GREAT TRANSITION INITIATIVE
VISIONS AND PATHWAYS FOR A HOPEFUL FUTURE

MARCH 2013

Game On:
The Basis for Hope in a Time of Despair

To be truly radical is to make hope possible, rather than despair convincing.
Raymond Williams

IN A WORLD AT RISK, those attuned to the dangers can feel a powerful temptation to sound apocalyptic alarms to awaken the somnolent. Arousing fear, though, without offering a compelling vision of a better path, awakens only dispiriting anguish and despair. This pessimism is not so much wrong as disempowering. The basis for hope rests on two kinds of arguments, one scientific, the other historical. Quantitative simulation of alternative scenarios shows that sufficient environmental capacity and adequate technical means remain to reach a flourishing planetary civilization. Moreover, the precondition for this Great Transition is found in the shared risks and opportunities an interdependent global system now confronts. In our historical moment, the world has become a single community of fate, the foundation for cultural and institutional transformation. Although catastrophic premonitions cannot be logically refuted, they can be defied in spirit and negated in practice: pragmatic hope is the antidote to dystopian despair.

.

GTI PERSPECTIVES ON CRITICAL ISSUES

The *Great Transition Initiative* is an international group working for a planetary civilization rooted in solidarity, sustainability, and human well-being. With this long-term goal as our frame of reference, GTI Perspectives assess pressing near-term issues.

www.GTInitiative.org

Of Falling Skies

Cautionary fables warning of the hazards of social hysteria appear in many cultures. In one oft-told version, Chicken Little is walking through the woods when a mere acorn falls from a tree onto her head. "The sky is falling!" she overreacts, spreading panic among the other animals. This blatant episode of herd mentality ends badly for the overwrought bird and his guileless friends (but splendidly for the hungry fox). The moral of the story – *stay cool, it may not be as bad as you think (and check your sources!)* – has enduring relevance, for apocalyptic spirits have always walked among us, perhaps now more than ever.

"Not only hyper-ventilators and scaremongers sound the alert. Even qualified scientists are warning 'game over.'"

These days, however, one need not be a Chicken Little to have a visceral sense that forces far more powerful than acorns pummel us. The steady stream of crises we have confronted in recent years is enough to disturb the equanimity of anyone, from the insouciant to the highly-strung. Further, alarm is spread by disquieting reports of future risks to the food, energy, financial, oceanic, climate, and other global systems. In a manner of speaking, the sky itself does seem to be falling, in the form of punishing storms and strange weather that strike with greater frequency and heightened intensity.

Perhaps most unsettling is the apparent helplessness of the political order to act in the face of these gathering threats. Judging by the decades of inaction since the international community committed rhetorically to sustainability, the task of fostering a just and enduring mode of world development, the paramount challenge of our time, lies beyond the grasp of our political order.[1] The fragmented and myopic governance institutions we have inherited from the twentieth century are ill-suited for addressing the systemic and long-term predicament of the twenty-first. In turn, the doleful combination of deepening danger and feeble response feeds a rising Zeitgeist of despair. Fear for the future is globalizing along with the economy, communications, environmental disturbance, and much else.

A burgeoning eschatological literature tracks and amplifies the darkening mood: Our Final Hour, The Coming Plague, The End of Food, and Countdown to Apocalypse, to name a few recent titles. The bearish outlook spreads in the freewheeling precincts of the Internet, while cocooned subcultures outside the mainstream spin wild tales of conspiracy and end-times. Although jeremiads penned by the incautious and tendentious proliferate, not only hyper-ventilators and scaremongers sound the alert. Even qualified scientists are warning "game over."[2]

Are these contemporary doomsayers akin to the overanxious little fowl of yore? Or like Cassandra, do they bear valid, unheeded auguries? Rigorous pessimists, scrutinizing world conditions and trends, can find considerable support for such bleak outlooks. Figure 1 provides a bird's eye view of the dangers.[3] In order to assess alternative scenarios, we introduce ten major indicators of social and economic stress (see figure notes), including planetary boundaries, which delineate the safe operating space for Earth, and social targets for a just and cohesive world society.[4] A red wedge shows a planetary boundary has been transgressed or social target not met; green wedges suggest compatibility with social-ecological resilience.

The left panel of the figure, depicting the state-of-the-world today, confirms that we already confront a red-alert predicament. Half of the indicators extend beyond

planetary boundaries and social targets, in many cases significantly. In a Conventional Development scenario, where dominant trends and driving forces persist, the global system will move deeper into a zone of grave peril (bottom right of Figure 1). All but one of the indicators turns severely red by the year 2100.

Under this status-quo trajectory, long before the end of the century, the world system would veer into a *terra incognita* of systemic crises as environmental disruptions and social conflicts interact in complex ways, rippling across space and time.[5] Some manner of barbarized future would loom, perhaps in the form of an authoritarian Fortress World, in which the elite imposes order on an impoverished majority. Or, if crises spiral out of control, a Breakdown scenario could see institutional collapse and a descent into lawless anarchy.[6]

"Potential leverage lies with us; as the cause of the crisis that befalls us, we can become the agents of its reversal."

Focusing on these dire possibilities, pessimists can make a strong case, but this does not settle the matter. Not that their antitheses, the optimists (if any remain), can offer compelling refutation. Finding good tidings in the free market's hidden hand, or human technological ingenuity, or individual transcendence, is comforting only to true believers. Sanguinity and despair, though superficial opposites, really are different facets of fatalism, one awaiting a fall, the other deliverance. Neither is adequate in a world adrift, longing for the kind of hopeful engagement that can bring a shift of direction.[7] Potential leverage lies with us; as the cause of the crisis that befalls us, we can become the agents of its reversal.

Figure 1: Contrasting Futures

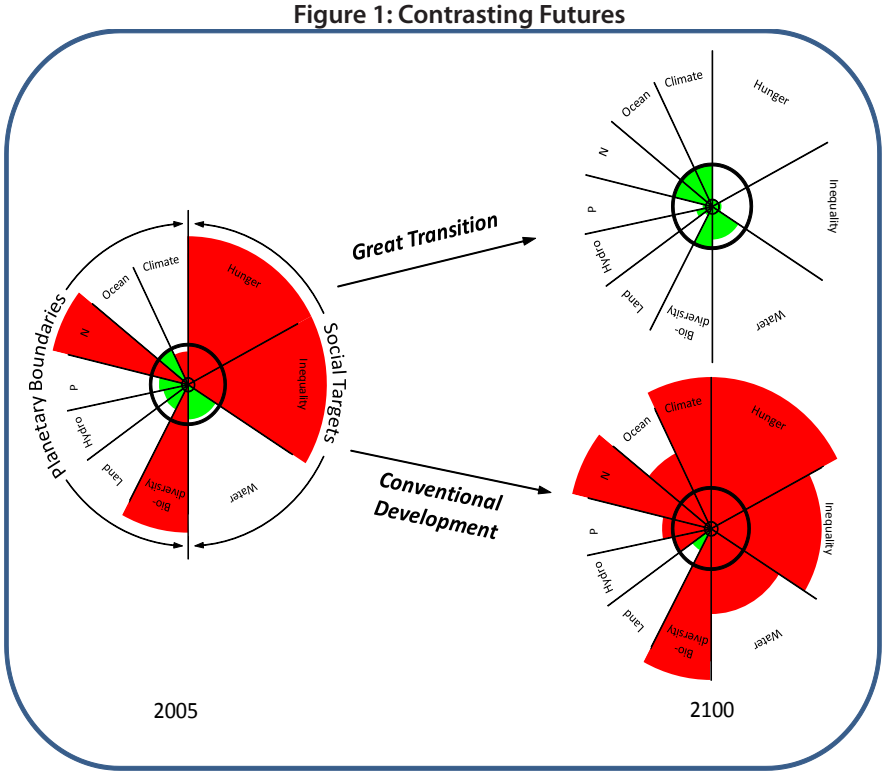


Figure Notes: *The bold ring defines planetary boundaries and social targets. The faint, innermost ring indicates pre-industrial values for planetary boundaries and strong egalitarian values for social targets (e.g., no hunger). Green wedges lie within the biophysically safe and socially desirable zone; red wedges transgress planetary boundaries and social targets (a blurred edge means that the value is too large to be displayed). The planetary boundaries are climate change ("climate"), ocean acidification ("ocean"), nitrogen cycle (N), phosphorus cycle (P), global freshwater use ("hydro"), change in land use ("land"), and rate of biodiversity loss ("biodiversity"). Social targets are the number of chronically hungry people ("hunger"), international inequality ("inequality"), and water stress ("water"). The planetary boundaries define Earth's safe operating space. Social targets for 2100 are 56 million for people suffering chronic hunger (the current figure is about 900 million); a ratio of developed country GDP per capita to developing country GDP per capita of 2 for international inequality; and a maximum of 1.7 billion people living in water stressed regions (freshwater adequacy remains a nagging concern in all scenarios).*

World Enough and Time

"Great Transition scenarios help delineate and clarify the possibility of more attractive futures."

Is despair for the future justified? We have arrived at a contingent verdict: if the world maintains a Conventional Development course, the coming decades indeed hold grave peril. Therefore, we introduce Great Transition scenarios to help delineate and clarify the possibility of more attractive futures. Such scenarios envision a major cultural shift along with a popular mobilization for fundamental change in the coming decades. A new suite of values – solidarity, quality of life, ecology – displaces the conventional triad of individualism, consumerism, and domination of nature. Correspondingly, institutional innovations promote social equity and individual fulfillment, redesigning economies to serve human needs and spare nature, not bloat profit for the few. Global citizenship becomes a strong aspect of human identity, the foundation for strengthening democratic global governance.

We can gain quantitative insight into how such a transformation might play out through data-rich simulations under these conditions (postponing for now discussion of the plausibility of such deep cultural change).[8] Great Transitions have the same point of departure as all scenarios: the constellation of institutions, power structures, behaviors and mindsets that govern current social-ecological patterns and trends. These conditioning factors are assumed persistent in Conventional Development, but malleable in Great Transition.

Figure 2 (below) provides a birds-eye view of how this shift might unfold. Consider each of the figure's graphs in turn.

Graph (a) Population: A host of causal conditions – universal access to education, the empowerment of women, better health, the extension of family planning services – accelerates the demographic shift to lower fertility rates leading to a gradual decrease in world population.

Graph (b) Gross World Product: The aggregate size of the global economy in Great Transition tracks that of Conventional Development through mid-century, but this masks a dramatic change in the relative composition of economic elements as growth in rich countries moderates and in poor countries quickens. By the end of the century, average world per capita income in Great Transition is only half that in Conventional Development (but three times the current value), while the North-South disparity has vanished.

Graph (c) Work Time: In the Great Transition scenario, as secure and sufficient standards of living become progressively more universal, notions of human well-being turn from ever greater material consumption to quality of life – relationships, leisure, community, creativity, and spiritual fulfillment. This preference is reflected in shorter work-weeks (and work-years) through gains in labor productivity taken as increased discretionary time rather than higher incomes. Yet, with incomes at about $30,000 per person – the level of affluent countries such as Germany and France today – all enjoy a secure and comfortable standard of living.

Graph (d) Poverty: Massive poverty remains a tenacious feature of the Conventional Development future, despite rapid growth in average incomes, due to the counter-

vailing effects of growth in population and inequality. By contrast, with the elimination of acute poverty a core policy priority of Great Transition, and increasingly less pressure for income growth among the affluent, the highly skewed income distributions of the past give way to more equitable development patterns within and among countries.

Graph (e) Energy: The soaring energy demand of Conventional Development would exacerbate a host of geo-political, environmental, and economic problems. These include conflict over dwindling conventional oil and gas resources; further intensification of climate change from exploitation of unconventional sources, such as tar sands; safety and security threats associated with the nuclear option; and the huge capital investments required. A combination of factors in the shift toward Great Transition – a smaller world economy, a tilt toward service sectors, far less reliance on private automobiles, and higher resource and use efficiency – decrease energy requirements dramatically.

"A combination of factors in the Great Transition – a smaller world economy, a tilt toward service sectors, far less reliance on private automobiles, and higher resource and use efficiency – decrease energy requirements dramatically."

Graph (f) Climate: Carbon dioxide emissions soar along the Conventional Development path as the uptick in nuclear and renewable power production, while substantial, is insufficient to counter the growth in energy demand and the deployment of carbon-intensive unconventional fossil energy sources. By contrast, the far lower energy demand in Great Transition can be met entirely by renewable resources, a transformation completed by mid-century. Effective policies (e.g., carbon taxes), regulations (e.g., strong efficiency standards), and research and development investment (e.g., hydrogen-based energy systems) are employed to keep carbon dioxide (and other greenhouse gases) at levels compatible with long-term climate stabilization.

Graph (g) Food: The two scenarios diverge sharply on both the demand and supply side of the food equation. Conventional Development crop requirements climb in concert with population growth and with the convergence, as incomes rise, of traditional consumption patterns toward the meat-intensive diets of the richer countries. In Great Transition, moderate population growth, along with diminished demand for meat prompted by environmental, health, and ethical concerns, stabilizes crop requirements. Regarding production, Conventional Development assumes high-input industrial farming practices, which, although of dubious long-term sustainability, are assumed to enable the maintenance of substantial yield growths. Great Transition, instead, assumes a shift toward ecological agriculture emphasizing complex multi-cropping systems, integrated pest management, and other organic and conservation oriented approaches.

Graph (h) Habitat: Natural habitats continue to decline in Conventional Development under the pressure to convert land to other uses, especially to accommodate urban sprawl. The mobilization for nature restoration in Great Transition includes denser urban forms and vastly expanded protection of ecosystems. Correspondingly, a rampant loss of species is first slowed and then stopped.

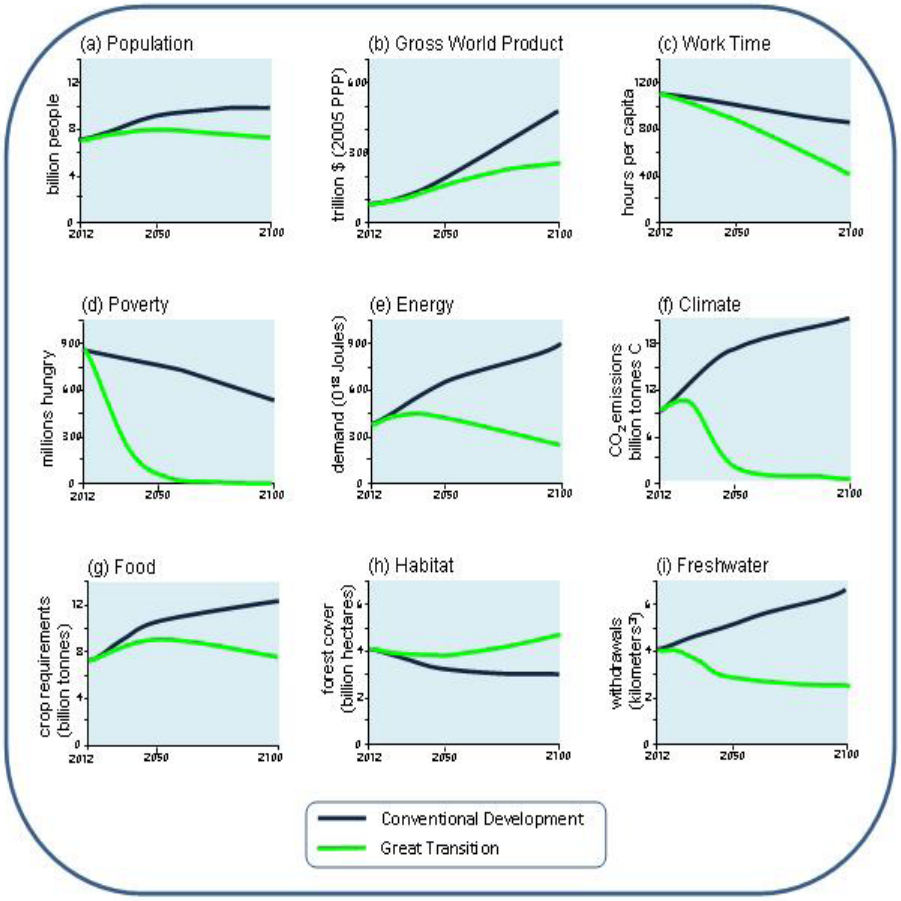
Graph (i) Freshwater: With many lakes and riverine systems taxed by rising human demands and ecological preservation needs, about 2 billion people already live in water stressed areas and the number is rapidly rising, reaching over 4 billion as withdrawals increase under the population and economic growth pressure of Conventional Development. In Great Transition, an emphasis on water use efficiency and re-use is able to decrease overall withdrawals, and correspondingly the number of

people in water-stressed areas gradually decreases to 1.5 billion.

These results, it should be stressed, are derived by assuming only the steady evolution of technology and deployment of known strategies. No technical panacea or behavior altering drug or other *deus ex machina* need be introduced to chart this transformative path. The degree and quality of social mobilization, and its expression as political will, are the primary constraints to a Great Transition future, not technical or policy know-how. If we are able to overcome them and seize the window of opportunity we now have for transformation, the story of the twenty-first century can shift toward the green and pleasant denouement depicted in the upper right panel of Figure 1.

"Prophets of doom speak too soon and with specious certitude."

Figure 2: Patterns Compared



The Hope Hypothesis

We have argued that while Dystopia looms as a real possibility, it is not inevitable. Our quantitative simulation of a Great Transition demonstrates how we still can pivot and turn toward a sustainable and humane civilization. Thus, prophets of doom speak too soon and with specious certitude. The only certainty on the road ahead is surprise: novel risks and opportunities, unexpected crises and responses, indeterminate

social and cultural developments. The history of the future will be written by choices yet to be made and actions yet to be taken.

As a postulate about the future, pessimism robs us of the motive to make change. Dark premonitions cannot be logically refuted – only defied in spirit and negated in practice. A culture of despair, which fosters fatalism and complacency, truncates possibility, becoming a self-fulfilling cause of the decline it foresees. In a parallel way, a culture of hope, by inspiring collective engagement, can help realize the regenerative social transformation it embodies.

"The very forces driving the global emergency at the same time are preparing the basis for transcending it."

Does hope have a future? Apocalyptic prophesies miss a central theme of the Planetary Phase: the very forces driving the global emergency at the same time are preparing the basis for transcending it. The deepening interdependence of people and all living things anchors the age-old dream of one human family in a new reality: we have become a single community of fate.

This objective entanglement also enlarges the subjective space of consciousness. Expanding the latticework of connection brings awareness of our place in a planetary nexus, nurturing our sense of responsibility to one another, to future generations, and to fellow creatures in a vibrant planetary fabric. This historical condition nurtures emergent values – solidarity, well-being, and ecocentrism – and institutions that reflect the need for democratic global governance and economies that give priority to social equity and community cohesion, human fulfillment and the healing of nature.

Rather than a quixotic vision divorced from the real world, these ideals have become pragmatic, necessities for the survival and flourishing of the human project. The expectation that contemporary circumstances will kindle a correlative adjustment in worldview grounds the "hope hypothesis". We see confirmation flickering across the cultural landscape in the cross-border cosmopolitanism of mobile and interconnected communities, the ubiquitous search for more satisfying and meaningful ways of living, and planetary environmental awareness. Fanning these flickers of hope into a force for social transformation has become the keystone to a positive resolution of our perilous moment.[9]

Can a global movement for change emerge and consolidate with sufficient speed and scale? Normally, societies develop gradually within resilient boundaries of law, governance and values. However, when historical continuity is interrupted, old societal structures weaken and cultural strictures loosen. In hinge moments, the scope for human choice and freedom expands. Then the efforts of an active minority, cascading through the cultural field, can amplify and redirect social evolution. This is the meaning of 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."

Episodes of collective action, rising unexpectedly to seize the possible from the grasp of the seemingly inevitable, have punctuated the long human story. In our own time, one need only recall the fall of Jim Crow, Apartheid, the Berlin Wall, and a host of other repressive regimes. Now, with the shape of the global future at stake, a whole new volume of the saga opens. Buoyed by pragmatic hope, we can build collective awareness and broad-based action powerful enough to bend the curve of history toward a thriving planetary civilization. It's game time.

Endnotes

1. The 1992 Earth Summit adopted Agenda 21, a consensus blueprint for moving toward sustainable modes of development.

2. Hansen, J. (2012) "Game Over for the Planet", *New York Times*, May 12.

3. Gerst, M; Raskin, P; Rockström, J. (2013) "Contours of a Resilient Global Future", submitted for publication.

4. On planetary boundaries, see Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., Lambin, E. F., Lenton, T. M., Scheffer, M., Folke, C. (2009) "A safe operating space for humanity", *Nature* 461: 472–475. On social targets, see Gallopín, G., Raskin, P. (2002) Global Sustainability: Bending the Curve. Routledge, New York.

5. Raskin, P. (2008) "World Lines: A Framework for Exploring Global Pathways", *Ecological Economics* 65: 451-470.

6. Raskin, P., Banuri, T., Gallopín, G., Gutman, P., Hammond, A., Kates, R., Swart, R. (2002). *Great Transition: The Promise and the Lure of the Times Ahead*. Boston, MA: Stockholm Environment Institute and Tellus Institute. This essay provides a conceptual framework for thinking about the global future and elaborates various scenarios (the scenario it labels Market Forces is equivalent to one referred to here as Conventional Development scenario).

7. Orr, D. (2011) *Hope Is an Imperative: The Essential David Orr*. Washington, D.C.: Island Press.

8. Raskin, P., Electris, C., Rosen, R. (2010) "The century ahead: searching for sustainability". *Sustainability* 2:2626-2651.

9. Raskin, P. (2011) "Imagine All the People", *GTI Perspectives on Critical Issues*. Boston, MA: Tellus Institute. Also published in *Development* 54:287-290, 2011 and *Kosmos Journal*, Spring-Summer 2011:4-7.

Paul Raskin is President of Tellus Institute and Director of the Great Transition Initiative.

Explore Joining GTI

TELLUS INSTITUTE
11 Arlington Street
Boston, MA 02116 USA
Tellus Website: www.tellus.org
GTI Website: www.GTInitiative.org
Email: gti@tellus.org