World Lines
Pathways, Pivots, and the Global Future

Paul D. Raskin

GTI Paper Series
Frontiers of a Great Transition
16

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    Prospects for a global movement and what it might look like
16. *World Lines: Pathways, Pivots and the Global Future* (Raskin)
    Dynamics of global change: crisis, choice, and action

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Table of Contents

List of Figures

World Lines: Pathways, Pivots, and the Global Future

Prologue

In physics, a *world line* is the trajectory of an object through space and time that tracks its history and projects its future. The term is used here in the plural and with a double meaning, for our concern is with the multiple world lines of the world itself. This essay reflects on alternative trajectories for an emerging global system as it takes shape in the coming decades. In contrast to the inanimate bodies of physics, the world is a "subject" as well as an "object" that depends on the ways human agents exercise their capacity to understand, imagine, choose, and act. Rather than following a deterministic path, the global future is a tangled web of possibilities generated by the interplay of natural law, crisis, contingency, and agency.

As time flows, the thicket of potential world lines collapses into the single strand we call the past. This is history's story, and it can be told in different ways by observers looking through different lenses of interpretation. Looking forward, the story of the future remains an unfinished book of plausible possibilities—the good, the bad, and the ugly. A previous essay (Raskin et al., 2002) depicted alternative visions of global society in the twenty-first century (summarized in the box on page 3 for later reference). Here, the focus turns from vision to pathway, from destination to journey, as the global world line moves through the turbulent decades ahead.

The next section, *The Global Moment*, sets the context. The third, *Macro-transitions*, develops a theoretical framework for analyzing structural change in human-ecological systems. The fourth, *Critical Uncertainties*, explores the possible forms of two key uncertainties in the landscape of the future—global crises and human intentionality. The fifth, *Pathways and Pivots*, describes possible global trajectories by tracing how these uncertainties might manifest and interact. A final section, *Conscious Global Evolution*, considers lessons going forward, highlighting prospects and strategies for the formation of a global movement rooted in a planetary ethos.

The Global Moment

The circle of social space has enlarged throughout human history—families, clans, tribes, villages, cities, nations, and countless variations in between. The ambit of identity widened through long processes of cultural innovation and social adaptation. More extended and complex societies offered pragmatic advantages such as greater capacity for resilience, innovation, and domination. But emergent social forms were also realms of the heart that broadened the affective sphere of community and reciprocity.

New and more complex social forms build on their predecessors, encircling and redefining them. Contemporary society carries forward multiple overlays of identity and structure extending from the individual and the family to the community and the nation. Naturally, the forms of these associations and the meanings attached to them are distinct to culture and place. But the need for the individual to reconcile participation across multiple social levels is universal.

In the current era, the circle of connectivity is poised to enlarge once more as its radius reaches out toward the very edge of the earth. History has entered the *planetary phase of*

civilization in which humanity and the biosphere are entwined in a common fate. There are many signs of this transition. Different observers highlight different aspects—economics, corporations, climate change, pandemics, communication technology, terrorism, civil society, governance, culture, and so on—all introduced by the modifier "global". Indeed, each is a critical issue in its own right. But rather than independent, these phenomena are separate expressions of a larger process, the formation of a unitary global system. Thought and action must rise to the level of this emergent totality, as well as to its separate manifestations. The catchphrase of systems theory—"the whole is more than the sum of its parts"—reminds us of the irreducibility of the global system ontologically, epistemologically, and politically.

The immediate historical antecedent of the planetary phase was the sweeping social transformation unleashed by the rise of European capitalism over the past five centuries. An inexorable process of growth was set in motion, driven by an expansionary economic dynamic with the profit motive at its core. Breaking the shackles of traditionalism, the new order liberated immense human potential for ingenuity, acquisition, knowledge, self-expression, and freedom. Then, the industrial explosion accelerated technological and social change, and quickened the march of the market nexus toward a world system.

The industrial era leaves a complex legacy that is the foundation for both pessimism and hope. On the one hand, we inherit the harbingers of a future that is rife with conflict, crisis, and misery—a dangerously damaged biosphere, extreme social and economic inequality within and among nations, deep geopolitical and cultural fissures, and a culture of consumerism that erodes meaning and well-being. On the other hand, we are bequeathed immense aggregate wealth; the power of science and technology; an ethos of equality and freedom; democracy, constitutional frameworks, and law-governed institutions; and the liberation of the human imagination. These assets are the preconditions for a global future based on human solidarity, human fulfillment, and ecological sustainability—a vision we refer to as a *Great Transition*.

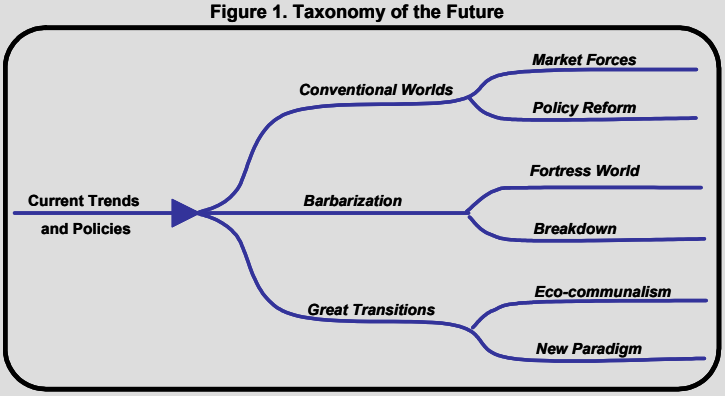
A macro-transition is now underway, operating at the scale of the planet. Like it or not, the world's people, cultures, and environments are becoming linked to an interconnected global system with a common destiny. But the form of the global society that will emerge in the coming decades remains both deeply uncertain and highly contested. The world will be more connected, but will it be more peaceful, just, and sustainable? Realizing that wish requires the ascendance of a new global culture expressing a sense of planetary affiliation, kinship, and citizenship. This possibility is immanent in the historical moment. The critical question is whether it can coalesce with sufficient speed, scale, and coherence.

Global Visions*

Fundamentally different forms of global society can crystallize out of the turbulence of transition. In the face of such deep uncertainty, the future cannot be predicted. Instead, multiple scenarios for the twenty-first century must be considered. To organize the possibilities, consider three broad channels radiating into the future, each representing an alternative class of visions. These three streams—*Conventional Worlds*, *Barbarization*, and *Great Transitions*—are shown in Figure 1 along with two variations for each.

Conventional Worlds are evolutionary scenarios that arise gradually from the dominant forces of globalization—economic interdependence grows, dominant values spread, and developing regions converge toward rich-country patterns of production and consumption. In the *Market Forces* variation, powerful global actors advance the priority of economic growth through such neo-liberal policies as free trade, privatization, deregulation, and the modernization and integration of developing regions into the market nexus. The *Policy Reform* scenario adds comprehensive governmental initiatives to harmonize economic growth with a broad set of social and environmental goals. The strategic blueprint for *Policy Reform* was adopted at the 1992 Earth Summit (UNCED, 1992) and given concrete expression through international initiatives, such as those to cut poverty by half (MDG, 2000) and to stabilize the global climate at safe levels (UNFCCC, 1997).

Figure 1. Taxonomy of the Future



Conventional Worlds visions face an immense challenge. They must reverse destabilizing global trends—social polarization, environmental degradation, and economic instability—even as they advance the consumerist values, economic growth, and cultural homogenization that drive such trends. How will the imperative of sustainability be reconciled with the conventional development paradigm? Relying on market adaptations is a risky gamble, while building effective mechanisms for global governance is difficult in a conventional world context. If unattended crises should deepen, global development could veer toward a *Barbarization* scenario. Such a tragic retreat from civilized norms might take the form of an authoritarian *Fortress World*, with elites in protected enclaves and an impoverished majority outside, or *Breakdown*, in which conflict spirals out of control, waves of disorder spread, and institutions collapse.

By contrast, *Great Transitions* are transformative scenarios in which a new suite of values ascend—human solidarity, quality-of-life, and respect for nature—that revise the very meaning of development and the goal of the "good life". In this vision, solidarity is the foundation for a more egalitarian social contract, poverty eradication, and democratic political engagement at all levels. Human fulfillment in all its dimensions is the measure of development, displacing consumerism and the false metric of GDP. An ecological sensibility that understands humanity as part of a wider community of life is the basis for true sustainability and the healing of the Earth.

One *Great Transition* variation is *Eco-communalism*, a highly localist vision favored by some environmental subcultures. But the plausibility and stability of radically detached communities in the planetary phase are problematic. Rather, the *Great Transition* vision is identified here with the *New Sustainability Paradigm*, which sees in globalization, not only a threat, but also an opportunity for forging new categories of consciousness—global citizenship, humanity-as-whole, the wider web of life, and sustainability and the well-being of future generations. The new paradigm would change the character of global civilization rather than retreat into localism. It validates global solidarity, cultural cross-fertilization and economic connectedness, while seeking a humanistic and ecological transition. Finally, the *Great Transition* is a pluralistic vision that, within a shared commitment to global citizenship, celebrates diverse regional forms of development and multiple pathways to modernity (Raskin, 2006).

* See Raskin et al. (2002) for details.

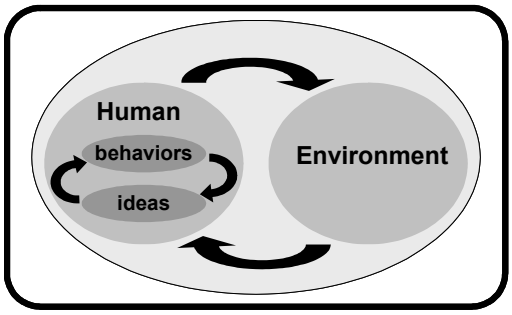
Macro-transitions

Human-ecological systems

Although human actions have always transformed the natural environment, a defining feature of our epoch is that environmental transformation has reached planetary scales. This momentous historic milestone has prompted scientists to designate a new geological era, the Anthropocene (Crutzen, 2002). An extra-terrestrial, observing developments on Earth over the eons, would note the astonishing rise to dominance of a single two-legged species in a flicker of time. The Anthropocene would appear abruptly, like an *in vitro* culture suddenly expanding to the very edge of its Petri dish.

A key feature of the planetary phase then is the increasing interdependence of human and ecological systems. As the coupling between the anthroposphere and the biosphere becomes more intense and varied, we must speak of a unitary global process—the co-evolution of human and environmental systems. By altering the bio-physical conditions for life on Earth, humanity changes its own evolutionary prospects. The appropriate unit of analysis for this coupled process is what we shall call the human-ecological system (HES).[*]

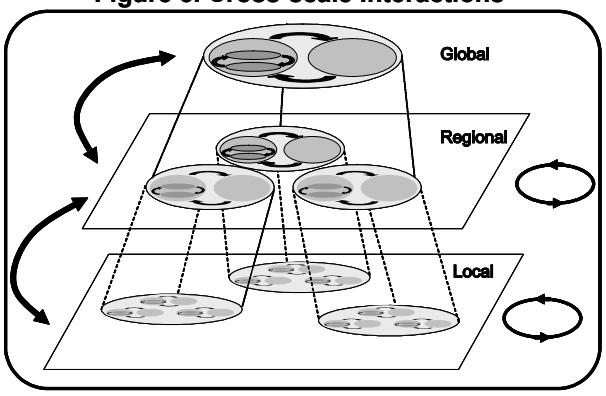
Figure 2. Human-Ecological System



The HES is an exquisitely complex structure that can be unpacked in endless detail. At a high level of abstraction, it is useful to underscore a key distinction by considering two domains within the Anthroposphere—*behaviors* and *ideas* (Figure 2). *Behaviors* include political, economic, and social institutions, and technology. *Ideas* include values, knowledge, ideology, spirituality, arts, and culture. The *Environment* subsystem includes all the ecosystems, minerals, and hydrologic, climatic, physical, biological, and chemical processes of the biosphere.

The global HES is comprised of numerous subglobal regions, each of which is a quasi-autonomous HES in its own right. A regional HES, in turn, entrains local systems. The structure of this nested structure of subsystems is suggested by Figure 3. The bidirectional arrows on the left side of the figure signify reciprocal causal linkages between global, regional, and local levels. There are numerous examples of such cross-scale interactions. Global

Figure 3. Cross-scale Interactions



[*] The term "human-ecological" is adopted here to indicate a comprehensive view of human institutions, culture, and ideas, rather than "socio-ecological" or "social-ecological" as sometimes appear in the global change literature, which suggest an emphasis on socio-economic institutions.

climate change, caused by the aggregation of local greenhouse gas emissions, ripples back through the system, ultimately impacting local environments and communities. International trade, a global-scale phenomenon comprised of complex chains of economic interchange, in turn, drives, distorts, and transforms development at all levels. The degradation of freshwater resources, often the collective result of poor water management practices of many riverine stakeholders, compromises environmental and economic well-being all along the river. Extreme poverty and inequality, the consequence of policy failure at all scales, feeds geopolitical tensions, immigration pressure, cultural conflict, and global terrorism.

In addition to such vertical cross-scale influences are the many horizontal economic, environmental, and political interactions that occur at a given regional or subregional level. These are represented by the circular arrows on the right side of Figure 2. The matrix of horizontal and vertical influences forms a complex global web of mutually conditioning structures and processes.

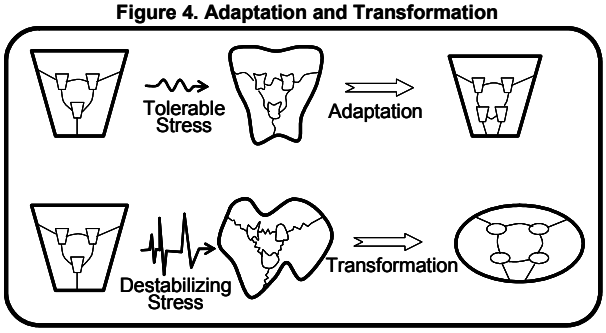
Temporal inertia—long time lags separating causes and effects as perturbations ripple through the global system—is an additional complicating factor. In the environmental sphere, climate change is a classic case where potential impacts are "in the pipeline" for decades before they manifest as severe weather modification, higher sea levels, ecosystem damage, and glacial loss. In the geo-political sphere, the formation of effective global governance mechanisms is greatly outpaced by the generation of problems needing collective attention. In the cultural sphere, nonmaterial culture values tend to change far more slowly than the material culture of technological innovation (Ogburn, 1950).

Continuity and transformation

The increasing turbulence, novelty, and uncertainty of the global system are consistent with the conditions that precede structural reorganization in complex systems of many kinds (Prigogine, 1997). Self-organizing systems maintain structural order far from thermodynamic equilibrium through energy and material exchanges with their environment. Such structures are resilient up to a point, able to absorb fluctuations and perturbations within certain tolerance limits. However, if disturbances exceed a critical threshold, transitions to qualitatively different states can ensue. After passing through a phase of instability and disorder, the system reaches a new equilibrium with a new structure.

Thus, in considering processes of change within human-ecological systems, it is useful to distinguish between adaptation—alterations of social relations within a given societal structure—and transformation—modification of the societal structure itself. Figure 4 illustrates the distinction between adaptation and transformation. It shows a system that is subject to a "stress", some form of disturbance, strain, or tension that originates either outside or within the system boundaries (specific global stressors are discussed below). The stress

Figure 4. Adaptation and Transformation



perturbs the system, its subsystems, and the patterns of reciprocal influence among them. In the top row, the stress is "tolerable", allowing the system to adjust while maintaining its essential structure. In the second row, the stress is "destabilizing", pushing the system beyond its capacity to adapt and leading to a transformative reorganization.

The continuity of social structure depends on the coherence and alignment of behaviors, ideas, and environment, the critical elements of the HES (Figure 2). In order to survive, a society must reproduce itself materially, politically, culturally, and socially (Chirot, 1994). The forms of producing, deciding, thinking, and being must be in essential harmony and the strains among and within these activities must remain within certain tolerance levels. Here, social continuity does not imply strict equilibrium, which is never found. Rather, continuity results from the internal coherence of functional elements and the capacity for incremental adjustment to institutional, cultural, and environmental disturbance. In the process of adaptation, societies tend to become more complex and stratified, generating increasingly differentiated subsystems with greater functional specialization and more elaborate patterns of interdependence.

Since the capacity to adapt is an essential feature of any successful HES, such systems are inherently conservative, seeking to accommodate novelty without structural re-adjustment. They resist change by managing disturbances through counterbalancing responses or new features that mute disruption. But when severe and prolonged strains overwhelm compensatory mechanisms, the coping capacity is compromised. When system elements become unsynchronized, structures destabilized, and behavior turbulent, a relatively rapid break may occur as institutional, cultural, and environmental patterns crack. This is the revolutionary moment when conditions are in place for systemic transformation.

For complex systems in general, the dynamics of change and post-transition structure is inherently uncertain with more than one outcome possible. For an HES, in which human actors are internal to the system, additional uncertainty is introduced by human choice, intentionality, and elective behavior. People are active agents who interpret events, give cultural meaning to social reality, and construct order, norms, and authority. Social change is about subjective interactions, negotiations, and struggles over meaning, legitimacy, and symbolic interpretation, as well as objective processes. But human agency can shape society's structures only within the limited range afforded by the historical conditions of that society. It is the combination and interplay between structure and agency that account for the development of an HES, notwithstanding the tendency of analysts to fixate on one or the other of these (Archer, 2000).

During the transition phase, small perturbations can have large effects on the character of the structural shift. In the midst of a planetary transition, the theory of complex systems suggests a heightened risk of discontinuous branching of the global trajectory as socio-economic and environmental stresses force the system into unprecedented circumstances. At the same time, it suggests that the scope for proactive human effort to affect the structure of the post-transition global system is amplified. We may well be passing through a window of opportunity for shaping the future, a window that could close rapidly if unfavorable structures consolidate.

Sources of change

In a broad way, this answers the question, why do societies change? Tensions within and among behavioral, ideational, and environmental features can be accommodated only up to a point. When dissonance and incoherence exceed the capacity of an HES to adapt, the system becomes unstable and chaotic, and structural reorganization ensues. The post-transition phase evolves in a new quasi-stable state, with reorganized components, new dynamics, and novel properties—a change in the way change happens.

To delve deeper, we need to understand the kinds of pressures that cause change. What can we learn from past social transitions? This is not the place for a thorough review of the considerable literature on social change. Moreover, that literature is retrospective and subglobal, with only limited relevance to the prospective and global perspective adopted here. Nevertheless, the planetary phase is an event in history and the factors influencing earlier societal change are still at play. In developing a framework for theorizing the global transition, we draw from history, but move beyond it by identifying novel conditions and phenomena going forward.

It is not obvious to what degree a universal theory of past social change is meaningful, given the importance of proximate factors that are specific to a particular time and place. Indeed, some observers underscore the particularities of development of each society, while others point to underlying common factors.[*] At any rate, the search for general patterns must allow for historical contingency, serendipity, and idiosyncratic individual and collective actors.

Social scientists have highlighted several general factors driving change. *Demographic developments,* particularly population growth, can force institutional adaptation, and push societies toward crisis and structural reorganization. *Technological innovation* can ripple through societies (when conditions are conducive for absorption and diffusion) and modify culture, behavior, and production systems. *Environmental degradation* can undermine the natural base that supports a society, and lead to social evolution or devolution. *External factors*—war, conquest, trade, and cultural influence—can cause disruption and discontinuity. *New ideas*—religious, ideological, or cultural—can impel change, whether as manifestations of underlying social shifts or as generative drivers in their own right. *Structural contradiction* among institutions can destabilize a society, for example, in Marxist theory, between the forces of production and the relations of production. *Conflict* is a key consideration in grasping the timing and character of social transformations, whether framed as rifts between socio-economic classes or more generally as discord between contending interests. *Social and political movements*, spawned by strains within society's fabric, can emerge as critical agents of change. *Charismatic leaders* can both express and catalyze movements.

Of course, many, if not all, of these aspects are likely to be in play at a particular transitional moment. However, various schools highlight certain factors as ultimately causal. For example, in the transition from feudalism to capitalism both the material conditions (e.g., economic systems) and culture (e.g., ideas, customs, behaviors, norms) were transformed. Yet, some analysts give greater weight to the former (changes in the "base") and others to the latter (changes in the "superstructure"). The systemic

[*] The distinction between specific and general explanations is referred to as "idiographic" vs. "nomothetic" approaches in the social science literature.

perspective transcends such dichotomies by inviting a consideration of multiple and reciprocal causal factors, and emergent structures that shape and pattern these factors.

With this framework, the concept of *social evolution* can be reconsidered. Evolutionary explanations of social development have a long and contentious history (Sanderson, 1990). Some nineteenth century versions celebrated the superiority of modern society as a culmination of the logic of development. By contrast, others excoriated capitalism as a heartless preparatory phase in the march toward socialism. What they shared was a belief in the enlightenment doctrine of progress and the notion of directionality in historical development. Sparked by the anthropologist Franz Boas and his school, the early twentieth century saw a fierce backlash that deemed classical social evolutionism an ideology of the powerful that demeaned the cultural sophistication of pre-modern societies and justified the "civilizing" impulse of colonialism.

This debate has a contemporary manifestation in contrasting global visions of convergent development (*Conventional Worlds*) and plural modernities within a global civilization (*Great Transitions*). The former is a modern cousin of the theory of universal stages that understands market-driven globalization as the next step in the progressive march of modernity. The latter takes a more fluid stance toward the future, recognizing divergent possibilities for development, regression, and surprise. But the rejection of a rigid *social evolutionism* need not imply the rejection of *social evolution* as a useful theoretical construct. Indeed, the systemic perspective advanced here embraces an evolutionary interplay among social dynamics, material conditions, and consciousness. Human-ecological adaptation and transformation is an open process of emergence, contingency, and human choice.

Critical Uncertainties

Will the world of the twenty-first century be some type of *Conventional Worlds*, *Barbarization*, or *Great Transitions*? The answer, we shall argue, will depend on the interaction between two critical uncertainties. The first is the form systemic crises assume in the future, their timing, magnitude, and character. Specifically, will a severe general crisis interrupt the evolutionary continuity of the global HES? The second critical uncertainty is the mode of human response to emerging challenges. Will social, political, and cultural adaptations provide the necessary coping capacity to buffer impacts and influence the direction of global development?

Global crises

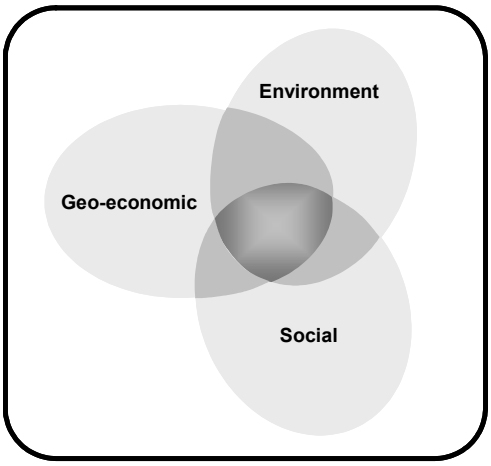
The global transition has been framed as a systems event operating at the planetary scale. It entrains parallel transitions across all human-ecological subsystems and, in turn, is shaped by them. Since systems resist change, seeking to maintain structural continuity through adaptation, the notion of global transition is closely linked to that of global crisis. Transitions announce themselves in the language of crisis.

Several different types of future upheavals may be germinating. Of course, the precise timing, character, and triggers of global crises are unknowable. Nevertheless, we can imagine stylized "general crisis syndromes"—multi-causal phenomena that cascade across sectors and subsystems to force restructuring of the global HES. To organize the possibilities and locate de-stabilizing trends, consider three "crisis realms"—

environment, geo-economic, and social (Figure 5). Each includes global problems that would be of major concern, even in the absence of linkages and synergies across these realms. But it is the possibility for feedback, interaction, and amplification across domains that define systemic global crises.

The environment realm includes a host of disturbances to natural systems that are compromising the integrity and sustainability of the global system (UNEP, 2002). Global climate change is already transforming the planet through increases in the frequency and severity of storms, loss of ice cover, and spread of disease vectors (Epstein and Mills, 2005). Impacts are likely to increase in the coming decades. The wild card is the danger of crossing thresholds of climate change beyond which lie abrupt climate transformations of incalculable cost and disruption (NAS, 2002). Climate change interacts with a host of other environmental stresses including freshwater inadequacy, ecosystem degradation, biodiversity loss, and fisheries depletion. The impacts on places and people are compounded by local pollution, erosion, and chemical hazards. The combined effects of multiple environmental insults are not well understood.

Figure 5. Crisis Realms



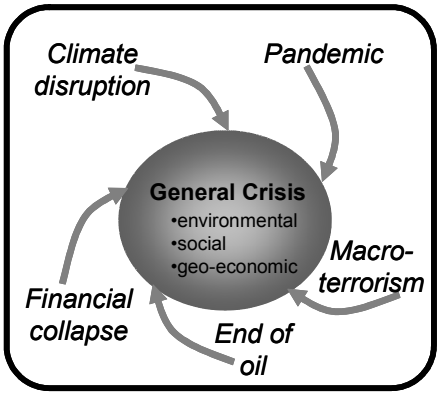
These ominous environmental trends are reason enough to doubt the likelihood of an orderly planetary transition. The social realm adds the equally daunting challenges of providing adequate food, shelter, health, livelihoods, rights, and empowerment to a growing population (BSD, 1998). In a world of great aggregate wealth, more than half the population struggle to meet basic needs on less than $2 per day, a shameful indictment of the ethical basis of contemporary global arrangements. Global inequality, injustice, and polarization have far flung repercussions in a highly connected world. They foster conflict; civil unrest; immigration pressure; anger; xenophobia, a fortress mentality; jingoism among the privileged; and even terrorism among the disenfranchised. The portentous cycle of antagonism, social schism, and violence tears the fragile fabric of global understanding, peace, and cooperation.

The third realm of global-scale conflict is dubbed “geo-economics”, referring to the suite of economic, political, and security challenges associated with increasing international interdependence. As globalizing financial, capital, and product markets more tightly interlink national economies, local crises can spread widely and generate system-wide instabilities. The weakness of international regulatory frameworks heightens the risk of world economic crisis. Moreover, the post-Cold War geopolitical landscape is complex and potentially volatile. New powers, especially China, are beginning to flex their might. The struggle over access to oil will intensify as demand grows, supplies dwindle, and much of the world’s reserves are held by a few countries of uncertain long-term stability (Leggett, 2005). Fueled by the fundamentalist reaction to modernity and the anguish of the excluded, global terrorism feeds superpower counter-reaction and cultural polarization. A key geo-economic uncertainty is whether global governance regimes will emerge to effectively counter the *Realpolitik* of narrowly-construed national interest.

The many connections among the environment, social, and geo-economic realms raise the global stakes. Like three people handcuffed to one another, they move together in complex ways, each influencing the others. The specific modes of interplay within and between these domains are far too numerous to catalogue here. Moreover, novel interactions, unknowable in advance, will no doubt emerge in the coming decades. But broadly, environmental stress feeds poverty and conflict, undermines economic performance, and introduces new international security challenges; geo-economic failure undermines efforts to protect nature and reduce poverty; the persistence of a global underclass, desperate for survival and looking to relocate to wealthier countries, undercuts resource preservation and the global trust that is a precondition for geo-economic cooperation.

The sources of general crises are located in this nexus where environmental, social, and geo-economic dimensions overlap—the central region of Figure 5. These would be extremely complex phenomena driven by multiple causes and feedbacks that cannot be discerned in advance. However, it is possible to imagine plausible high impact events that might trigger a chain reaction of de-stabilization. For illustration, five possible triggers of a general crisis are shown in Figure 6.

Figure 6. Possible Triggers of a General Crisis

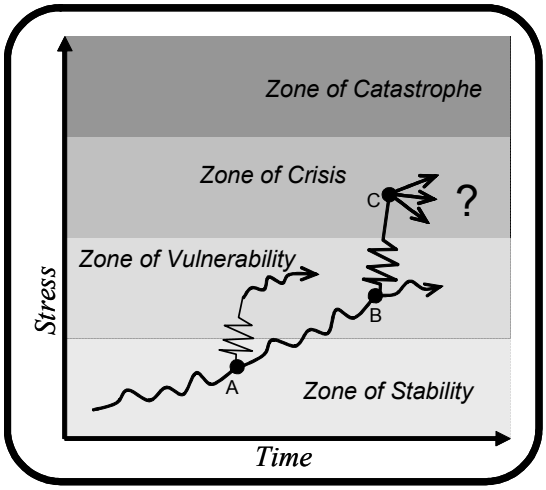


One chain begins with severe climate change leading to altered hydrological patterns, food shortages, economic collapse, social disruption, institutional breakdown, and international conflict. Another path to general crisis might be initiated by an unprecedented pandemic; perhaps via an extremely contagious disease vector that emerges from disrupted ecosystems and is carried to the four corners of the Earth by a highly mobile affluent population and by waves of impoverished refugees fleeing the spreading chaos. A third sequence might begin with a macro-terrorist attack, such as nuclear detonations in major cities or wide deployment of biological weapons, resulting in colossal disruption and death counts orders of magnitude greater than past attacks, massive military reaction, and an ongoing cycle of violence and disruption. A fourth cycle of destabilization might begin with absolute oil shortages and huge spikes in cost, leading to economic de-stabilization and wide geo-political conflict. Finally, a fifth might begin with a collapse in the global financial system where the combined effects of excessive speculative investment, artificial exchange rates, and massive international debt reach a tipping point, and a global depression ensues with profound social, environmental, and geo-political reverberations.

The potential for an event to trigger a general crisis depends on both its magnitude and the condition of the global system at the time of occurrence. A relatively modest triggering event may kick a vulnerable system—one that is under high stress with low capacity to cope with disturbances—into crisis. To illustrate, Figure 7 is a plot of global paths through stylized "zones", defined by level of stress on the global system. With the system in a zone of stability (point "A" in the figure), a modest triggering event may not cause an irreversible change of structure. The system may be kicked into a "zone of vulnerability", but can recover. However, the same event acting on a system that is

already in a vulnerable condition (point "B") can force it into a "zone of crisis". Once there, the future of the system is highly uncertain and can branch in several directions depending on bio-physical or institutional responses (point "C").

Figure 7. Stress, Bifurcation, and Risk



In addition, one can imagine truly cataclysmic events, a popular topic of conjecture in the futurist literature. The dangers come from various directions—from space, a "killer asteroid" pulverizes the planet; from technology, self-replicating robots, nanotechnology, or genetically modified organisms overwhelm human defenses; from the environment, a vast transformation of the global climate system renders vast regions uninhabitable; from global health, a disease spirals out of control and human population collapses; from geopolitics, a third world war erupts with massive use of weapons of mass destruction. Such low-probability/high-impact events would kick the global trajectory into a "zone of catastrophe", upon which no further speculation is ventured here. However, it should be underscored that efforts to reduce global stress and strengthen human coping capacity would decrease the risk of such nightmare scenarios.

Human coping capacity

A twenty-first century crisis is brewing in a world where twentieth century ideas and behaviors linger. Contemporary economic, political, and cultural institutions are ill-suited for coping with the de-stabilizing environmental, security, and social tensions that they have created (Held et al., 1999). The chasm between obsolete institutions and new global challenges is unsustainable. If allowed to intensify, the gap could close rapidly, for better or worse, through structural transformation.

The threats to the integrity of the global human-ecological system are of unprecedented complexity, scale, and uncertainty. A coherent, cooperative, and sustained planetary response is needed to enhance *human coping capacity* in the face of these emerging challenges. Three aspects of coping capacity are *anticipation*, *mitigation*, and *adaptation.* Anticipatory global institutions would take a precautionary approach to policy setting, seeking to identify and avoid global conditions that risk crossing irreversible thresholds of system instability. The measure of mitigation is the capacity to act collectively to reduce stresses to tolerable levels. Adaptation refers to the institutional wherewithal to buffer people and the environment from the consequences of disruptions that cannot be prevented.

In the contemporary world, the task of strengthening global coping capacity rests with nation-states, which remain both the primary nodes of global political arrangements and ardent defenders of their own sovereignty. The terms of international engagement are all too often governed by a narrow and myopic national calculus. Not surprisingly, the collective response of the community of nations to its common problems has been piecemeal and reactive, rather than integrated and anticipatory. Precious decades have been lost in which the rhetoric and grand international proclamations have substituted for effective action.

The mismatch between the historic task of building global coping capacity for the planetary phase and sluggish progress raises urgent questions. Will the world continue to muddle through, reacting and adjusting to events, while hoping that impending systemic crises fail to materialize? What social actors might appear on the stage to alter the dramatic arc? What new institutions and forms of conduct are necessary for a sustainable and livable world? Can they develop in time? Each global vision (see Box, p. 3) answers these questions with its own narrative.

Conventional Worlds, by definition, assume evolutionary adjustments through the spread of dominant institutions and values. The *Market Forces* variation envisions the ascendance of a unified capitalist world system aided by such neo-liberal principles as open trade, free markets, and small government. The key social actor is a globalized private sector. Institutional coping capacity rests largely with automatic markets adaptations through price signals that alter consumer demand and encourage entrepreneurship. The flaw here is the lack of mechanisms for anticipating and preventing environmental and social disruption that are long-term and systemic (Raskin et al., 2002:28-29). If a global crises materializes that overwhelms market adaptations, the premise of evolutionary change that lies at the heart of this scenario would be violated. The scenario then would be, not only infeasible, but contradictory. Market-led scenarios are only plausible if global stress remain within the tolerable range.

The *Policy Reform* variation of *Conventional Worlds*, on the other hand, assumes that another powerful social actor emerges—concerned policy-makers who act with conviction to proactively align markets with sustainability goals. In this vision, governments, working through strengthened multinational bodies, implement a comprehensive and ambitious suite of actions to reduce poverty, conflict, and environmental risk. This government-led vision of how human coping capacity might be built is not inconceivable. In principle the necessary technologies and policy instruments are available for the task of "bending the curve" toward a sustainable and just future (Raskin et al., 1998). In practice, however, reversing the powerful trends feeding global instability would require immense resources, rapid diffusion of a new generation of appropriate technologies, and effective programmatic initiatives across a wide array of places and issues.

Could such a vast global effort be mobilized and sustained? Where would the necessary political will come from? Today, even the most far-sighted leaders are constrained by powerful polities with vested interests in the status quo. At a deeper level, political cultures within states have failed to cultivate mass awareness and support for addressing global perils. Popular myopia is reinforced, in different ways, by both the consumerism of the affluent and the desperation of the poor. If political will fails to materialize with sufficient scale and pace to blunt global crises, the reform path could easily veer toward *Barbarization*, whether the organized form of *Fortress World* or the chaos of *Breakdown*.

It seems a coherent planetary politics for a sustainable and just future will need a powerful new historical agent to drive it forward. Specifically, it will take an aware and engaged global citizenry to broaden and deepen the political space for a *Policy Reform* platform, and to put the possibility of *Great Transition* on the historic agenda (Raskin et al., 2002). We shall refer to such a popular mobilization broadly as a *global citizens movement* (GCM). The arrival and significance of a GCM as a new social actor on the

global stage would be signaled by the level and quality of awareness, mobilization, solidarity, and political maturity of associated world citizens (Kriegman, 2006).

We are drawn to the judgment, then, that the development of global coping capacity will be highly correlated to the parallel development of a GCM. One sees a harbinger of such a movement in the explosion of international civil society efforts on a host of global issues, conducted by spontaneous citizens campaigns and tens of thousands of international non-governmental organizations. The annual gatherings of the World Social Forum draw over 100,000 people in a week of celebration, education, and networking, an early suggestion of the immense popular energy that might propel a GCM.

The growth of global civil society is an important development that taps into deep reservoirs of public concern for the fate of people and the planet. It has resisted mightily the human costs of globalization, the destruction of the environment, and great power jingoism. All of this is vital for slowing unsustainable and destabilizing trends. These actors are a major source of energy for a GCM. But civil society also suffers from significant limits—*fragmentation* around a thousand separate issues, *organizational entrenchment*, and the *negative politics* of protest. These delimit the mobilization of a mass movement of ordinary citizens at a scale that can redirect global development.

A mature GCM would transcend these deficits. Its hallmarks would be a shared *vision* for the global future, a common *identity* as global citizens, and a sophisticated *strategy* for change. It would coalesce around a global vision that is both hopeful and rigorously grounded. It would evolve an integrated framework for mutually supportive action. It would balance the needs for unity and coherence with respect for diversity and autonomy, rejecting both the stultifying top-down movements of the past and the incoherent bottom-up politics of the present. The GCM would be a broad cultural and political project, a popular harabinger of a new planetary civilization.

The crystallization of an increasingly influential GCM over the coming decades is the critical factor for strengthening the capacity of human institutions to cope with twenty-first century challenges. Then, the government-led *Policy Reform* vision or, if the GCM were to surge, the values-led *Great Transition* become plausible. But if the GCM remains weak and fragmented, it will be but a minor global actor, leaving center stage to the improvisations of the transnational corporations and neo-liberal bodies for a *Market Forces* world—or of the go-it-alone super powers, fundamentalist reactionaries, and new isolationists driving *Barbarization*.

In this framework, the plausibility and historical prospects for the formation of a GCM become a principle focus in depicting pathways to the future. This question is taken up further in the penultimate section of this essay, *Conscious Global Evolution*.

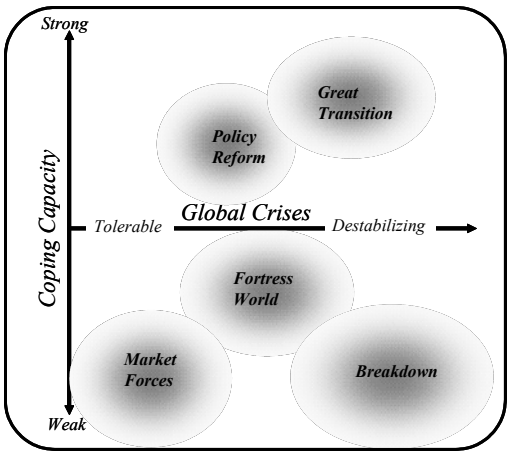
Long-range Trajectories

The discussion of global futures has drawn attention to the scale, form, and timing of two critical uncertainties: global crises and the human coping capacity. The plausibility of alternative scenarios was related to these two factors, as summarized in Figure 8. This schematic locates the archetypal visions in a space that is defined by a range of values for the critical uncertainties.

Along the horizontal axis, *Global Crises* range from *Tolerable* to *Destabilizing*, that is, from a series of jolts that can be managed through evolutionary adjustments to severe disturbances that force system restructuring. Along the vertical axis, *Coping Capacity*

measures the degree to which human institutions are able to anticipate, mitigate, and adapt to crises. It ranges from *Weak* to *Strong*, that is, from the persistence of fragmented and fragile global institutions to the emergence of coherent and resilient world governance. The strength of coping capacity, in turn, has been correlated to the degree of coalescence of a *global citizens movement*, a popular upsurge for a new development paradigm.

Figure 8. Plausibility of Alternative Visions

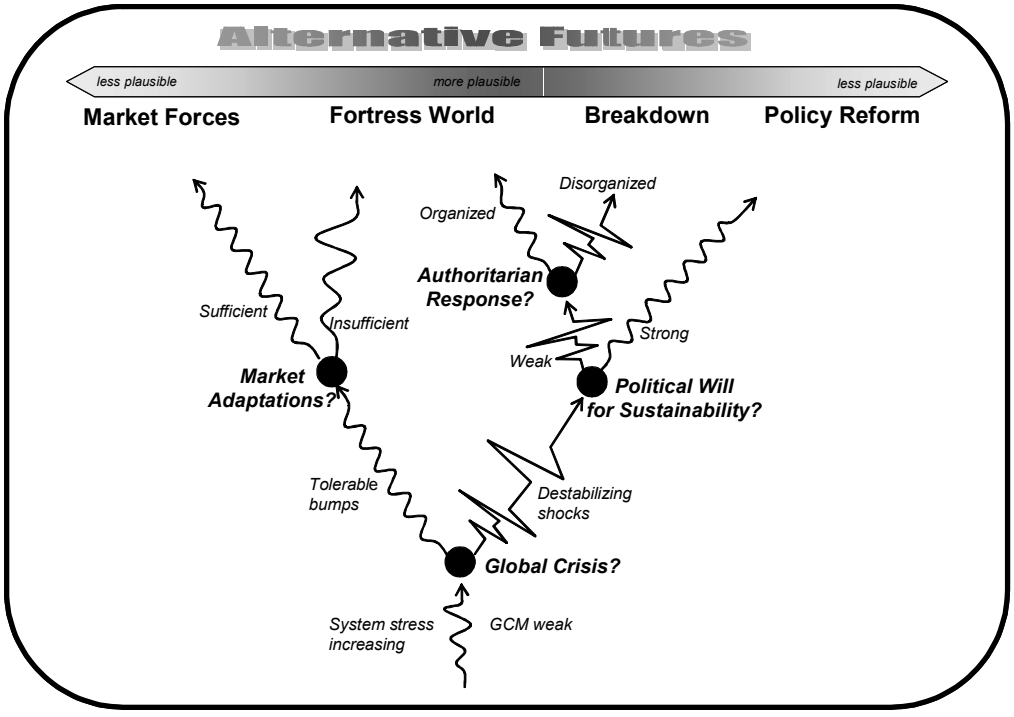


To probe these relationships further, we turn to an exploration of alternative global pathways. Of course, an exhaustive account of the innumerable possibilities is not feasible. However, by abstracting away from detail, the broad contours of major clusters of pathways come into focus. Two families of world lines are analyzed in the following subsections. The first assumes that the GCM remains a minor player (*GCM Weak*) and the next that it evolves into a significant change agent (*GCM Emerges*).

Global citizens movement weak

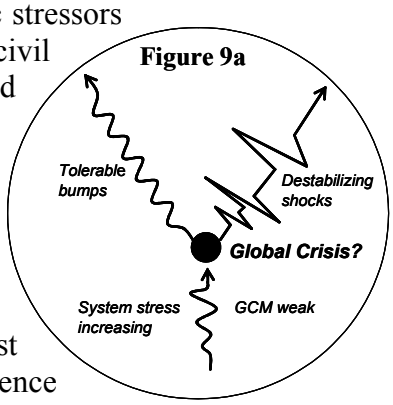
In these scenarios, the grand historic project to forge a global identity, culture, and politics fails. The efforts of activists and visionaries are unable to overcome massive fragmentation, particularism, and apathy. Effective global governance institutions for coping with global threats fail to develop. The implications of a weak GCM are tracked in Figure 9.

Figure 9.
Pathways I: Global Citizens Movement Weak

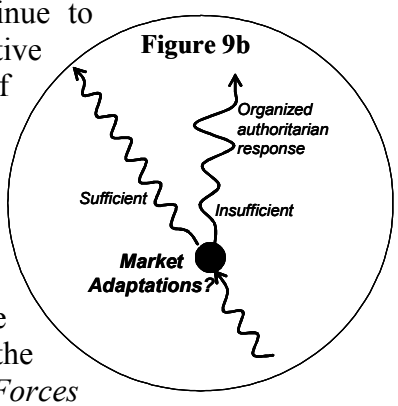


At the top of the figure, *Alternative Futures* refers to the spectrum of global visions summarized in the box (see p. 3). The shaded bar indicates the degree of plausibility of each vision, with the darker central region deemed more plausible and the flanks less so. Note that *Great Transitions* are not included since the precondition for its plausibility has been linked to the emergence of a strong GCM, which is assumed absent here. In Figure 9, the solid lines represent possible global pathways. The amplitude of the waves shows the degree of stress on the system. The black bullets represent bifurcation points beyond which the possible pathways diverge. The discussion below explains each part of the figure in detail.

We begin at the bottom of Figure 9, with the segment highlighted in Figure 9a. The contemporary global world line is shown entering from below. System stress is increasing as the suite of ecological, social, and geo-economic stressors continue to intensify. Meanwhile, the GCM remains weak; civil society action continues but does not coalesce as a unified force, failing to offer a global vision and organizational space for a self-expanding movement. The critical uncertainty concerns the character of *global crises* in the face of increasing stress and weak human coping capacity. The world line branches into two broad streams, depending on whether the global crisis is tolerable (the left branch) or destabilizing (right branch). The left branch shows a most fortunate development—the physical and institutional resilience turns out to be much greater than feared. Human and bio-physical resilience are able to weather the storm. The crisis takes the form of a series of *tolerable bumps* that can be managed with only incremental adjustments in dominant institutions. The counterpoint is shown in the right branch as stresses interact and amplify to the level of *destabilizing shocks*. The global crisis deepens into a general system crisis.

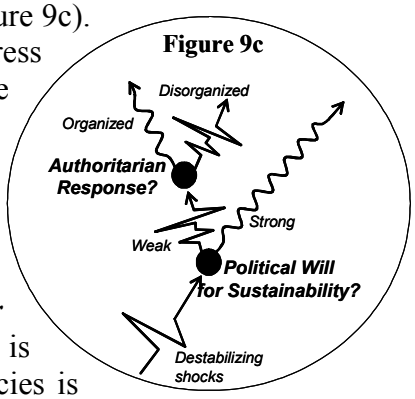


Following the left branch (shown in Figure 9b), we see the relatively gentle series of tolerable shocks entering from the bottom-right. While global stresses may continue to gradually deepen, the dominant institutions driving market-led global development are able to adjust and persist. In the absence of the spur of severe crisis to challenge entrenched ideology, the trajectory continues in the general direction of some form of a *Market Forces* world. Widespread complacency, institutional inertia, and wishful thinking are artfully reinforced by media campaigns of vested interests, the reassuring claims of professional skeptics, and the spread of consumerism. In this climate, the forces of reform and transformation do not vanish. They continue to advance the values of sustainability, equity, and alternative lifestyles, but are unable to gain traction. The sense of urgency is insufficient to mobilize either political will from above or a popular politics for a new global deal from below.



The key uncertainty then becomes whether *market adaptations*, as the primary coping mechanism, are sufficient for maintaining system integrity (illustrated by the node in Figure 9b). If they are sufficient indefinitely, as in the left fork, global development continues toward a *Market Forces*

future. But this cannot be considered plausible. As argued in previous sections, highly complex global problems—climate change, ecosystem degradation, social inequality, cultural polarization, oil politics—are the result of complicated chains of influence over great distances and often with long time lags between cause and effect. For systemic problems such as these, market adjustments cannot give the timely and effective signals to induce the necessary behavioral responses. It is not inconceivable that unattended global stresses will remain tolerable, but given the current outlook, it is implausible. The right fork of Figure 9b shows the other option, that market adaptations are insufficient. In the absence of mature mechanisms for international governance, and with the popular global movement weak, the imposition of an *authoritarian response* is deemed necessary by the global forces of order to prevent a slide into chaos and anarchy. Under such conditions, some form of *Fortress World* becomes plausible.

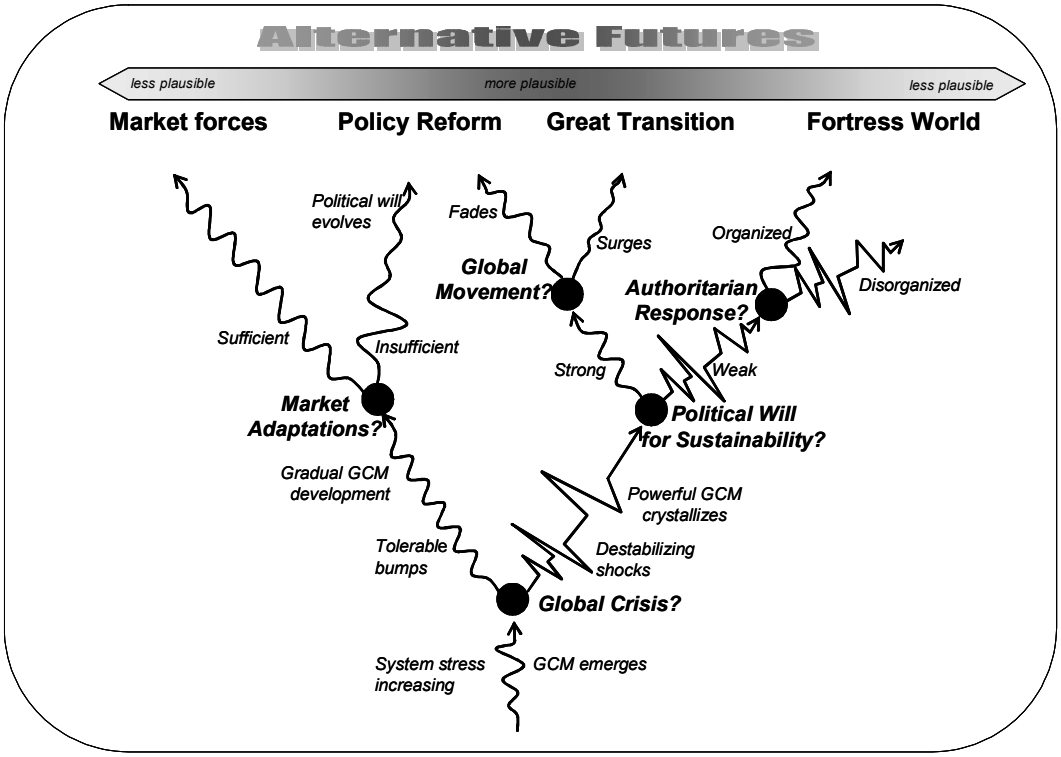


We turn now to the right half of Figure 9 (highlighted in Figure 9c). This is a highly fragile sector of the trajectory space. Global stress gathers force and is expressed, not as a series of manageable jolts, but as destabilizing shocks that threaten system stability. At the same time, the absence of a politicized global citizenry (recall that the GCM is assumed weak here) circumscribes proactive preparation of governance mechanisms for coping with the growing crisis. The question, suggested by the first node in Figure 9c, is whether the necessary *political will for sustainability* can emerge in this context. If the political will is strong, a massive and globally coordinated campaign of policies is mounted to address environmental, social, and geo-economic stressors. The crisis is gradually mitigated and the global pathway veers toward a *Policy Reform* future. This is not impossible, but must be considered unlikely, for it will be difficult to lay the political and institutional platform for such global stewardship in the absence of strong citizen engagement for sustainable development. If political will is weak (the left branch in Figure 9c), the crisis would worsen and the emergency would stimulate the mobilization, perhaps reluctantly, of the global forces of order. If the *authoritarian response* (upper node of Figure 9a) is able to orchestrate an organized response of repression and control in the midst of deepening chaos, a *Fortress World*-like future would ensue; if not, *Breakdown* would loom. Either is plausible in this sequence.

Global citizens movement emerges

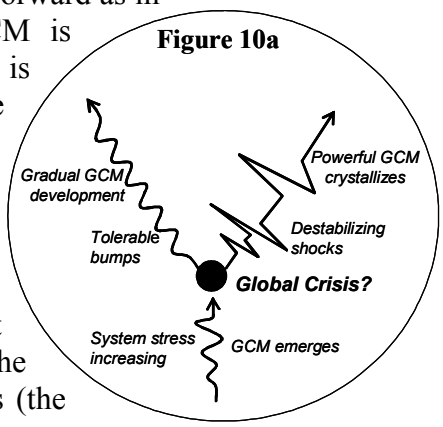
In the second family of possibilities, it is assumed that the GCM, rather than remaining weak, emerges and grows in strength. The branching world line structure is shown in Figure 10 and discussed in detail below. The assumption of a significant global movement is a critical new factor in the architecture of the future. Note that the spectrum of plausible futures has changed dramatically from Figure 9 where the GCM was assumed to remain weak. *Policy Reform* and *Great Transitions* move to the central range of plausible alternative futures, rather than *Fortress World* and *Breakdown*. Note that *Market Forces* is neither entirely implausible nor highly plausible in either case.

Figure 10.
Pathways II: Global Citizens Movement Emerges

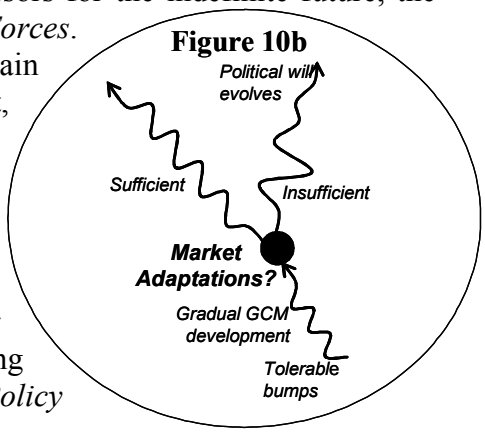


At the bottom of Figure 10, the global system is impelled forward as in Figure 9, but now, instead of popular passivity, a GCM is assumed to begin to take shape. A critical uncertainty, again, is whether the *global crisis* comes in the form of tolerable bumps or destabilizing shocks, represented by the branching lines from the bullet in Figure 10a. The "tolerable" branch may be more likely than in the parallel situation without the GCM (Figure 9a) because the political base for a government-led *Policy Reform* agenda would be strengthened. Since it is unlikely that a nascent GCM would have a powerful influence in the near term, the global system would remain at risk of destabilizing shocks (the right branch of Figure 10a).

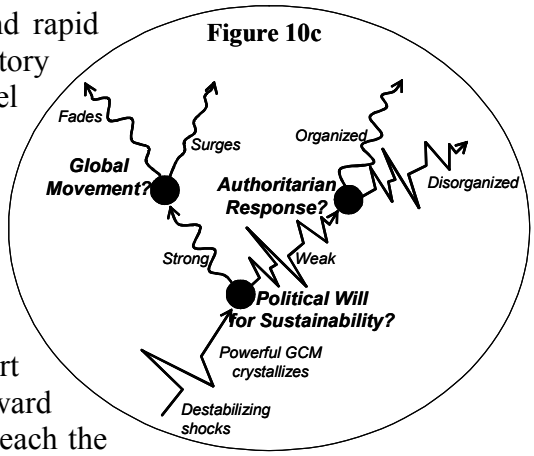
Figure 10a



Following out the left "tolerable" branch, we come to Figure 10b. Again, if market adaptations were sufficent in coping with system stressors for the indefinite future, the world line would take the left fork toward *Market Forces*. But for reasons given earlier, this is an implausible chain of events. If market adaptations are insufficient, ominous global problems persist (the right fork in Figure 10b). In the analogous situation with a weak GCM (Figure 9b), an authoritarian response leads to a *Fortress World* future. But because stronger political will for sustainability and international governance capacity could be expected under the prod of a popular movement, the conditions are in place for imposing corrective measures and for navigating toward a *Policy Reform* world.



Finally, we follow out the right branch of Figure 10a where global crises take the form of destabilizing shocks to the global system. It is reasonable to assume that these ominous developments could galvanize the crystallization and rapid growth of a powerful GCM (Figure 10c). The trajectory again faces the bifurcation point defined by the level of *political will for sustainability*. In the corresponding situation where the GCM was assumed weak (Figure 9c), it seemed most plausible that political will would also be weak and the world line would tilt toward *Fortress World*.



But with a vibrant GCM, *strong* political will for sustainability is the more plausible outcome as support shifts weight away from authoritarianism and toward cooperative government-led remediations. We then reach the next bifurcation point (upper left node in Figure 10c). The GCM may *fade* as the crisis abates, leading again to *Policy Reform*. However, if it continues to *surge*, some form of *Great Transition* becomes plausible.

If, on the other hand, *political will for sustainaiblity* is *weak* despite the influence of a powerful GCM, we reach the right branch of Figure 10c. Though less plausible, it is certainly possible that the pace and intensity of crises would overwhelm efforts to build coping capacity. Then, the question becomes once again whether an organized *authoritarian response* can impose a *Fortress World*. Less likely would be a disorganized and chaotic *Breakdown* scenario, since higher levels of international coherence would be expected in those pathways where a strong GCM drives cooperative governance.

Conscious Global Evolution

The foregoing speculative inquiry into alternative global pathways has underscored the importance of coherent action in navigating the minefield of the future. If de-stabilizing crises strike before the formation of the necessary human coping capacity, the prospects for a sustainable and just future grow dim, indeed. This, then, is the historical challenge posed in these early decades of the planetary phase. Can humanity act with sufficient foresight, unity, and resolve, as stewards of Earth and in solidarity with unborn generations, to begin the long transition to a global civilization?

Freedom, necessity, and possibility

Two antithetical philosophies of history challenge the very possibility of shaping the future through collective human action. Historical *determinism* gives primacy to inexorable historical forces that control the tides of history, while historical *indeterminism* understands social development as largely a sequence of contingent events and exceptional individual acts. From contradictory premises, each would judge cooperative efforts to direct the global transition an exercise in futility.

Each of these extremes has a kernel of truth. Transcending them means acknowledging both *necessity*, an unflinching recognition of the constraints entrained in the historical moment and the human condition, and *freedom*, an affirmation of scope, nevertheless, for human choice in shaping the future. Against utopianism and political voluntarism, necessity reminds us that the future will be fashioned by real human beings within the objective limits of historical possibility. Against mechanistic determinism, freedom reminds us of the uniquely human capacity to envision, act, and enlarge the sphere of the possible.

The breathtaking diversity of human cultures stands as evidence of the openness of that human possibility. The defining adaptive strategy of Homo sapiens was the evolution of plasticity of behavior. The essentialist reduction of human nature ("people are selfish" or "people are cooperative") fails to grasp the flexibility that defines humanity ("people are both depending on context"). Humanity is both the sculptor and the sculpture, changing and adapting to its cultural and physical environment in an open process. The outcome of the global transition will be the next expression of this historical dialectic.

Before the crisis

The history of the future will be the story of how two pivotal unknowns emerge and interact—the form of forthcoming global crises and the capacity of engaged citizens to shape events. The latter factor—the capacity for collective action—has been referred to as a global citizens movement (GCM). Our analysis suggests that the degree of development of human coping capacity correlates to that of the GCM. In turn, a strong GCM is linked to the plausibility for a transition to a stable and desirable global formation in this century. It has a triply critical role—muting the causes of system shocks before a crisis, countering demagoguery in the midst of crisis, and advancing favorable global arrangements after a crisis.

A vibrant GCM would widen and strengthen the base of political support for implementing corrective policies to moderate de-stabilizing precursors. This would buy

time by delaying the onset and blunting the severity of global crises. The potential of other global actors—multinational governmental bodies, corporations, NGOs—to mount a systemic response to the global challenge is limited. They are enfeebled, respectively, by nationalism, narrow self-interest, and fragmentation. A serious reform program must overcome the deficits of political will among myopic leaders, social responsibility among bottom-line driven corporations, and unity among civil society organizations. A GCM is the natural agent to counter political inertia and drive the action agenda for sustainability and justice.

An evolving GCM could create space for engaging widening circles of citizens the world over in the cultivation of new values and politics. This would counter the risk that crises feed a global culture of fear, xenophobia, and despair, the breeding ground for conflict, authoritarianism, and a *Fortress World* future. Moreover, a strong GCM would influence the form of post-crisis recovery, adaptation, and evolution. By offering a legitimate and positive vision, it could surge forward by channeling the political energy released by a crisis. Its scale, diversity, and organizational sophistication would determine its capacity to contest the form of global restructuring that emerges from a crisis.

The burning uncertainty is whether a strong GCM can emerge in time. That may seem improbable. These turbulent years apparently cause more resignation, complacency, and anger than hope, engagement, and idealism. Nevertheless, experience suggests that there is a growing, albeit often latent, hunger throughout the world for a positive vision of the future and sense of global identity. This is the cultural energy upon which a GCM could coalesce. It would not be the first time that an effervescence of popular will arrived unexpectedly to torque the direction of history.

Seed crystals

If the possibility of a GCM is latent in the contemporary cultural matrix, focus must turn to strategies for crystallizing it. Three key arenas are *understanding*, *vision*, and *action*. This triad corresponds to the basic psychological elements of a whole person—knowing (the *cognitive*), feeling (the *affective*), and acting (the *intentional*) (Tibbs, 1999). While individuals will be animated by different mixes of interests and motives, the collective energy of a new movement will flow from the unity of thought, feeling, and action.

Understanding

In the past, scientific fields formed in correspondence to distinct levels of organization in the real world—physics to particles, biology to life-forms, social science to society, and many demarcations in between. The levels of structure form a nested hierarchy, each encompassing those within it, but not reducible to them since each exhibits phenomena that only become manifest at the higher degree of complexity.

Now, the emergence of a novel global system is stimulating the formation of a new discipline to address its structure, dynamics, and uncertain future (Kates et al., 2001; Gallopín and Raskin, 2002; Swart et al., 2004; Schellnhuber et al., 2004). Although the biogeophysical aspects of "earth system science" have been the research focus to date, it is recognized that the larger conceptual framework of co-evolving human and environmental systems will be needed. Global system studies promises to be a great

intellectual adventure of the twenty-first century, urgently needed for informing policy and action. It would provide the knowledge platform for a GCM.

In these early years, five theoretical strategies can be discerned for the new discipline: It is *systemic*, focusing on whole structures, integrated patterns, and reciprocal interactions; *synthetic*, blending bio-physical, socio-cultural, and ideational aspects and perspectives; *prospective*, taking a long view to reflect delayed processes, deep uncertainties, and developments beyond the fluctuation of passing events; *dynamic*, drawing attention to transformational processes where novel structures can form; and *normative*, understanding human values as key internal features of the system.

Global system analysis is normative in a second important sense. By illuminating the perils and possibilities of the planetary phase, it influences the values, perspectives, and intentions of human actors. The study of the global system is itself a causative element of the very system it ponders. Knowledge and action become bi-directional: by studying the world, we change it; by changing it, we deepen our understanding of the global system.

Vision

Global visions are not so much right or wrong as they are alternative images that serve as distant attractors that can influence the direction of the global system. Subjective vision is an objective factor conditioning the global trajectory. The way we think about human prospects alters human prospects. A sense of hope does not guarantee a desirable future, but it leaves the possibility open. A zeitgeist of pessimism does not guarantee a grim future, but it helps fulfill its prophecy of despair.

This introduces a teleological element and a utopian impulse into the dynamics of global pathways. Indeed, the exploration of alternative scenarios would be of speculative interest only if the insight could not help us consciously shape the outcome. Certainly, in the more mundane aspects of our futures—selecting a home, committing to a partner, or pursuing a profession—we act in the manner of engaged scenario analysts, envisioning alternatives, choosing a future, and acting to achieve it.

But on the grand question of shaping social evolution, it is difficult to see a path through the dense fog of uncertainty and ideology. Thus, the project of forging the broad principles, contours and strategies for a hopeful global alternative is of utmost importance. This is best pursued as an adaptive and open process that engages an expanding international group in research to refine the vision and share it with diverse audiences (GTI, 2006). Widespread belief in the feasibility of a *Great Transition* is a precondition for inspiring the collective effort to achieve it.

Action

Carrying a *Great Transition* forward will take the combined efforts of a multitude of players from all parts of the world. Civil society organizations have a continuing role to influence a thousand issues, researchers to make the scientific case, the media to raise public awareness, trade unions and corporations to spearhead a transformation in the private sector, and educators and faith-based groups to lay the more enduring foundations. All these are critically necessary, but not sufficient.

The historical condition underlying the possibility of a global citizens movement is that the Earth itself has become the locus of crisis, danger, and possibility. In the planetary phase, humanity as a whole has become a community of fate. If a GCM consolidates, the *Great Transition* will have found its voice. To imagine such a movement is to picture a

diverse and plural process of people from every corner of the world, across cultures, classes, and places. It would be an expanding arena of popular participation, cultural ferment, and political activism. It would engage the full spectrum of issues. It would cluster this diversity under the umbrella of an inspiring and inclusive global vision, rooted in a rigorous understanding of global conditions. It would practice a politics of trust, seeking to reconcile proximate differences on the path to a common global future.

Is a GCM conceivable? One looks to the past for clues. An earlier "great transition" from feudalism to industrial society involved a sharp struggle between old elites and an emerging modernizing class. Socialist movements also had the clarity of class conflict, pitting an industrial working class against entrenched forces of capitalism. By contrast, globalization is forging a multifarious opposition drawn from North and South, privileged and excluded, environmentalist and social justice advocate. In the planetary phase, a focus on class fissures as the engine of transformation is not so much wrong as incomplete.

In this regard, nationalist movements offer perhaps a more illuminating historic analogy, since they were often complex social amalgams united by a surging sense of shared national identity ("imagined communities"). Looking forward from the vantage point of a few hundred years ago, a world map consisting of two hundred nation-states would likely have seemed ludicrously improbable, and the incipient ethos of "nationalism" rather quixotic. After all, nationalist movements had to overcome the de-centering forces of city-states, fiefdoms, warlords, ethnic conflict, and colonizing powers. But from the vantage point of today, the territorial nation-state seems inevitable.

Likewise, looking forward from today, the ascendance of "globalism"—planetary consciousness, identity, and citizenship—may seem improbable. But globalization is binding the world's people and the biosphere in a shared destiny, like it or not. The age-old dream of a global civilization is increasingly anchored in the conditions of the planetary phase. The Earth as a unit is palpably relevant to the human and ecological challenges of the twenty-first century. In this sense, the imagined global community has a more objective basis than the imagined communities of nation-states, with their rather arbitrary boundaries. Global threats drive a new planetary consciousness (the "push of fear"), while a positive planetary vision draws it forward (the "pull of hope"). The possibility—not the certainty—of a widespread commitment to global citizenship is now on the agenda.

The systemic framework clarifies Margaret Mead's dictum: "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has". At transitional moments, such as ours, small actions can have big impacts. The efforts of an engaged few can ripple through the cultural field, amplifying and influencing the global trajectory.

Epilogue

So are these the best of times or the worst of times? One need not be a cynic to harbor deep foreboding—rigorous pessimists can mount considerable evidence to indict the future. But the wheel is still in spin. The shape of the global future rests with the reflexivity of human consciousness—the capacity to think critically about why we think what we do—and then to think and act differently. The Italian revolutionary Antonio Gramsci famously counseled "pessimism of the intellect, optimism of the will" – unsentimentally facing portentous developments, while affirming the belief that action can make a meaningful difference. Poised at a planetary tipping point, dystopian premonitions cannot be denied. But they can still be defied. It will take collective "optimism of the will" to bend the global trajectory toward a civilization worth living in. Then, more than a vision, a *Great Transition* to one thriving human family, sustained by and sustaining the web of life, would become an objective possibility for our global future.

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