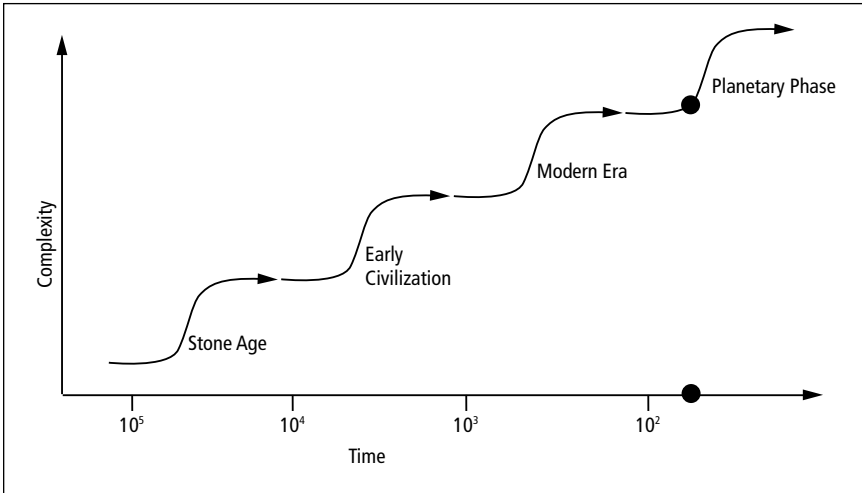
communication was democratized through printing. Extending this typology to the Planetary Phase, emerging political, economic and communications features are, respectively, global governance, globalization of the world economy, and the information revolution.

Numerous additional dimensions could be added to characterize the differences in historical eras, such as changing features of art, science, transportation, values, war and so on. But the schematic of Table 1 at least suggests how various aspects of the socio-economic nexus cohere at different stages in the process of historical evolution. In the transition from one coherent formation to another, each of the dimensions transforms. We can follow this process by looking across the rows of the table. Social organization becomes more extensive—tribal, city-state, nation-state and global governance. The economy becomes more diversified—hunting and gathering, settled agriculture, industrial production and globalization. Communications technology becomes more powerful—language, writing, printing, and the information and communication revolution of the current phase.

Societal complexity—the number of variables needed to describe roles, relationships and connectedness—increases in the course of these transitions. Each phase absorbs and transforms its antecedents, adding social and technological complexity. In a heartbeat of geological time, the scale of organization moves from the tribe to the globe, the economy becomes increasingly differentiated, and the technology of communication develops from the capacity for language to the Internet.

Not only does social complexity and the extent of spatial connectedness increase from one epoch to the next, so does the pace of change. Just as historical transitions occur more rapidly than natural evolutionary transitions, historical transitions are accelerating. This is illustrated in Figure 2, which represents schematically the evolution of complexity of the four major historical phases. Since the time-axis is logarithmic, the repetitive pattern suggests that change is accelerating in a regular fashion. The duration of successive eras decreases by roughly a factor of ten—the Stone Age lasted roughly 100,000 years, Early Civilization about 10,000 years and the Modern Era

Figure 2. Acceleration of History



some 1,000 years. Curiously, if the transition to a Planetary Phase takes about 100 years (a reasonable hypothesis, we shall argue) the pattern would continue.

The Planetary Phase

Scanning the broad contours of historical change suggests a long process of increasing social complexity, accelerating change and expanding spatial scale. A premise of much of the contemporary globalization discourse is that humanity is in the midst of a new historical transition with implications no less profound than the emergence of settled agriculture and the industrial system (Harris, 1992). The changing global scene can be viewed through alternative windows of perception—disruption of the planetary environment, economic interdependence, revolution in information technology, increasing hegemony of dominant cultural paradigms and new social and geopolitical fissures.

Globalization is each of these and all of these, and cannot be reduced to any single phenomenon. It is a unitary phenomenon with an array of reinforcing economic, cultural, technological, social and

environmental aspects. At the root of the diverse discourse and debate on globalization, and transcending the differences between those who celebrate it and those who resist it, one theme is common. The hallmark of our time is that the increasing complexity and scale of the human project has reached a planetary scale.

Of course human activity has always transformed the earth system to some extent, and the tentacles of global connectedness reach back to the great migrations out of Africa, to the spread of the great religions, and to the great voyages, colonialism and incipient international markets of a century ago. Capitalism has had periods of rapid expansion and integration of regions on the periphery of world markets. It has also had phases of retraction and stagnation associated with economic, political and military crises. The international system and its institutions have been restructured and dominant nations have been displaced (Sunkel, 2001; Ferrer, 1996; Maddison, 1991). At the end of the nineteenth century, the international integration of finance, trade and investment was comparable to contemporary levels when taken as a percentage of the much smaller world economy.

The claim that a planetary phase of civilization is taking shape does not deny the importance of economic expansion and interdependence in earlier eras. Indeed, the increasing imprint of human activity on nature and the expanding reach of dominant nations were necessary antecedents of globalization. The essence of the premise of a planetary transition is that the transformation of nature and the interconnectedness of human affairs has reached a qualitatively new stage. Growing human population and economies inevitably must butt against the resource limits of a finite planet. The increasing complexity and extent of society over hundreds of millennia must at some point reach the scale of the planet itself. That point is now.

Planetary dynamics operating at global scales increasingly govern and transform the components of the earth system. Global climate change influences local hydrology, ecosystems and weather. Globally connected information and communication technology penetrate to the furthest outposts, changing values and cultures,

while triggering traditionalist backlash. New global governance mechanisms, such as the World Trade Organization (WTO) and international banks, begin to supersede the prerogatives of the nation-state. The stability of the global economy becomes subject to regional financial disruptions. Excluded, marginalized and inundated with images of affluence, the global poor seek immigration and a better global bargain. A complex mix of despair and fundamentalist reaction feeds the globalization of terrorism. All of these are signs that we have entered a new planetary phase of civilization.

These phenomena are the legacy of the Modern Era of the last thousand years, which brought us to the threshold of planetary society. From the first flickering of the humanistic sensibility nearly a thousand years ago, through the intellectual and theological upheaval of the scientific revolution, to the firestorm of capitalist expansion, modernism challenged the authority of received wisdom, the paralysis of birth-right and class rigidity, and the economic stasis of traditionalism. The culmination was the Industrial Revolution of the last two centuries. It fused a host of modern developments—law-governed institutions, market economies and scientific ingenuity—and tapped into the human potential for accumulation, acquisition and innovation. A permanent revolution in technology, culture and desire spawned an explosion of population, production and economic complexity. Ever hungry for new markets, resources and investment opportunities, the self-expanding and colonizing industrial system began its long march toward a world system.

The world has now entered the Planetary Phase, the culmination of the accelerating change and expansion of the Modern Era. A global system is taking shape with fundamental differences from previous phases of history. We would search in vain for a precise moment that demarcates the origin of the new era. The past infuses the present. Surely the growth of world trade a hundred years ago, the two world wars of the twentieth century and the establishment of the United Nations in 1948 were early signals.

But the primary phenomena that constitute globalization emerged as a cluster over the last two decades. Critical developments between 1980 and the present are seen in:

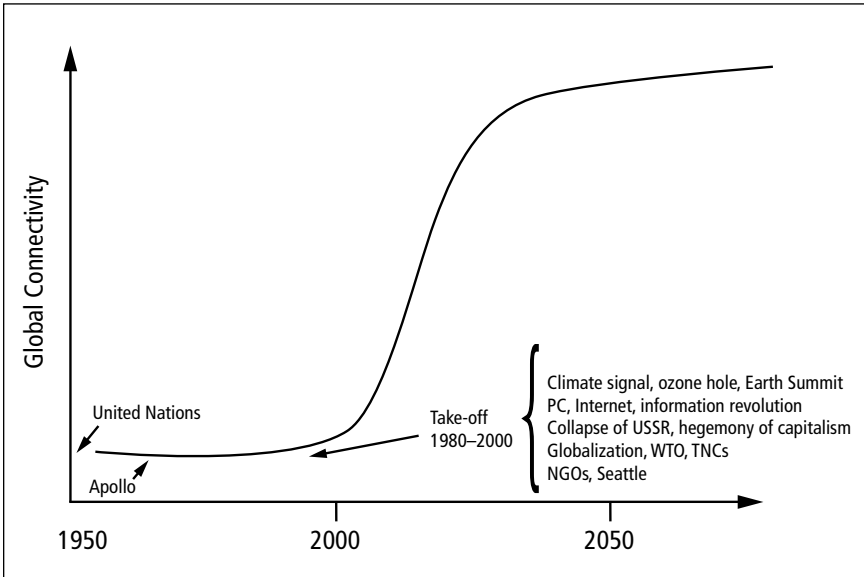
- The global environment. The world becomes aware of climate change, the ozone hole and threats to biodiversity, and holds its first Earth Summit.
- Technology. The personal computer appears at the beginning of the period and the Internet at the end. A manifold communications and information revolution is launched and biotechnology is commercialized for global markets.
- Geo-politics. The USSR collapses, the Cold War ends and a major barrier to a hegemonic world capitalist system is removed. New concerns appear on the geo-political agenda including environmental security, rogue states and global crime and terrorism.
- Economic integration. All markets—commodity, finance, labor and consumer—are increasingly globalized.
- Institutions. New global actors, such as the WTO, transnational corporations and an internationally connected civil society—and global terrorists, the dialectical negation of planetary modernism—become prominent.

Our hypothesis is that these various elements represent constituent aspects of the global transition. This is illustrated in Figure 3, which shows global connectivity, loosely defined, as following the characteristic S-shaped curve of transition, with “take off” over the last two decades. The schematic suggests that we are in the early phase of an accelerating transition. In this turbulent period, the character of the global system that will emerge from the transition cannot be predicted. The ultimate shape of things to come depends to a great extent on human choices yet to be made and actions yet to be taken.

Branch Point

A transition toward a planetary phase of civilization has been launched, but not yet completed. The critical question is: What form will it take? Inspired by the turn of a new millennium, a stream of popular books, pensive editorials and scholarly essays have sought to understand and find meaning in globalization and

Figure 3. Planetary Transition



its discontents. The sense that momentous changes are afoot has stimulated a proliferation of explications of what they may portend. As Wittgenstein once noted, the fly in the bottle has difficulty observing the fly in the bottle.

Considerable quantities of old ideological wine have been decanted into the new bottle of global change. As the new realities are refracted through the prism of political and philosophical predilections, the full spectrum of worldviews is revealed—technological optimists and pessimists, market celebrants and Cassandras, social engineers and anarchists. Crudely, archetypal social philosophies can be placed in three broad streams—the evolutionary, the catastrophic and the transformational. They reflect fundamentally different mindsets about how the world works. In the contemporary context, they find expression in divergent outlooks on the long-range prospects for global development.

Evolutionists are optimistic that the dominant patterns we observe today can deliver prosperity, stability and ecological health. Catastrophists fear that deepening social, economic and environmental

tensions will not be resolved, with dire consequences for the world's future. Transformationists share these fears, but believe that global transition can be seized as an opportunity to forge a better civilization. In a sense, these represent three different worlds—a world of incremental adjustment, a world of discontinuous cataclysm and a world of structural shift and renewal.

Each worldview sees the future through cloudy crystal balls of interpretation, fear and hope. And in truth, each has a plausible story to tell, for diverse and contradictory forces are at play that could drive global development toward some form of conventional globalization, barbarism or a great historical transition. Fundamentally different worlds could crystallize from the complex and turbulent state of the planet, depending on unfolding events, serendipity and human choice.

Uncertainty and indeterminacy lie deep in the fabric of reality. At the microscopic scale, subatomic matter undergoes discontinuous quantum leaps between states. At the macroscopic scale, as well, apparently identical complex systems can bifurcate into distinct futures at critical crossroads. Similarly, biological systems can absorb and assimilate external disturbances until critical values are exceeded, and then transition to one of multiple possible states. At critical points, small perturbations can have big effects.

Human reflexivity and volition add further dimensions of indeterminacy. The biography of any individual will include decisive moments when experiences and choices shape the lived life, while other possibilities are filed under “what-could-have-been.” Human history, too, is not inevitable, as illustrated by counterfactual histories that re-tell the past with plausible “what ifs?” (Ferguson, 1999)—what if Stalin had been ousted in the 1920s or Germany had won World War II? History is a tree of possibilities, in which critical events and decisions are branch points defining one of many alternative pathways.

The horrific terrorist attacks on the United States of September 11, 2001 and their aftermath provide a vivid real-time example of historical branching. “9/11” was a rip in time that defined a “before” and “after,” a cultural short-circuit that revealed deep

global fissures and interrupted complacent attitudes. At one level, it revealed a strain of pan-Islamic fundamentalism that violently rejects the modernist project itself. As a fanatical fight for purity and against any form of assimilation, it cannot be palliated. At the same time, the despair and anger that is the seedbed for extremism has been brought to the world's attention like never before, exposing the contradictions and failures of global development.

Certainly the world will not be the same after 9/11, but the ultimate implications are indeterminate. One possibility is hopeful: new strategic alliances could be a platform for new multinational engagement on a wide range of political, social and environmental problems. Heightened awareness of global inequities and dangers could support a push for a more equitable form of global development as both a moral and a security imperative. Popular values could eventually shift toward a strong desire for participation, cooperation and global understanding. Another possibility is ominous: an escalating spiral of violence and reaction could amplify cultural and political schisms; the new military and security priorities could weaken democratic institutions, civil liberties and economic opportunity; and people could grow more fearful, intolerant and xenophobic as elites withdraw to their fortresses.

In the critical years ahead, if destabilizing social, political and environmental stresses are addressed, the dream of a culturally rich, inclusive and sustainable world civilization becomes plausible. If they are not, the nightmare of an impoverished, mean and destructive future looms. The rapidity of the planetary transition increases the urgency for vision and action lest we cross thresholds that irreversibly reduce options—a climate discontinuity, locking-in to unsustainable technological choices, and the loss of cultural and biological diversity. Postponing the rectification of how we live together on this planet could foreclose the opportunity for a *Great Transition*.