



# Premises for a New Economy

**THERE IS CONSIDERABLE UNCERTAINTY ABOUT HOW TIGHTLY ECOLOGY CONSTRAINS PLANETARY GROWTH.** Given this uncertainty, prudence

dictates a conservative approach that takes limits to growth seriously. In an ecologically constrained world, both the global North and the global South need to consider new obligations and limits. A basic commitment to social justice requires that the claims of the poor, chiefly residing in the South, take precedence over the claims of the rich, chiefly residing in the North. The North may have to accept an actual reduction in conventional measures of standard of living to create ecological space for Southern growth. At any rate, the scope for further growth to contribute to well-being in affluent regions is quite limited, so the costs to the North of reducing growth may be modest—especially if a new economy is organized to provide the economic basis of a good life based on precepts other than more, more, and still more. While recognizing a priority for the poor imposes obligations on the North, this recognition cannot be a license for the South to replicate the wasteful disregard for ecosystem boundaries that has characterized growth in the North. Nor ought the South to countenance the wanton disregard for the claims of the disadvantaged that has allowed large islands of Northern poverty to continue to exist in oceans of Northern wealth.

## GTI PERSPECTIVES ON CRITICAL ISSUES

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1. *The intertwined problems of development, equity, and ecology require a new economy.* In 1992, officials from 172 nations met at the Earth Summit in Rio de Janeiro and made a set of commitments to address global equity and development within the ecological limits of the planet. In 2012, “Rio + 20” will re-assemble these nations. Its agenda must begin from a recognition that none of the commitments has been fulfilled. Indeed, since 1992 this nexus of problems has worsened.

2. *We are living in a danger zone.* Since the dawn of industrialization, economic growth has been associated with ever greater use of non-renewable materials and energy, as well as the degradation of renewable resources beyond their regenerative capacities. This has eroded the ecosystems upon which the economy depends and will ultimately lead to destructive transformation or even collapse.

A century ago, the day of reckoning appeared so far away that we could ignore the ecological constraints on growth. We seemed to be living in an empty world, operating comfortably within the safe zone of the ecosphere.

No longer. In 2009, a distinguished group of scientists confirmed the cumulative message of environmental science: humanity is already operating beyond the safe space defined by these boundaries.<sup>1</sup> A case in point is the inability of the atmosphere to neutralize the detritus of economic activity, particularly, CO<sub>2</sub> and other greenhouse gases—“global climate change,” for short.

By historical standards, the path from an empty to a full world has been remarkably swift; most of the expansion took place in the last century. If the world economy continues to grow at the rate of the last 30 years, output would expand 16-fold by century’s end. To maintain the same rate of *per capita* growth as was achieved over the last 30 years would be less demanding since world population is expected to stabilize over the next 50 years, but this more modest trajectory would still imply a 6-fold expansion over the rest of this century. Using current technologies, either of these scenarios would require the equivalent of the atmospheres of several additional Earths to absorb the pollutants generated by growth.

3. *We must recognize that a dramatically different way of how we live, work, and understand the world—as distinct from an energy techno-fix—may be required.* A necessary condition for avoiding potentially catastrophic consequences of climate change is to “decarbonize” the economy, that is, to reduce energy use, neutralize carbon emissions from fossil fuels, and shift to renewable sources of clean energy.

Technological optimists believe that decarbonization will allow us to transcend limits to growth. If GDP growth could be decoupled from increased energy use and energy use decoupled from CO<sub>2</sub> emissions, we could hope to achieve safe emissions targets even with 20th century rates of economic growth. However, up to now the results of decoupling have been meager at best. Carbon dioxide emissions from fossil fuel consumption increased by 40 percent over the last two decades. Whatever the theoretical possibilities, the practical reality today is that decarbonization on the requisite scale would require global rates of improvement in energy systems several times faster than any historical experience.

Even if technology does rescue us on the energy front, the economic regime of the past remains problematic. Continued growth on a global scale at historical rates will reach barriers such as exhaustion and pollution of fresh water supplies and loss of genetic diversity, as well as shortages of raw materials, or, equivalently, sharply

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increasing costs of raw-material extraction. Indeed, technological progress on energy efficiency may bring us more quickly to other ecosystem constraints. We may also pass boundaries that have not yet been identified.

We are in the grip of massive uncertainties—uncertainty about whether energy technologies can evolve quickly enough to permit continued growth, uncertainty regarding economic and social constraints, and uncertainty about how quickly a growing economy will come up against other limits. Prudence and responsibility require us to plan for hard choices about the nature and location of growth.

**4. A key implication of prudence, responsibility, and equity is that the claims of the rich must be subordinated to those of the poor and to the well-being of Earth's life support systems.** There is a conflict between on the one hand growth and on the other hand the continued availability of sources and sinks—sources of energy and other raw materials which sustain growth and sinks for carbon, nitrogen, and other pollutants which are the detritus of growth. This conflict has been translated by economists into a question of the appropriate interest rate for comparing the claims on goods, or equivalently, claims on these sources and sinks, on the part of a hypothetical average citizen of the future with the claims of an equally hypothetical average individual living in the present. This interest rate is often referred to as the “social rate of discount” to distinguish it from market rates of interest. Recognizing that an appropriate rate of interest does not emerge from the market is a step up from crude market economics, but in the light of the overwhelming uncertainty that dictates prudence towards the future, formulating social justice in these terms at best captures a secondary issue and at worst is a total distraction..

The more pressing issue is to allocate whatever ecological space there might remain for growth between the poor who chiefly reside in the Global South and the rich, who for the most part are living in the Global North. Once formulated this way, the answer is clear: a commitment to social justice such as the one embodied in the Rio and other UN Principles requires that the claims of the poor take precedence over the claims of the rich. We must accept that food, clothing, and housing in the global South have higher priority than providing additional consumption in the global North.<sup>2</sup> The same logic requires that the needs of the poor within the North and the obligations of the rich within the South be treated as social priorities.

Reducing the extreme disparities that exist between and within countries is more than a mandate of social justice and human decency. Greater equality is now becoming, for the first time, a basic ecological necessity fundamental for the survival of civilization and perhaps humanity itself. The alternative is continual strife over resources, yielding outcomes that range from massive migrations to outright warfare.

Both North and South must accept new obligations and limits. It is reasonable to expect the South to aspire to Northern living standards, but it seems unlikely that the planet's ecology can support the growth necessary to achieve parity even were the world's richest 20 percent to accept that their current income is sufficient for a dignified and meaningful life and forego further increases in consumption. Prudential regard for planetary health thus requires that the North accept not only a slowdown in growth, but very likely an actual reduction in material standards of living, at least according to conventional measures. This would at once set more realistic aspiration levels for the South and create more ecological space for Southern growth.

“Not only the organization of work but also the organization of investment must be transformed.”

This need not have a negative impact on Northern well being. Serious problems exist in the North, ranging from enormous income disparities to the erosion of community. But none of these problems requires economic growth for a solution; indeed, growth can make these—and other—problems harder to solve.

In the South, recognizing a priority for the poor cannot be a license to replicate the wasteful disregard for ecosystem boundaries that has characterized growth in the North. Nor does it countenance the wanton disregard for the claims of the disadvantaged that has allowed large islands of Northern poverty to continue to exist in oceans of Northern wealth. It would be an ephemeral gain if the ecological space created by greater prudence and responsibility in the North were to be abused by governments, corporations, or private citizens in the South. The South can and must break new ground in terms of respect for both ecology and equity.

5. *Planning for a “post-growth” economy in the North will require significant innovation in technologies, economic practice, and social institutions.* In principle the growth of output could be maintained at historical rates while reducing the share of consumption in GDP, and transferring a rising level of income to the South through foreign investment and aid. An “optimal growth trajectory” which takes account of the distribution of consumption across regions as well as across time would point us in this direction.

This trajectory would leave the structure of production and employment in the North relatively intact. However, Northern populations would receive no benefit from productivity growth, making this a politically difficult option. The alternative is to use a rising share of the gains from productivity growth to reduce hours of work or the fraction of lifetimes spent in the labor force.

Both shortening annual hours and shortening work lives present challenges. To be financially feasible, the shorter-hours path would require substantial innovation in the organization of the economy. Capitalism has built-in incentives to concentrate work into fewer hands rather than spread it throughout the available work force. Because a large fraction of labor costs are fixed rather than varying with the number of hours worked, firms typically find it more profitable to employ fewer workers for longer hours than to allow hours to fall with productivity growth. Unless countered by financial incentives and regulations, the incentive to lay off workers in response to productivity increases could lead to rising unemployment coexisting with a cadre of workers who continue consumption-oriented lives as if there were no limits to growth. Therefore, it will be necessary to re-structure the incentives facing firms in areas such as health coverage, payroll and other employment taxes, as well as to institute regulations that encourage reductions in working hours.

An alternative to reduced annual hours is to take productivity gains in the form of shortened work lives. This is less consequential for firms’ decisions about hours of work, but requires fundamental institutional changes in other dimensions. Around the world, public pension plans face actuarial shortfalls, and one frequently suggested remedy is to raise the retirement age. The solvency of planetary ecosystems points in the opposite direction. Greater reliance on ecological taxes could both contribute to funding pension liabilities and reduce environmental impacts.

Not only the organization of work but also the organization of investment must be

transformed. Capitalism has built-in incentives for expanding productive capacity along with productivity, and while continued productivity gains are to be expected and encouraged, the expansion of capacity is itself the problem from the perspective of sustainability. As long as the composition of investment in equipment, buildings, infrastructure, and communications is dominated by the profit motive, and it remains profitable to promote consumption, there is a vested interest in growth which will not easily adapt to the demands of ecology and equity.

Investment must be redirected from capacity expansion to protecting and enhancing the ecosystem services on which genuine prosperity depends. To some extent this can be accomplished by modifying private incentives through taxes and subsidies. To some extent it will be necessary to transcend private incentives.

The enormous power of large corporations must be subordinated to the needs of society. Untamed financial corporations illustrate the problem: they have catalyzed unsustainable growth, created instability, undermined economic security and threatened people's livelihoods. But it is not only financial corporations that must be brought into line with human needs. As corporations are presently constituted in law and fact, major shareholders, creditors, and top executives dominate decision-making. New regulations will be necessary in order to reassert the primacy of sustainability and therefore the primacy of the rights of stakeholders other than owners, creditors, and executives. In addition, radically different institutional structures may be more suitable than the traditional corporation for managing common property and natural resources, for stimulating innovation and investment in sustainable energy, and more broadly, for mobilizing individual and collective creativity to serve human needs.

**6. A slow or no-growth economy requires individuals to accept a new tradeoff of time for money.** Changes in how work, investment, and enterprise are organized speak to the supply side of growth. Equally far-reaching changes will be required on the demand side. The consumption of goods and services has an important but limited role to play in the drama of human progress. Of course, fulfilling all the dimensions of a well-lived life requires a certain minimum standard of living, but this is a far cry from the central notion of conventional economics, namely, that there is no limit to our wants, no limit to the satisfactions from consuming more, more and ever more. Indeed, the "economics of happiness" literature at the very least points to diminishing marginal returns: after a certain threshold is reached (somewhere in the range of per capita GDP of \$10,000 to \$20,000, a range which runs from the average per capita production of the world economy today to twice today's average production), further increases in output add negligibly to perceived happiness/life satisfaction.<sup>2</sup>

An economics that places higher value on discretionary time, in part, would supplant private consumption with new public amenities and spaces that create non-commodified opportunities for leisure and self-development. A second substitution is to build community and other forms of human connection, thereby enriching people's lives without enlarging ecological footprints. This shift will require new policies toward marketing and advertising, which are a major force for promoting consumerist values. Particularly for children, these are pernicious means of persuasion, which limit their mental and spiritual universes.

Ultimately it will also be necessary to develop non-consumerist ways of understanding and being in the world. These ways, which draw on a variety of traditions that have long opposed consumerism, will be strengthened by a retreat from market-driv-

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en growth, which inevitably inculcates values, beliefs, and ways of being that favor success in the market environment. An evolving balance between paid employment and other activities will also require strengthening educational systems to ensure that people have skills and tools to meet their needs inside and outside the market.

**7. *What are the implications of a new economy in the North for the South?*** A separate paper, presumably with more input from people living and working in the South, would be required to answer this question. But there is one obvious implication: the present engine of growth, namely, exporting to the North, would no longer be available to drive the growth train. If the growth of output and consumption in the North is to be sharply curtailed, the North will require reduced imports from the South, with the result that there will be a global reduction in North-South trade. Two possibilities present themselves: more inward-looking growth for the larger countries (China, India, Brazil), and more South-South trade for the smaller countries. Of course, these are not mutually exclusive alternatives.

**8. *A new economy requires a new economics.*** The reorientation of both the demand and supply sides of growth will require a fundamentally different role for the market. Markets have been an important part of most human societies and will continue to be so in a post-growth era. But meeting the challenges of the 21st century will require us to reverse the tendency of recent decades to pursue the fantasy of a “self-regulating” market in which an invisible hand provides all the guidance and control necessary for people to thrive.

There is a growing recognition within economics of the limits of the invisible hand. Mainstream economists have begun to question the role of consumption in enhancing well-being above a certain level of per capita income. Even the identification of well-being with the utilitarian conception based on a calculus of pleasure and pain is being challenged. Behavioral economics is an important step toward more realism about how people make decisions and gain knowledge. Greenhouse-gas emissions are a canonical example of negative externalities, a concept that has been recognized as undermining the invisible hand for almost a century.

Nonetheless, mainstream economics continues to conceive of the economy and economic agents in extremely limited terms and to turn a blind eye to fundamental shortcomings of a market system. Markets organize the production of goods and services, but at the same time markets produce people. Markets shape our values, beliefs and ways of understanding in line with what makes for success in the market. Markets thus exist in a kind of symbiosis with the discipline of economics, shaping people to fit the assumptions of the discipline even as economists shape the world in the textbook image. A new economy will need a broader view of economics, which goes beyond the calculating, self-interested, individual to take account of community, compassion, and cosmos. A new economics will build on a basic insight of ecological economics, namely, the fundamental interdependence of humans and the rest of nature.

**9. *We need to rediscover relationships of respect and reciprocity with each other and the Earth. The time for action is now.*** The logic of our situation suggests that some form of global polity may emerge in the coming decades—good or bad, beautiful or ugly. In one scenario we will descend into a latter day version of Hobbes’ war of all against all, powerful nations fighting for access both to the limited sources of materials and energy for growth and to the limited sinks into which to throw out the garbage that accompanies growth. In another we will go forward in appreciation of

what unites us, building solidarity and equality, justice and compassion, quality of human life and ecological flourishing. We have a choice between a blessing and a curse: either we live in harmony with each other and the planet, or we destroy each other and—perhaps—life on the planet. Let us choose life.

“Let us choose life.”

### Endnotes

1. Rockström, J.; Steffen, W.; Noone, K.; Persson, Å.; Chapin, F. S.; Lambin, E. F.; Lenton, T. M.; Scheffer, M.; Folke, C. (24 September 2009), “A safe operating space for humanity”, *Nature* **461**: 472–475.
2. It should also be recognized that global ecological degradation to date has been mainly attributable to the global North, which, while constituting 20 percent of the world’s population, receive 75 percent of global income.
3. Estimates of this threshold vary considerably. Richard Easterlin, the father of happiness research, has argued that the absolute level of income makes no difference for human happiness, that only relative income matters (R. Easterlin [1995], “Will Raising the Income of All Increase the Happiness of All?” *Journal of Economic Behavior and Organization* **27**:35–47). Bruno Frey and Alois Stutzer have suggested a threshold of \$10,000 (Frey and Stutzer [2002] “What Can Economists Learn from Happiness Research?” *Journal of Economic Literature* **40**: 402–435, p 416). Richard Layard has suggested a threshold between \$15,000 and \$20,000 (“Happiness: Has Social Science a Clue,” Lionel Robbins Memorial Lectures 2002/3. Delivered on 3, 4, 5 March 2003 at the London School of Economics, p 17, <http://cep.lse.ac.uk/events/lectures/layard/RL030303.pdf>; *Happiness: Lessons from a New Science*. London: Penguin, 2005.) Others, for example, Betsey Stevenson and Justin Wolfers, suggest that the relationship between income and happiness entails diminishing returns, but that the effect of a given *percentage* increase in income on happiness is independent of the level of income (Stevenson and Wolfers, “Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox,” *Brookings Papers on Economic Activity*, Spring 2008). The CIA estimates world GDP in 2010, at purchasing power parity, to be \$75 trillion. With a population of 7 billion, per capita GDP works out to \$10,700 (<https://www.cia.gov/library/publications/the-world-factbook/geos/xx.html>).

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