

Surprises Ahead:  
What Will Be Special About the 21<sup>st</sup> Century?  
Why Do We Now Need Boundary-Crossing Research?

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Author Note

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### Abstract

I was asked to make the case for boundary-crossing research by exploring some of the major challenges that will face humanity in the 21<sup>st</sup> Century. I have chosen to make a strong case for boundary-crossing research. I do so by arguing, first, that the emerging conditions of the 21<sup>st</sup> Century will raise the issue of the future of the modern/Industrial form of human civilization; second, that human survival depends on our willingness as a species to learn to cooperate with our evolution at every scale up to the civilizational – an evolution that is taking us beyond our present forms of civilization; and, third, that such cooperation necessarily entails wrestling with the kinds of issues that can only be perceived, understood and responded to within frames of reference that entail boundary-crossing research.

key words: civilization, modern/Industrial, transformation, crises, hope, cross-boundary research

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**Introduction**

I am more than pleased; I am honoured, to be here at the University of Luxembourg for this thoughtfully-designed and carefully-crafted symposium. It is a joy even to be included in this gathering, much less be asked to speak to you. As I understand it, my task is to set the wider historical context for this event; to see our work whole and draw a long-bow on it.

On my office door there hangs a cartoon from *The New Yorker*. A man is walking past a storefront that has a sign advertising the services found within. The sign reads, “*Things put in perspective while you wait.*” This sign captures my sense of my assignment from the universe – for good and ill I am a big picture, context-sensitive, strategically-minded sense-maker. Therefore, I responded with delight when I was asked to think with you about this question: “*What is it about the 21<sup>st</sup> Century that makes boundary-crossing research and living so important, vital, and even urgent?*”

As suggested by the cartoon on my door, what I have to offer to you are my own reflections and perspectives. They are hard-won and I am staking my life on them. But they are nonetheless, just my perspectives. In terms the great American boundary-crosser, Willis Harman, used to use, “*There is no requirement that you agree with me. You can get off this bus at any stop along the way.*”

However, we are all aware that while perspectives are not reality, they are not to be grasped lightly. Perspectives *are* the basis of human action. As we see the world, so we understand it. As we understand the world, so we act within it. Happily, when we change our minds, within limits, history changes. In this vein, I invite you to listen with your most aware, generous and critical selves. John Gardiner, once Lyndon Johnson’s Secretary of Education, once observed that he had enough persons in his life who were *unloving critics*, even enough who were *uncritical lovers*, that what he hungered for were more *loving critics*. So it is with me, and I assume all of us.

**What Will Be Special About the 21<sup>st</sup> Century?**

So, to work, “*What will be special about the 21<sup>st</sup> Century?*”

I offer the thought that the 21<sup>st</sup> Century is a hinge of history, a truly rare time in which the long trajectory of human history will irrevocably change. Well before 2100, it will be clear that human kind will have turned a corner; that the transformations of the 21<sup>st</sup> Century are far more profound, thorough-going and urgent than was publicly recognized in 2010. It will also be clear that our species faces either a tragedy – continuing crises, collapse and eventual extinction, or a comedy – the human journey will continue for millennia towards an ever deeper humanity. The thought that our time may both require and be a period of profound civilizational transformation

may be familiar to those of us who are gathered here. However, we all know that it is not yet *an idea in good currency*. This way of framing the 21<sup>st</sup> Century will not occur to or pass the lips of any of those who will soon gather in Canada at the meetings of the G8 and G20. Few programs in transformational leadership even hint at civilizational work, fewer still prepare us for it. Giving the *civilizational perspective* legitimacy and responding to it with great courage and imagination are among the most pressing tasks of the early 21<sup>st</sup> Century. Fulfilling this project requires boundary-crossers and boundary-crossing research and living. We have real work to do. So I will explore for a bit, the question of, “*Just how profound, thorough-going and urgent is the transformation we are in?*”

## Profound

I have come to distinguish between a *culture* and *the form of civilization any given culture will manifest at a particular time in human history*. I do so because this distinction allows me to offer the thought that what is changing within and among us is not only our various cultures, but the deepest forms of human civilization. From this perspective, to talk of the emergence of a *post-Industrial* or *trans-modern civilization* as if it is merely a newly emergent form of a *culture*, is to miss a good deal of the length, breadth, depth and drama of the challenges we face in the 21<sup>st</sup> Century.

By ‘*culture*’ I mean what is normally understood in these settings. As an example, I offer this statement made in a powerful Keynote address a year ago in Essen, Germany by my friend and colleague Thomas Homer-Dixon (2009), “*I have come to realize that the solutions to our climate-change crisis will ultimately reside at the level of culture.*” While I agree with his use of ‘*culture*’, I would add to his statement, “*and the form of civilization it manifests.*” In my view, the changes he is calling for do not only entail a transformation of *culture*, but an evolution of a new *form of civilization*.

As I look at our history as a species, I find it useful to distinguish five forms of civilization: small-group nomadic forms, settled regional forms, settled empire forms, modern/Industrial forms and, just possibly, a truly post-Industrial or trans-modern form of civilization. This latter, of course, is only a place-holder until we figure out the nature of the beating heart of the next form of civilization, should there be one.

These five forms imply that any given *form of civilization* is not static. If the conditions are right a new form of civilization can emerge from an existing form. If this were not so, there would be only one form of civilization. For good and ill, this is obviously not the case. One policy implication is clear – we should stop promising persons in existing cultures, including our own, that they have the right to maintain their present form of civilization forever. Whatever our intentions, this is a promise we likely *cannot* keep. No way of life is non-negotiable.

A major reason I focus on the various *forms of civilization* and distinguish them from different *cultures* is that every form of civilization is a cosmic bet that its grip on reality – what it takes to be known, true, good and beautiful – is reliable enough that the lives of its descendants will be secure if they continue to honour and live by the ways they have inherited.

At least to me this much is clear. It is not sufficient to use the category of *culture* to capture the transformations that are afoot within and among us today. Much as cultural differences are not to be overlooked or taken lightly, they do not capture the deep differences that exist among different forms of civilization. Put another way, the differences among actual cultures within a given form of civilization are smaller than the differences among the various forms of civilization.

Consider for example, that the French, among many others, have lived in the first four forms of civilization, although, of course, they did not know themselves as *French* 20,000 years ago. This comment also applies to the Hebrew/Christian tradition. If pursued, this perspective can re-frame our misbegotten ways of creating public policy about social welfare, innovation, multiculturalism, Islam, and East/West differences.

### **Thorough-going**

It may not surprise you that as I see it the transformations we are in will be far more thorough-going than is commonly understood. The point I want to convey is this: it is no accident that every spiritual and psychological tradition worth its salt has images of awakening to a new sense of reality at its heart. Evolving consciousness is the name of the human game not merely that of living by *right behaviour* or getting richer.

This was exemplified in a recent conversation with the godfather of complexity theory – Stuart Kauffman. He was saying how excited he was to realize that we live in an open universe; that while he had known this fact for decades, he was just beginning to explore how radical an insight it is. We all know the mind works in this way. The gap in time is long between the initial exploration of new perspectives and the time when they become ideas in good currency, even in our own lives, let alone in our societies.

This gap between insight and its deep digestion into the routines of living is both blessing and curse. The blessing is that we avoid a life of constant turmoil; one driven by the mad rush to live out our newest insights in new ways, and do it today. The curse is overshoot – as persons, societies and civilizations we are prone to staying within familiar patterns and commitments long after the conditions that required them and made them successful have disintegrated. The Financial world has a term for the investments we make during this time – *regret capital*.

I have learned from my mentors that we can trust the process of insight dawning and working its way into our lives. Therefore, it is safe to say that in the 21<sup>st</sup> Century a critical mass of opinion leaders world-wide will move beyond a notional acquaintance with systems, complexity, non-linearity, and respect for/love of persons, community and humanity. These ideas and the realities they reveal will come to grip us by the throat. This new wine will not be captured within the old wineskins of any existing form of civilization. Unfortunately, the timing of these developments is uncertain. The truly big question of whether they will arrive in time to ensure the human future is still open.

## Urgency

A sense of urgency is a function of the ratio of *the time we have to do what is necessary* and *the time it will take to get the job done*. When the *time we have* is divided by the *time required*, if the answer is 1 or more than 1, we can succeed; if not, failure is virtually guaranteed.

So how long does it take any form of civilization to evolve into a truly new form?

It appears to have taken about 5,000 years for settled regional forms of civilization to emerge and become widespread. None undertook this journey deliberately. There was no handbook for shepherds to become farmers. It took roughly half this time for settled empires to emerge and become common. More recently, it has taken roughly 1,000 years for the modern/Industrial form of civilization to emerge and spread to every corner of the Earth. What is more, the development of new forms of civilization has been slow, local/regional, unconscious and optional. Sadly, none of these descriptors apply to the work that is now before us. No one suggests we have as much as 100 years to get this work well underway. We are in way more trouble than we know.

This means that for the first time in history, our species must become conscious enough of ourselves and the planet to learn to cooperate with our own evolution. From my perspective, the core work of the 21<sup>st</sup> Century is to nudge our existing forms of civilization onto a fundamentally different trajectory and to do so in order to allow us to learn to consciously guide our own evolution. The ‘our’ here is at every level – as persons, families, friends, groups, communities, organizations, polities and whole civilizations. For good and ill, to survive with any reasonable degree of grace we must become conscious architects and intentional co-creators of new ways of seeing, thinking and living – ways that truly fit the unique conditions that are emerging in the 21<sup>st</sup> Century.

### So how are we doing?

Consider a somewhat random and incomplete selection of evidence:

- Bill Rees, the co-inventor of the *Ecological Footprint*, has calculated that when Heather and I were married in 1961, humanity was consuming only 50% of the Earth’s resources, when calculated at a sustainable rate of consumption. Today, his figure is 140% and is still growing. Put another way, Earth Overshoot day for 2010 is calculated to be August 21<sup>st</sup>.
- Dennis Bushnell, NASA’s Chief Scientist at Langley is quite clear from public platforms that if you are not deeply worried about the future of humanity, you are not well enough read; your knowledge-base is simply not current.
- The phenomenon of globalization, at root, means that we are well and truly stuck with each other. There is no place to hide. We can no longer afford to hear the admonition of Jesus to “*pray for your enemies*” merely as a moral/spiritual precept. It is an emerging empirical requirement of a world in which it is illusory to think that we can live and prosper while our enemies die.
- The as-yet undigested reality that resources are increasingly scarce; some in absolute terms, all when measured *per capita*.

- There is no hint in the Brundtland Report (1987) that *sustainable development* requires an evolution of our form of civilization.
- There was no official talk in Copenhagen about climate change as a symptom of a much deeper malady – a form of civilization that is reaching the end of its rope.
- As Yehezkel Dror (2001) put it in his Report to the Club of Rome,

*“The situation of humanity in the face of global transformations can be summarised in two sentences: Societies are unprepared; Governance is unequipped.... In the main contemporary governance is obsolete and unable to deal fittingly with rapidly mutating problems and opportunities.”*

- My remarkable colleague, Dr. Maureen O’Hara (2009), characterizes our situation this way: We face *Another Inconvenient Truth* – *the biggest challenges of the 21<sup>st</sup> Century will be those for which we are least prepared and on which we spend little serious money; those that bear on our deepest sense of what it is to be human; those that are social, psychological, spiritual and cognitive in nature.*

As I read the evidence, the main conclusion is not comforting. To me, it has become apparent that there is no reasonable chance that eight or nine billion of us will be able to live on this earth as an acceptable version of a late, modern/Industrial form of civilization; that today’s core global project, achieving *sustainable development within this unconsciously held frame of reference*, simply cannot succeed.

Nonetheless, modern/Industrial civilizations are undaunted, as are the elites in virtually all other societies. We simply do not believe that the 21<sup>st</sup> Century will be, as the Centre for Strategic and International Studies asserts, *An Age of Consequences*. Indeed, we cannot bring ourselves to believe it. Rather, we cheer the fact that the fundamental dynamic of human civilization today is that of the late, modern Industrial form of civilization becoming the norm. Everywhere, officially life is coming to be seen as a production/consumption function, the success of which is measured by the accumulation of money. Greece was not the only country dominated by the thought that we must *“Build a competitive Greece<sup>1</sup>.”* Indeed, the speed and sophistication of the extension of this understanding to the ends of the earth in the last 60 years makes the efficiency of the 19<sup>th</sup> and 20<sup>th</sup> Century Christian missionary movements pale in comparison. Consider that 1,000 business schools are being built every year. More, those who open them do so with pride.

I am trying to point out that, as a species, we still live officially within long-inherited and multi-layered frames of reference. For example, this ancient assumption is still made today – *while the future may be unknown, it will allow us, wherever and whomever we are, to be whom we already are forever.* Everywhere and overwhelmingly, the conversations of officially sanctioned consciousness are within, not about, the deepest assumptions on which our ways of living hang. This is dominantly true of our governments, major corporations, foundations, churches, universities, international bodies, voluntary organizations, disciplines and learned societies. Sadly, it is even dominantly true of the field I know best: that of futures research and strategic

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<sup>1</sup> This slogan is carved in a granite wall outside the Ministry of Economic Development, Athens, Greece.

foresight. In this perspective, the global credit crisis, which is still costing us far more than mere trillions, is but a warning shot regarding the damage our most deeply embedded and unconsciously-held assumptions can do.

These thoughts are truly troubling. One reason is that we now know that whole cultures can, and sometimes do, get it profoundly wrong; that whole cultures can and have set their feet to a path that, in time, leads only to societal disorder and even collapse. The work of Joseph Tainter (1988) and Jared Diamond (2005) makes this clear. Worse, *we know that to date no culture that has found itself on such a path has been able to become conscious of this fact early and deeply enough to alter its fate.* As of today, the scoreboard reads something like “*History 22, Humans 0.*”

### Is Hope Warranted?

You have probably figured out by now that from my perspective, we do not suffer so much from counter-intuitive reality, as from forms of civilization that rest on, reflect and reinforce counter-reality intuitions. That I am pessimistic about the development of a reality-grounded intuition that is deeply absorbed by the opinion leaders of modern/ Industrial civilization will not be news to you. For me optimism and pessimism are about the difficulty of the human journey. I believe it will be far harder and more arduous than any we now anticipate or are prepared for. But pessimism is not hopelessness.

I am a *hopeful* pessimist. I believe that the myth of Sisyphus is not the last word about the human adventure. Why?

As a free-lance intellectual, I am cheered by the thought that a transformation of our form of civilization is not merely required, but is already well underway; that over the last 250 years, as we have been extending our modern/Industrial capacities we also have been profoundly changing our minds about the nature of reality, what it is to know it reliably and who we are as persons within reality. As I see it, we in modern/Industrial civilizations are being driven off our inherited mental maps and governance models at depths that, while not unprecedented, are truly rare. The good news is that what is driving us in these wholly new directions is the best, not just the worst, of modern/industrial civilization. As children of the Enlightenment, many of us have had the courage to follow the data wherever it had taken us, even into *terra incognita*. Cross-boundary work depends and builds on this quality of courage-driven integrity.

Again, somewhat randomly, I draw your attention to the following:

- This event and the work that brings us here. It could not have happened in 1970 and would not wait until 2040. Whatever else we share it is the conviction that we cannot make sense of the nature of, threats to and possibilities hidden within the present without greatly expanding our imaginative grasp on the world of which we are a part. We know that the short-term, siloed, and superficial sensibilities that characterize and dominate modern/Industrial forms of civilization simply will not get us to where we need to go. We know, as my grandmother told me, we must become persons who are *far-sighted, broad-minded and with a depth of judgment.*



- The emergence of a sensibility alive to and informed by living adaptive systems, complexity theory, humanistic psychology, critical theory and an openness to a renewed spirituality, forgiveness and love.
- The widespread hunger for spaces within which we can grow; for experiences that are intellectually reliable, emotionally safe and deeply non-trivial.
- The fact that it is slowly dawning on us that any human future will require a degree of maturity that is unprecedented in human history; that the challenge of self-limitation is at the heart of our work in the 21<sup>st</sup> Century; and that self-deprecation greases the skids of self-limitation. Consider this paragraph from Ian McEwan's (2010) new book, *Solar*:

*How, wondered Beard as his plane last quitted the stack on a banking hairpin tangent and lined itself up north of the Thames to begin its descent, how could we ever begin to restrain ourselves? We appeared, at this height, like a spreading lichen, a ravaging bloom of algae, a mound enveloping a soft fruit – we were such a wild success. Up there with the spores.*

As a person, of course, I am also fed by multiple sources of life and hope. I include kittens, the colour of the sky over my Rocky Mountains at dusk, children, an open universe, an uncertain future, our capacity for intellectual, emotional, physical, and spiritual experiences, my wife's voice and the excitement of good work. And, all of these rest on my experience of being loved. For me, the last word about my life, and by extension our lives, is in the passive voice. We are held and loved. We live by grace. I doubt this is news to you.

In this light, this meeting can be seen as a *clan gathering*. Granted we are a loose-knit bunch. As with any family reunion we discover cousins we did not know we had. Our clan identity, such as it is, appears to be rooted in the power of the experience of coming to insights that cross, span, transcend and soften the boundaries that fragment our lives, landscapes and communities – silos of gender, ethnicity, discipline, tradition, sector, geography, nation and language. Whatever the specific and individual paths that got each one of us here, we know that by growing beyond our inherited horizons we can see, think and do things that inherited patterns do not permit. We also know in our bones how liberating and empowering this can be. The bonus is that in the process we become more fully human and do so as persons, families, communities, organizations, nationalities and just possibly whole civilizations.

In short, our commitment to boundary-crossing research and living is experiential, as well as solidly intellectual. We need it for us as persons and not just for our careers and our shared future. The work of conceiving and embodying the next form of civilization requires us to be willing to trespass even when others tell us to stop.

Lest we get too giddy with the journey we are on, we need to recall that learning to exercise responsibility for the ongoing evolution of the forms of our civilizations is new work. Moses, the Buddha, the Prophets, Confucius, Aristotle, Jesus, Mohamed are all silent on it. As far as I know, this work is not assigned in substantial terms. To my knowledge, for example, the world's first major research centre that is wholly devoted to developing an integral and reliable knowledge of the long evolution of human consciousness, cultures and forms of civilization has yet to be founded.

I do not mean that there are no persons, and even institutions, with a deep interest and commitment to aspects of this work. Our presence here is testimony to the contrary. We are not here by accident. Our lives to some significant degree are dedicated to this work. Nevertheless, we must admit that the institutions in which we live, the governments, corporations and foundations that fund them are not yet captivated by the new project of learning to be mid-wives of a new form of civilization. A new *Manhattan Project* to save civilization is not yet even on *our* agenda, let alone that of the G8 or G20.

This is ironic. Our money-mad societies are blind to the fact that there is a franchise here – one that is worth hundreds of billions to the first jurisdictions with the moxie and capacity to own it. I have no doubt that in the next 5 to 15 years, some jurisdiction will commit itself to becoming a living learning laboratory for the world – one that demonstrates how a largely unconscious late modern/Industrial culture can transform itself into a wholly new form of civilization. What I do not know is who will pick up this challenge and where the world's first conference of jurisdictions committed to this work will be held. That it will be held I am wholly confident.

### Summary

Allow me to briefly recap what I have tried to say.

Our time, the 21<sup>st</sup> Century, is profoundly important for the long-term future of our species and the planet as we know it. This century is a hinge of history like no other. By 2100 we will know whether the future will be fatal for us or whether we have managed to walk the narrow edge of a precipitous cliff and are giving life to the new global project of birthing a truly new form of civilization.

Much sooner, possibly as early as 2020, some of the things that we as a group know will have gone critical in the wider world and be known by more than a critical mass of opinion leaders. This means, among other things, that the official optimism of late modern/Industrial civilizations will all too soon give way to widespread dread and pessimism; possibly to panic and paranoia. Bluntly, we are about to be sorely tested as a whole species. Best we find a sure footing for the courage to be hopeful in the midst of our bouts of depression. Best we re-discover knowing as a sacred act of love.

But lest we get too starry-eyed, Northrop Frye (1976), the great Canadian literary critic, would remind us that for life to be a comedy, not a tragedy, those who go hand in hand into the sunset have had to have the wit and courage to live to the end of the story. Given that the actual story we are in is not one we think we are in, the drama of the 21<sup>st</sup> Century will be riveting. *Will we awaken in time to realize that the future now so widely anticipated is among the least likely? If we awaken, will we figure out the work that is required of us? If we know the work, will we rise to the occasion or falter? If we falter, will others abandon or encourage us?*

I conclude with the words of Wilfred Cantwell Smith, another exceptional Canadian. Wilf Smith was one of the world's great historians of religion. He founded the McGill Institute for Islamic studies and later the Harvard Centre for the Study of World Religions. In a private note to me he said:

*“I have spent much of the last forty years endeavouring to understand world views other than those we in the West have inherited; and in the last several years I have been particularly concerned with the question of what is involved in the endeavour to understand, and to help others understand, an outlook different from the one that one already has. One of the conclusions to which I have come is that in order to understand a different view – especially if it be radically different and/or profound, comprehensive, humane – one must oneself become a different sort of person.”*

So it is for those of us who are boundary crossers – persons who are becoming conscious co-creators of a new form of civilization. May it be a civilization that is reasonably wise, prophetic, visionary, courageous, respectful, secure, prosperous, inclusive, innovative, sustainable, deeply humane and easily moved to both tears and laughter.

The future is in our minds, our hearts and our hands.

### References

Diamond, J. (2005) *Collapse: How Societies Choose to Fail or Succeed*. New York, USA: Viking.

Dror, Y. (2001) *The Capacity to Govern: A Report to the Club of Rome*. Abingdon, U.K: Routledge.

Frye, N. (1976) *The Secular Scripture: A Study in the Structure of Romance*. Cambridge, USA, Harvard University Press.

Homer-Dixon, T. (2009) *The Great Transformation – Climate Change as Cultural Change*. Keynote address, Essen, Germany, June 8-10, 2009. Accessed at [www.homerdixon.com](http://www.homerdixon.com)

Homer-Dixon, T. (2006) *The Upside of Down: Catastrophe, Creativity and the Renewal of Civilization*. Toronto, Canada, Albert A. Knopf.

McEwan, I. (2010) *Solar*. Toronto, Canada: Alfred A Knopf. P. 111.

O'Hara, M. (2009) *The Other Inconvenient Truth: Psychology and the Threatened World*. Presidential Address to Division 32, the American Psychological Association Annual Convention of the American Psychological Association, August 8, 2009, Toronto, Canada.

Tainter, J. (1988) *The Collapse of Complex Societies*. Cambridge, U.K.: Cambridge University Press.

United Nations. (1987). *Our Common Future: Report of the World Commission on Environment and Development*, chaired by Gro Harlem Brundtland.