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Exploration of catastrophe and creativity

BARBARA JULIAN

Six years ago, Thomas Homer-Dixon, director of the Trudeau Centre for the Study of Peace and Conflict at the University of Toronto, published *The Ingenuity Gap*, which examined links between the natural environment, geopolitical crises and the global economy. He assessed the gap between the problems humanity faces (climate change, resource depletion, overpopulation in have-not countries, extremist movements) and the collective knowledge, wisdom and will available to solve them.

Six years down the road, the gap has widened. After hurricanes, tsunamis and terrorist events, after high energy prices, Mideast wars and undeniable global climate change, a new sense of alarm has taken hold, yet most political leaders still advocate endless growth -- demographic and economic -- and ignore the links between growth and social and environmental disaster.

In *The Upside of Down* Homer-Dixon shows how the increasing complexity of societies causes a convergence of crises due to the interconnectivity of systems: urban consumer lifestyles demand more energy even as cheap, accessible energy supplies are diminishing; in the developing world landscape degradation (logging turning forests to deserts) creates migration to city slums where impoverished, uneducated masses fuel extremist terrorist causes. The "green revolution," meant to feed the millions, unbalanced millions of acres of soil with pesticides, and still emits the greenhouse gas nitrous oxide into the atmosphere.

It is not this or that crisis but the convergence of all that threatens life.

The interconnection that comes with complexity also occurs in highly evolved natural systems -- a forest for instance -- and is the same as that which contributed to the collapse of earlier civilizations, such as the Roman empire. When a forest is destroyed, by fire for instance, renewal begins immediately. What will supply this renewal and resilience to our civilization after its present form collapses?

Homer-Dixon calls the birth of a simpler system from the ashes of an unsustainable, complex one "catagenesis," and he asks what structures we could put into place now to facilitate that rebirth after collapse.

Instinctively, one thinks in terms of harmonizing with nature's own growth-death-rebirth cycle. No ecosystem, organism, species or economy can grow forever. Things grow, are sustained for a time, and then die by transforming into new states -- what some thinkers now call "panarchy."

Homer-Dixon asks how we might build conserving, cyclic economies that follow the laws of nature, rather than follow political ideologies that promote endless growth even though we live on a finite-resource planet. To build such economies seems do-able, but it is also necessary to increase prosperity in poor regions, which will not otherwise produce an educated middle class whose interests lie in keeping the peace rather than a fundamentalist apocalypse.

The Upside of Down manages to be disturbing without being depressing. It mixes information and anecdote, fact and speculation, questions and answers. As well as diagnosing socioeconomic ills it fascinates readers with descriptions of the workings of nature: how Earth's vegetation cover, air temperature, glaciation, ocean currents and ocean salinity are connected.

“The planet’s climate has re-organized itself dozens of times,” says Homer-Dixon, even just in the past 100,000 years of its multi-billion-year history -- but today is modern humanity’s first experience of it. What global collective of experts in interpenetrating fields might deal with it? According to what cultural and ethnic values will they be selected? It is not the technical problems, but the ideological/religious ones that bedevil us. Change and complexity create in some an increasing need for certainty and authority -- and increasing opportunities for extremists. And, “technological change is allowing fewer people to kill larger numbers of people more quickly than ever before.”

This brings us back to the reality of the impoverished, malnourished, illiterate majority, and the tightening net of converging circumstances in which we all live.

Every resident of the planet should be capable of joining the discussion about remedies. Thomas Homer-Dixon does his part in providing entry points for readers who are interested, in the form of research sources and websites to consult and to communicate through, including his own.