



E-Journal of the World Academy of Art & Science

ERUDITIO

*“A multidisciplinary forum focused
on the social consequences and policy
implications of all forms of knowledge on
a global basis”*

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Editorial

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Eruditio Vision

The vision of the Journal complements and enhances the World Academy's focus on global perspectives in the generation of knowledge from all fields of legitimate inquiry. The Journal also mirrors the World Academy's specific focus and mandate which is to consider the social consequences and policy implications of knowledge in the broadest sense. The vision of the Journal encompasses major challenges facing global society and seeks to examine these issues from an interdisciplinary, multi-method and value guided perspective.

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Editorial

This issue of *Eruditio* contains challenging and possibly controversial themes. Nonetheless, overall, these contributions challenge the frontiers of thinking in different spheres of global relevance.

In [“Need for a New Economic Theory”](#), **Orio Giarini** has given us a clarified walkthrough of the central conceptions of economics that seem to imprison us today. He then brings in the notion that the forms of wealth or value production are in flux. He identifies the importance of the growth of services as a new foundation of economic value. He notes that this perspective introduces uncertainty and probability as the new rules of the game. However, this simply requires a strong need to redefine economic value in order to understand what scientifically reproduces the wealth of nations.

Edy Korthals Altes, in [“Quo Vadis? Cultural Reorientation – Our Shared Journey”](#), states his provocative postulation at the beginning of his article. He challenges us with his proposition that the spiritual renewal of humanity is long overdue. He has seen that deliberation of the enlightenment, which produced the autonomous man, also produced a creature who seems to have inflated himself. This self-inflation has come at the cost of spiritual deficit. We now confront new crises in which the spiritual dimension of human identity is increasingly lost as money and greed overtake any recognition of deeper and transcendent spiritual values. He underscores the misconceptions that this view produces and wants to get us back to values infused with spirit that are universally relevant. He has a focus on such concepts as interconnectedness, vulnerability, yearning, and awe. From these considerations, he thinks we can emerge with a common platform that might more closely patch together the practical world of science and the transcendent world of religion. He concludes by stressing that at the back of his analysis is the centrality of the most inclusive conception of love, and that “God, goodness, and love, both received and given, give meaning to life.”

Graeme Maxton, in [“Privacy is not Dead, It’s Just Resting”](#), rightly notes that our right to privacy is under assault. The assault is not only led by governance, but also by major corporate personalities. Currently we are in the shadow of the Snowden whistleblower disclosures. These disclosures reflect staggering intrusions in the mega collection of data about individuals. Even foreign leaders are not immune from this. Reports from the U.S. government indicate that these NSA intrusions into private communications violate the American Constitution. He has given a broad but incisive description of a multitude of other ways in which the privacy of the individual may be compromised. A great deal of this is not well known or if known, understood. The author has provided us with a useful introduction to these challenges regarding the common sense right to privacy.

Robert W. Fuller, in [“Something America and China Can Do Together”](#), writes with unassuming but profoundly challenging message. In this article, he looks at the position of America and China as the starting point for his meditation on profoundly important future directions of global, social organization. He sees in the Chinese tradition some timeless Confucius values and he sees in the American intellectual tradition the deeper values tied to the idea of universal dignity. It is this concept that may move us past the imperfections of

democracy to a deeper system of values rooted in dignitarian governance. This is a short but profoundly challenging thesis, and one that the editors hope will generate continuing discussions in the World Academy.

One of our contemporary conflicts about basic values is the distinction between one's liberty and the abuse of liberty namely, license. This is at the back of the issue raised in this article by **Graeme Maxton** and **Octavian Ksenzhek** on the [“Limits to Nature”](#) about the autonomous Homo economicus and the idea that this player's autonomy is limitless. This theme is explored in terms of the limits of nature itself and the challenge of knowing the limit and knowing the cost of going beyond the limit.

Winston P. Nagan

Chair of the Board, World Academy of Art & Science

Chair, Program Committee

Editor-in-Chief, *Eruditio*

Need For A New Economic Theory

Orio Giarini

Member, Board of Trustees, World Academy of Art and Science;
Director, The Risk Institute

1. Search for “The Wealth of Nations” – some basic points on macro-economics

There are thousands of books and articles these days, including political declarations at all levels, particularly in the “developed” countries, invoking “growth” as a basic factor to solve major economic problems such as employment, financial disequilibria, retirement and health costs, etcetera.

The big question is: which growth and how. Is there any major factor to be taken care of, in addition to key issues like economic and political stability, adequate monetary policies, social fairness, education and entrepreneurial spirit, stimulation of human capital and environmental protection?

2. Thinking of Adam Smith

At the end of the eighteenth century, Adam Smith tried to answer very similar questions.

During his times the word “economist” was not yet diffused: he was a social philosopher. And he was concerned about identifying a key event or issue, which could become the priority to promote the “Wealth of Nations”.

He answered the question on what would define the industrial revolution. The new manufacturing systems, of which he had various examples around him in Scotland (starting with the making of a pin), provided the practical evidence.

His book and his experience during the phase of industrialization became the basis for the formulation of “economics”, applicable even today. We should note then that this discipline (and its theories) is clearly derived from this historical experience.

3. ...like Galileo Galilei...

“Nonsense” was the reaction of most “social scientists” of his time (take as an example Quesnay and many others) to the central idea of industrialization. For them, the evidence was that the wealth of nations was based on agriculture. Point!

4. Macroeconomics: “desaparecido”?

There are many economists who in the last decades have admitted that macroeconomics (the general framework of economics) is somewhat deficient. The attraction of the simulation

models has somewhat obscured this issue, as well as the tentatives to absorb the issues concerning the environment and the very fortunate idea of sustainability in the existing dominant theories. But what about the “production” of the wealth of nations?

5. The Value of Services

At his time, rightly, Adam Smith underlined the priority of industrialization, which was in between agriculture (an important sector, but which of course had to improve) and services (depending on “dedicated” people, but with no recognized economic relevance).

The point is that services tend today to provide about 80% of all the “productive” activities. The higher levels of technology, in most cases, become more and more efficient every day and the tools are becoming cheaper. But they require more and more services to conceive, manufacture, distribute, finance, control etc.

Some economists (see those who were involved in the GATT discussions) tried to include in the “normal” economic theory, the evidence of the growth of services, saying that they are simply products that you don’t feel even when they fall on your feet.

In any case, today it must be recognized that good services are the basis for a good and successful “manufacturing” process at all levels.

6. Studying “supply”

Adam Smith was concerned about how to improve, via industrialization, the production process (i.e. “supply”, as it is called by the economists).

“Modern” economics has shifted, since many decades, from supply to demand (consumption). And still thinks mainly in these industrial-age economic terms (among others see the discussions between Krugman and the “mellonites”). In fact the advances in science and technology have provided the economists with the idea that supply should be elastic enough and that the key is to mobilize or manipulate demand. By the way, this argument was the background of the bitter attacks against the Club of Rome report of the 1970s on *The Limits to Growth*.

But since then, the “traditional” economic growth, in the industrialized countries, has diminished – with many ups and downs – so that 1% or 2% growth of GNP seems a great achievement in the western world, and this even in a world of extended “quantitative” easing.

So, what about reviewing the conditions of supply, of producing wealth today?

7. The Growth of Services and Economic Value

Supply today starts with fundamental research (and its serendipity: the search for discoveries not yet known). And then goes on with applied research and technology, up to a period of utilization of any system or “product” (which can be a service), and a final phase of waste treatment.

Here is where the notion of economic value is linked to the notion of risk management in time (at least part of the value is linked to the future).

Uncertainty and probability are the rules of the game (a little like going from Newtonian physics to Quantum physics). The economic value depends largely on the period of utilization, which also includes costs. At the beginning of the whole process, research is also based on managing probabilities, as well as market success, maintenance and security up to disposal costs. Value is necessarily linked to the notion of performance (in time). Entrepreneurs know this.

We are therefore pretty far from the ancient classical model of value, based on the “equilibrium” between supply and demand in a given moment in time.

There is then a strong need to redefine economic value, to better understand what produces the Wealth of Nations. Indicators have to be adapted: otherwise, why is it then that GNP improves when there are costs linked to disasters? The war in Syria is obviously not a blessing: who or what measured the actual losses of the civil war?

“There is a strong need to redefine economic value, to better understand what produces the Wealth of Nations.”

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Quo Vadis?*

Cultural Reorientation – Our Shared Journey

Four Key Words – One Direction

Edy Korthals Altes

Fellow, World Academy of Art and Science;
Former President, World Conference of Religions for Peace

Abstract

This article is an urgent plea for a cultural reorientation. The present financial-economic crisis is symptomatic of a culture which has lost its bearings. The economy reigns supreme. The present economic model is however not sustainable at a global scale.

How do we break the stranglehold of the economy on our culture? Two things: a realistic appraisal of the present predicament and a broadly shared view on a sustainable and more liveable world.

Is there in our individualistic society – with such diversity in convictions of life – a common ground for developing a shared creative vision? In the opinion of the author a common platform could be established in four keywords, to which everyone can relate. Against the backdrop of the relationship of the four keywords, some pertinent questions point towards a more realistic, sustainable economy.

‘Quo Vadis?’ is carried by the conviction that human beings are capable of charting a more promising course of action in a global world.

Yes, we can!

Together, we can!

Who would dispute that a spiritual renewal of our culture is long overdue? The profound impact of the severe economic crisis we are experiencing has led to many concerned analyses. These are often limited to the shortcomings of the market economy. But is that appropriate? Wasn't this crisis inevitable? Is it not the symptom of a culture which has lost its bearings? The contribution of science and technology to a substantial improvement and betterment of our quality of life is indisputable. The age of Enlightenment paved the road for 'responsible man', freed from abuse of power by church and monarchs. But has this 'autonomous man' overestimated himself by closing his eyes to the greater Reality from which we are inseparable?

Our culture has become imbalanced by the one-sided focus on the material plane, at the expense of non-material values. The economy reigns supreme. Economic considerations are

* This essay was translated from the original Dutch text by Caspar van Lissa (1985), MSc, grandson of the author and PhD candidate researching the role of empathy in conflict resolution at Utrecht University.

the decisive factor in most sectors of society. Just think of how materialism has dominated education and the media. In a public sector, the principle of profit is supplanted without serving the public interest. Vulgar self-enrichment has penetrated even the healthcare system. In the world of sports, corrupted by money, players are sold for millions of dollars! In the business world too, we see the devastating effects of the pursuit of immediate financial gain. Short-term thinking undermines the continuity of the enterprise.

A healthy economy is vital to society. Hence the need for a critical reflection on the pillars on which it rests. Especially now, it has become increasingly clear that the current pattern of production and consumption is not sustainable on a global scale. The current culture of greed is based on three fatal misconceptions:

- **The first:** That man has infinite material needs which must be satisfied.
- **The second:** That everything must grow; permanent growth is considered to be not only desirable but even necessary. Yet permanent material growth within the limits of our habitat on this planet is impossible.
- **The third:** A completely free market, unconstrained by rules, effective supervision or a moral/social context. This paved the way for irresponsible decision making, objectionable practices and large-scale fraud. The disastrous consequences were not confined to the financial sector. The entire economy was dragged into a deep crisis.

How can we break the stranglehold of the economy on our culture?

First, by becoming aware of the collective madness of this dance around the golden calf and then of a modern idol hypnotizing us with the lure of the dollar. For this idol, even the elite of our society go down on bended knees. People are trampled in the frenzy of this macabre dance around the Mammon, and the necessary conditions for a decent, “humane” existence for future generations are sacrificed. All this to satiate the greed of those now living! Short term thinking abounds.

“Our culture is dominated by forces that degrade people and objectify them, reduce them to Homo economicus, a number, a cash cow for unscrupulous financial experts.”

But do these symptoms of moral decay not follow from a loss of the sense of the transcendent, the loss of a greater horizon? Is this not the reason that man has lost the rudder and thus the view of his true destination? Václav Havel had already come to this conclusion in the years of his imprisonment. The philosopher Hans Jonas expressed this insight even more powerfully in his seminal work “The Imperative of Responsibility”. Jonas referred to the loss of the notion of transcendence as “perhaps the greatest mistake in history.”

This time of change demands a view of life that provides structure and coherence. After all, here lies the key to our deepest motivation. This determines our behavior, and the way we relate to people, matter, and nature itself.

People: Our culture is dominated by forces that degrade people and objectify them, reduce them to *Homo economicus*, a number, a cash cow for unscrupulous financial experts.

Have we forgotten that man is a person, imbued with inalienable dignity and fundamental rights that deserve respect?

Matter: Are we master or slave to our worldly possessions? Driven by the pursuit of more, regardless of the consequences? Or do we realize that the essence of life is found in our human relationships? Matter should serve human and social well-being.

Nature: Is nature an object of boundless exploitation? Do we recognize or respect the intrinsic value of nature? She is to be handled with care. This is an absolute requirement, since our natural environment is the fundamental condition for our continued existence. Hence the need for an economy that develops within the limits dictated by nature.

Our view of life is the source of inspiration for personal commitment to a peaceful, sustainable and truly human society. A source that will flow abundantly when one strikes a balance between concern for one's own well-being and for the common good. A source that allows people to flourish in freedom and responsibility, endowed with a spirit of empathy and independence that allows them to turn against the forces that threaten life.

Would it not be possible, in our individualistic society, with its colorful diversity of philosophies of life, to rally support for a shared creative vision that leads to a reorientation of our culture?

Can we find common ground to set course for a sustainable, more livable society? I believe that we can, as the sources for this shared vision are indeed present in science, religion and other philosophies of life. Let me make an attempt to identify the fundamentals of a common approach.

The starting point is an experience of reality that we can all identify with, regardless of differences in belief. We all live in a world that's under threat, populated with humanists, agnostics and believers alike. We must chart a new course together.

The ingredients for that joint reflection are present in four key words that everyone can relate to.

1. Keywords

1. Interconnectedness
2. Vulnerability
3. Urge to live
4. Awe

The first two, *Interconnectedness* (1) and *Vulnerability* (2), are based on hard facts. *The urge to live* (3) is vital for a human being. The fourth word, *Awe* (4), reflects a fundamental experience that is repressed in our culture, but potentially present in every human being.

It goes without saying that these keywords may be differently rooted in a humanist or agnostic compared to a monotheist. However, the values they inspire are shared by all. Some of these are responsibility, respect for life, peace, justice, solidarity, and moderation.

1. Interconnectedness

Science in particular has deepened our understanding of the fundamental *interconnectedness* of all ecosystems. Many religions too have propagated this for centuries. This insight is crucial, both for the individual and for society as a whole. It can contribute to the replacement of the sterile *egocentric culture of individualism* by a *culture of connectedness*, based on relating and caring. The global *Campaign of Compassion* works towards this end. This inspires values like justice, solidarity and the pursuit of peace. In political terms, it means caring for the poor and weak in society, social and just taxation, a humane immigration policy, etc. This notion of interconnectedness is also of particular relevance in our rapidly globalizing world. Growing awareness of connectedness can promote the development of international agreements (e.g., for raw materials, water) that take into account the legitimate interests of all countries, including the weaker partners. The increased interdependence among nations requires it.

“The current environmental crisis is largely caused by the unsustainable pattern of production and consumption of about one fifth of the world’s population.”

2. Vulnerability

Is it still necessary to elaborate on the vulnerability of our ecosystem after the impressive documentary *Planet Earth*? Don’t the facts outlined in the reports of United Nations experts speak loudly enough? We might be headed for an environmental catastrophe in the next few decades. The current environmental crisis is largely caused by the unsustainable pattern of production and consumption of about one fifth of the world’s population. Three fifths of the world is now following this globally untenable model of development at an accelerated pace. How could we close our eyes to the severity of the situation, given that the problem is further compounded by explosive population growth?

In order to repel a global catastrophe, cooperation between science, religion and other fields of life is required. Only then can the colossal forces that were developed in recent decades be controlled. Science can contribute predominantly in the field of technology. Our view of life can inspire the necessary behavioral change. This partnership is essential for a sustainable economy on a global scale. An economy respects the boundaries dictated by nature.

3. Urge to live

The urge to live is inherent in all forms of life. For human beings this implies another aspect namely the longing to live well, in a world where living is good. A world in which peace and justice are not just empty words. A world which provides future generations with the opportunity to enjoy the beauty and diversity of Mother Nature.

The current deterioration of the necessary conditions for life thwarts the realization of this deepest desire. This has stirred the primordial instinct – the will to live. This force manifests itself in the surge of creative initiatives to promote sustainability in business and other sectors, and also in numerous groups, movements and NGOs. We’re in this battle for the long

haul, and the courage to persist despite adversity is crucial. That's why access to a fountain of hope is indispensable. Hope springs eternal!

The necessity of a more responsible way of man relating to matter and nature is greater than ever, hence the urgency of a thorough reconsideration of the premises of our culture of greed. This is where religions, other philosophies, and science – each in their own way – share a joint responsibility. That applies equally to all who bear responsibility in politics, economy, business, the media, and culture. They are the ones who shape the process of change.

Many religions preach a resounding call to change our way of life, to leave this misguided path. Science provides indispensable analyses and suggestions for creative new directions. Politicians and managers are faced with the challenge of paving those ways!

4. Awe

A single word, which so aptly captures the sense of rapture we experience when faced with the wonder of that which transcends us, the miracle of life in the boundless Universe. It is a word that evokes a fundamental attitude of profound respect and reverence for the source of all Being. For the religious man, it is rooted in his relation to God. The Holy Books bear witness to this living relationship. The Psalms beautifully sing its praise. But the non-believer too can identify with this fundamental principle. In the international Pugwash Movement, I have met many leading scientists who – being agnostic – were filled with awe in their contemplation of the structure and interconnectedness of the micro- and macrocosm.

“A hurried and hectic existence leaves little time for reflection on fundamental questions of life.”

The advancing scientific understanding of the precision of the laws that enable life on earth adds to the sense of awe over the origin of all Being. Indeed, progress in scientific discovery can lead to a greater sense of awe.

This fundamental principle also emerged during the installation of the major European telescope on the Spanish island of La Palma, in the presence of Queen Beatrix of the Netherlands and other European heads of state. A famous astronomer pointed out that this telescope allows us to penetrate even further into the secrets of the Universe, ‘but that everything we do here is nothing more than reflecting on the great miracle that it exists.’

The sense of *Awe* is fueled by wonder and contemplation of Being; by the primal force of nature, as well as her beauty and elegance.

In our Western culture, the vision and feeling for what transcends us are often lacking. In ‘flatland’, the horizon remains limited; there is no dimension of depth. This is where banality and greed thrive, while humanity and integrity languish.

For many, this sense of Awe is an unknown experience. The Self, elevated on a pedestal, is mainly governed by the horizontal dimensions of counting and measuring. A hurried and hectic existence leaves little time for reflection on fundamental questions of life. Moreover, thanks to science, many commodities have become essentials. When we come to understand a little of the process of life, we tend to believe that we have a handle on it.

The principle of life in itself is a great miracle that too often escapes attention. And precisely that insight might help us gain perspective on Man's place in the *Ultimate Reality*.

2. A Vision of Interdependence

Nobody can ignore these four key words, because they determine the *human condition*. Each of them in turn has the power to inspire change, but a cultural reorientation at this critical stage requires a clear vision of their interdependence. Only then, the indispensable synergy will be engaged. This vision of intimate interdependence is currently lacking. A serious shortcoming – the very fusion of all four key words can shift the balance in favor of the change that is now underway.

To clarify the above statements, I mention the mindset of some leading environmental scientists who expect total salvation based on a pragmatic approach. It is this blind spot precisely that underpins the deeper spiritual underpinnings of the environmental crisis (the fourth key word) and hinders the progress of sustainability.

On the other hand, there is a form of religiosity which leads to resignation and passivity, rather than the required engagement. Single-minded fixation on the fourth key word – and the consequent attitude of *awe* – can sometimes lead to a failure to take a stance based on the factual *Interconnectedness* (1) and *Vulnerability* (2).

Each of these four words is an important signpost. But the decisive impetus for cultural change comes from a clear view of the cohesion between these key words. Together they provide a basis for a joint reflection on the continued existence of humanity in a humane, sustainable society.

3. A Common Platform

The much needed reorientation of our culture would benefit tremendously from cooperation beyond perceived differences. The vision of the cohesion between the key words provides a starting point for people of different views of life to come together and set a new, common course.

Might that be possible for science and religion too?

Certainly, the relationship between them has historically been tense, especially when each exceeded the boundaries of their own competence by taking a stance on matters which belong to the domain of the other.

Essentially there is no need for contradiction, because each has its own domain, with its own methodology and a different objective.

Science focuses on analysis, the explanation of phenomena and the study of regularities.

Religion and philosophy focus on giving meaning, and identifying a code of life that make a society livable. They focus on insights that provide structure and cohesion to life, and promote personal development that combines freedom and responsibility.

In *The Great Partnership*, an important book by renowned British Chief Rabbi Jonathan Sacks, he provides a powerful argument for cooperation between science and religion. Both are aimed at promoting human well-being. And precisely that is what is now threatened by the irresponsible way man relates to matter, and nature. The disturbing perversion of the essence of religion by fanaticism, extremism, and violence need not deter us from collaborating with the vast majority of moderates. A radical minority might distort our perception of the essence of a religion, but can never strip it of its original meaning. The famous Swiss theologian Hans Küng rightly distinguishes between true and false religiosity. His criterion is whether the well-being of man is served. In this context, the importance of dialogue within religious denominations is further emphasized. Like the cooperation between religions and other views of life, it deserves more attention from spiritual and political leaders.

The fundamental *Interconnectedness* (1) and *Vulnerability* (2) demand effective action in the short term. Facts and trends speak an ominous language. This action is even imperative if we intend to heed the *urge to live* (3). Hence, there is an urgency for joint reflection of believers and nonbelievers, science and religion, the cultural sector, economy, and politics. Our collective survival under humane living conditions is at stake.

Religion without science is blind, but science without religion is lame. – Einstein

4. Love – The Keystone

The preceding discussion avoided the use of the big word – “Love”. This is due to the widespread misconception that a ‘soft power’ is irrelevant in a formal discussion on cultural change. Love is one of the most powerful forces known to man. It can bring the mighty to their knees, and move people to act in favor of a fellow human in need, even at the expense of personal sacrifice.

It is also Love that gives a powerful impetus to our awareness of the four key words. Certainly, reason forces us all to do so, but without love we end up in a cold, harsh society.

Love is universal. We are steeped in it in the womb. It is transmitted to future generations. Love is the keystone in the dome created by the four key words. It is the unifying force, and has left its mark on each of them.

*It is the highest form of connectedness,
the most sensitive and fragile,
fulfills our deepest yearning
and deepens the sense of awe.*

Love is central to many religions. For the Christian it is rooted in the love of God, which is embodied in Jesus Christ. The inner knowing that nothing – neither might nor power, in life or death – can separate us from that love is a constant source of inspiration, strength, independence and courage to persevere.

In our formalized society, a rediscovery of the rejuvenating power of love is essential. Not merely for the individual, but for all of us. It is about more than sustainability: Ultimately, it is love that makes society livable.

5. Discussing a Viable Route Together

For a new inspiration for our culture, a realistic assessment of the critical situation in which we find ourselves is required. Against the backdrop of the relationship between the four key words, we might ask the following questions:

“The current crisis offers a unique opportunity for the emergence of a new, sustainability-oriented economy. This requires innovative policy, not a return to the past.”

- How can we promote development towards a culture with a well-balanced relationship between matter and spirit? How can we get rid of the dominance of the economy?
- Are we ready for a revision of the purpose of the economy? Shouldn't its purpose be *the responsible use of the limited resources available to promote the general and individual well-being of present and future generations*?
- Shouldn't production, distribution and consumption of goods and services be aimed at a just and sustainable society in which the limits that nature sets are strictly adhered to? Is the economy a goal in itself, or an instrument at the service of human welfare, *within the limits made by nature*?
- How do we liberate ourselves from consumerism? A sustainable economy is impossible when it is driven by the assumption that man has infinite material needs to be satisfied. Man is more than a craving animal. He does not live by bread alone, but also by spiritual resources that inspire a full, meaningful life. Does not a highly developed society require moderation? If so, should we not limit the frenzy of material greed stimulated by intrusive advertising?
- Does the pursuit of unlimited material growth – given the limits of our habitat on Earth – not inevitably lead to a global environmental catastrophe?
- How can we safeguard job security while adapting our pattern of production and consumption?
- Should the calculation of GDP be adjusted in order to obtain a more realistic picture of the qualitative development in a society?
- How can the growing gap between rich and poor be reduced?
- How can the interests of citizens be protected in the public services?

The current crisis offers a unique opportunity for the emergence of a new, sustainability-oriented economy. This requires innovative policy, not a return to the past.

Finally, whether we will succeed to achieve the required fundamental cultural reorientation in time depends on whether a tipping point can be reached, where enough people are willing to promote it. Hence, there is importance of a well-founded view of life, which determines the way man relates to matter and nature.

The decisive factor may be the answer to the ultimate question posed to each of us:

- What have I done in my lifetime, with my abilities, in this critical phase for humanity?
- Has this been a “self-centered” existence, focused on money and blind to the distress of the world?
- Or have I tried – in a spirit of empathy – to promote a more peaceful, humane, and sustainable society?

To this question, Herman van Rompuy, the current president of the European Council, offers a profound and guiding answer in a Haiku of only nine words:

*God, goedheid, liefde
gekregen en gegeven
vullen een leven.¹*

*God, goodness and love
both received and given
give meaning to life.*

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Notes

1. Herman Van Rompuy, *Haiku* (Gent: Karakters, 2001)

Privacy is Not Dead, it is Just Resting

Graeme Maxton

Member, Club of Rome

“Those who would give up essential Liberty, to purchase a little temporary Safety, deserve neither Liberty nor Safety.” – Benjamin Franklin

Abstract

Our right to privacy is under assault. Companies are collecting more information about how we live and our views, often with questionable motives. At the same time, many governments are tracking their citizens more than ever before.

Privacy is not just about keeping a bank account hidden or a love affair a secret. It is about freedom. It is about the right to do what we want to do and express our thoughts, alone or with others, without being watched. It is an essential component of relationships, offering intimacy and allowing shared discussions and experiences. It is what has separated modern societies from totalitarian regimes. If what we do and where we go are tracked and recorded, we tend to change our behaviour. If what we write or say is monitored, we hold back.

Despite its importance, new technologies and laws have allowed the privacy of millions of people to be invaded. A fundamental right is evaporating. If we let the trend continue, we risk losing almost everything enlightened modern societies hold dear.

1. Don't Shout Across the Room at Parties

When Mark Zuckerberg, the founder of Facebook, said in 2010 that he thought that people wanted to be more open about sharing personal information he was suggesting that our views on personal privacy have shifted greatly in a very short time. When he and others founded Facebook just six years earlier, he said, “the question a lot of people asked was ‘why would I want to put any information on the Internet at all?’”

Today, the generation of Facebook fans and LinkedIn lovers no longer cares about the information they post. Hundreds of millions share intimate details of their lives. They shrug when Facebook and its rivals change their privacy policies to make this information more widely available, deeming their privacy irrelevant or unimportant. As Zuckerberg says, information about us has become public by default.

Yet there remains the question about who or what is driving the change and why. Is the new openness about personal information the result of fundamental changes that have taken place in our societies? Do people no longer care about their privacy? Or is the change being driven by companies wanting to profit from prying into our lives? Can we trust Facebook, Yahoo, MySpace, Bing, Google, Skype, Microsoft, Apple and others with the information we have given them and that which they have collected themselves?

That would certainly seem rash, especially after recent revelations over their close links to America's national security apparatus. The fact that these firms are so large and powerful is itself reason to worry. Because they have almost no competition, dominant companies have a tendency to exploit customers and markets, as the oil, rail-road and banking barons of the 19th century did. Today's big American technology companies don't control the electricity supplies, bank lending or transport routes, however. They control something much more powerful – information.

Using the information they hold, these firms now have the ability to track individuals and groups with similar views and ideas, whether they are in contact or not. They know who is left-leaning, who is gay, who is worried about their weight. They know who our friends are and where they are, even when we do not. They have the ability to nudge our views in directions they might find beneficial – to make us think more favourably about particular products or negatively about issues like privacy, for example. Through the use of 'sock-puppets', fake online personae used by marketing firms and government organisations, they can manipulate our opinions about news events and politics.

Recent technological developments raise other concerns. The latest generation of tablets and smartphones are able to report their location, even when they are switched off. Software makers and telephone companies can keep track of where we are and where we have been. The next generation of phones will even be able to track the type of movement being undertaken – a car journey, a walk, a train ride, for example.

More troubling still, the activities of the big technology companies, and what they do with the information they hold are almost completely unregulated. Within the US, the authorities have said that regulations would hinder commercial interests and so companies such as Facebook and Google will only face a biannual audit of their activities for the next 20 years. New regulations are being developed in Europe, India and China but they will not come into force for several years. For others, indeed for the majority of users, what these companies collect and what they do with the data are beyond the scope of national laws. This is especially troubling because these big firms have already shown very poor ethical standards.

2. Two-Facedbook and Twittish Twitter

Intel, Google and Microsoft have all been fined for anticompetitive behaviour. Apple and Skype have been repeatedly investigated and accused of it. Google was caught getting around the privacy settings on its own browser by placing tracking cookies¹ on websites. The US Federal Trade Commission (FTC) says Facebook has 'repeatedly' failed to honour its promises to keep personal information private,² has continued to make information available even after users deactivated or deleted accounts, and shared information with advertisers and developers when it had promised not to. Google collected information about internet access points and user details illegally with its Streetview car and then failed to delete the data despite repeated assurances that it would.³ Many of Apple's programs have been found to be 'harvesting user information, including entire address books' without the users' permission.⁴ Twitter has acknowledged that it has stored customers' address lists on its servers too, without them knowing. When this was discovered, instead of apologising, the company amended its privacy policy to make the practice standard.

Sergey Brin, one of Google's founders, famously once said that the perfect search engine would be 'like the mind of God'. It would be everywhere and know everything. By combining the information it collects from all the sites it operates, the company appears to be making every effort to develop this, a system that knows you better than you probably know yourself.

Google's main search engine tracks your interests and then filters the results you see, depending on your previous searches. It tracks the sites you visit. YouTube, which Google owns, tracks your taste in videos. Streetview Google Earth and Google Maps offer a picture of where you live and where you go. Picasa, Google's photo sharing website, uses facial recognition software to identify you and your friends. Gmail knows who you write to and what you say. Google Docs stores your letters, Google Calendar your plans. The company's Android operating system on your phone or tablet knows exactly where you are and where you have been. Changes to the company's privacy policy in 2012 allow it to collate all this information.

By integrating so much information, Google even has the ability to track those who are not active on its sites. As long as your friends are talking about you and posting your picture, you and your movements are being logged.

3. Not Now Google

Taking this a step further is a system called 'Google Now' which collects everything that Google knows about you and then tries to create a 'theory of you' to predict your needs. This is called 'push search'; rather than posing questions, the system tries to give you answers before you ask.

Google Now knows, for example, where you are likely to be at certain times of the day, ties this to information about where you actually are, and then tries to predict what you will do next. If you have an appointment in your Google Calendar, and usually travel by bus, it will tell you when you need to leave. If you have bought a flight ticket online, it will know this and so tell you about any air-traffic delays. If you are in the car, it will learn where you go or where you recently thought of going based on your searches. So it will make suggestions and tell you how long the journey should take, given the traffic conditions. The system also gives you updates on your favourite sports teams, which it works out from your searches.

Google Now is obviously good for advertisers, because it helps them target their messages better. Journalists report that the system is 'creepily self-aware'. Yet the question is: should Google be permitted to have a theory about any of us? Should a private company, one found guilty of collecting private data illegally, have so much information about us that it can help direct our lives? Rather than simply trying to predict what we do, the risk is that it will try to influence or determine the outcome. Rather than being helpful, it has the capacity to modify our experiences and ideas, either to the benefit of advertisers or for some social or political end.

4. The State is Watching You Too

Our privacy is not only under assault from big American technology companies. Governments are invading the privacy of citizens more than ever before, often illegally.

Millions of people are being watched, tagged and monitored by their governments, even though most are not guilty of any crime, will not be charged with any offence and, until Edward Snowden's revelations in the summer of 2013, did not even know they were being spied on. Even now, they are told that the snooping is essential to combat crime and fight terrorism.

The traditional approach to tackling crime is to wait for an offence to be committed and then use investigative techniques to catch the culprits. Its success depends partly on people being dissuaded from committing crimes, through education, instilling a sense of social responsibility and having penalties severe enough to put them off. It is the enlightened approach to crime and assumes, at its core, that good society is based on trust.

The new approach supplements the traditional model with technologies that can make investigations simpler, though these also carry costs. They make it possible for some serious crimes to be stopped before they are committed and so can save lives. They make solving some crimes easier. By using the location tracking system on mobile phones or CCTV cameras for example, the police can identify who was present when a crime was committed. By reading the emails sent between members of a suspected terrorist cell, the security services can keep an eye on what they are planning.

Inherent within this approach however, is an assumption that innocent people will not mind being watched too. For it to work, the security services need to monitor people they think might commit a crime. And sometimes they will get that wrong. They will also track people who abandon plans to commit a crime – who may do nothing illegal either. And they will inevitably track the friends of possible wrong-doers, to see if they are involved. The new approach means that many people are tracked, with their friendships and movements watched, logged and recorded without them knowing, when they are not guilty of anything.

To function, the modern approach requires every citizen to accept that they may be monitored. Everyone has to trade a possible loss of privacy for greater security. They have to accept that the details of their lives may be tracked and stored without their knowledge and for no good purpose. Moreover, they have to accept this imposition without their agreement, and under the assumption that the powers given to the police and security services to do this will not be abused.

Despite the obvious advantages, the drawbacks with this approach are many and grave. It undermines the fundamental right to a presumption of innocence. By tracking us, there is an inherent doubt, a small assumption that we may be guilty of something. The system is also easy to abuse and it's hard to track when it is. It can lead to a state that is effectively controlled by the police, where people are fearful about what they do, say and think.

Despite these disadvantages, such modern crime-fighting thinking lay behind the creation of America's Information Awareness Office (IAO) in 2002. This was established to build a database on everyone. Its goal was to create Total Information Awareness (TIA), a computer program that would collect data about all of us and then interrogate this to identify patterns of interest. Without having to apply for a search warrant, the IAO wanted to collate information from personal emails, financial transactions, medical records and social networks and so build a picture of every individual in America and ultimately everywhere else too. This was

to be used to identify suspicious activity, unhealthy relationships and threats. The original IAO program included funding to collect biometric data too, and allow people to be tracked using a network of surveillance cameras.

Less than two years after it started, the IAO was shut down by Congress because of fears that it would lead to a mass surveillance system. Yet its ideas are still with us and many of its projects have been given the funding they needed. What it set out to achieve has been created, in other ways and under a different name. The master software program has been renamed 'Stellar Wind' or simply 'The Program' and, despite legal objections on constitutional grounds from top Justice Department Officials,⁵ the massive computer needed to interrogate all the information is nearly complete.

The NSA's \$2 billion data storage facility will eventually have the capacity to process yottabytes (a quadrillion gigabytes or 10 to the power of 24 bytes or 500 quintillion pages of text) of data and, from 2014, it will be the centre-piece of a 'Global Information Grid',⁶ with the capacity to store personal information for decades.

The blandly-named Utah Data Center will intercept, decipher, analyse and store vast swaths of the world's communications. With the help of an array of listening posts and satellites, it will capture and store the contents of private emails, phone calls, and Google searches, as well as all sorts of other personal data trails – parking receipts, travel itineraries and store purchases. Because of its vast computing power and the huge number of messages that can be analysed simultaneously, which make it easier to identify patterns, the Centre will also be capable of deciphering previously encrypted material. This will give America access to an even wider range of password-protected data than now, including financial information, commercial reports, databases, stock transactions, business deals, foreign military and diplomatic secrets, legal documents and other private personal communications.

Rather than being pulled together by the government as was envisaged under the establishment of the IAO, the data needed to feed this computer will come from private companies. Google, Facebook, Twitter, Apple and all the others have collected all the information needed, and even more effectively than originally envisaged. Congress has not been able to object.

By tapping into Facebook and other social networking sites, the authorities in America and much of Europe know who our friends are, what we do and what we like. Google's data tell them our interests. Mobile phone apps show them where we are, to within a few feet. Twitter is used to identify 'communication clusters',⁷ groups of people with similar views and the opinion leaders they gather around. Twitter was especially useful in pinpointing the ring-leaders during the Occupy movement's sit-ins in late 2011 and has also been used to track Tea-Party thinking, to predict which political candidate members we will want to follow.

5. Sharing More Than You Intend

The creation of this giant computer and database is not the only developments that should bother us, however. Part of the IAO's original remit included mining the information hidden in metadata. This capability has also been developed.

Metadata is the technical name for the hidden content on our computers, the electronic DNA. Metadata lie behind all websites, videos and electronic documents. They show when

computer files were created, where they are located on a hard drive and when they were accessed or changed. They show the location and identification of the computer as well as the name of the user and the Internet Service Provider. They show the changes made to documents, revealing what the writer added and deleted. Comments made by those editing the text are also traceable. This is also true for those who use cloud computing services and for files converted into PDF format. (Metadata can be removed though.)

Metadata can be used to show, for example, that a series of pictures was taken using the same camera. If they were taken using a camera with a location detector, the metadata show the precise location of the picture. It can be proved that photos said to have been taken in New York were actually snapped in Hong Kong.

Lawyers and government agencies value metadata because they are so revealing. Metadata ‘mining technologies’ have been developed to identify the thinking behind documents and reveal the details of who contributed to them. US security agencies have developed meta-metadata analysis tools, which mine the metadata about the metadata. And, crucially, websites such as Google and Facebook, which promise to protect some of your information in their privacy policies, do not promise to protect users’ metadata. They class them as business information which they retain and store indefinitely.

Scalable Social Network Analysis (SSNA) software was originally a creation of the IAO too. The IAO’s plan was to create a program that would analyse real life social networks – families, sports teams, legislatures—for attributes that were interesting or valuable. Today, the software is used commercially to analyse data contained in email, sent on Twitter or posted on Facebook and Flickr to target advertising. It is also used commercially in the online gaming industry, and to track buyer behaviour.

For governments SSNA software is used to extract and review parts of speech and distil text. It looks at patterns and relationships hidden on social networking sites, in phone conversations and in corporate data. It is used to identify fraud, find hidden terror cells, track money launderers and seek out organised crime syndicates. It can be used to monitor people’s personal interests too, track their friendships and affiliations and understand their wants, beliefs, written thoughts and activities.

6. No ‘Reasonable Expectation of Privacy’

Such developments, while technically impressive, are also worrying. The government agencies that use them (and not just in America) freely admit that they are compromising privacy.⁸ Thanks to changes in laws since 9/11 however, most of these methods of collecting data are legal – though not all.

Technologies of more questionable legality have also been developed and used by several government agencies, including computer viruses and Trojan software deliberately used to infiltrate computers. Examples include CIPAV* and Magic Lantern.[†]

Magic Lantern tracks keystrokes and is installed via an email attachment or by exploiting the vulnerabilities in computer systems. The FBI originally wanted to activate the program

* See https://en.wikipedia.org/wiki/Computer_and_Internet_Protocol_Address_Verifier

† See [https://en.wikipedia.org/wiki/Magic_Lantern_\(software\)](https://en.wikipedia.org/wiki/Magic_Lantern_(software))

when someone started to use PGP encryption to protect their email messages, to allow them to open sealed documents.

CIPAV is a virus tool used by the FBI to gather location data. It identifies the address of a computer, the open ports, installed applications, operating system and web browser while tracking the websites visited. Its existence was exposed in 2007 during the trial of a boy who made bomb threats to his school near Seattle.⁹ His computer had been infected with the software through MySpace. Controversially, the US Circuit Court of Appeals ruled that the FBI's actions were legal as Internet users no longer have any 'reasonable expectation of privacy'.

The FBI has also developed an internet traffic 'packet sniffing' program called Carnivore. This is installed on the computers of Internet Service Providers and used to track messages in transit.

7. Micro-brother is Watching Too

Governments are not just using computers to track their citizens. According to *The Washington Post*,¹⁰ technologies and techniques honed on the battlefields of Iraq and Afghanistan are in the hands of British and American law enforcement agencies now too, allowing mass surveillance of their citizens.¹¹

In the UK, almost all towns and cities are already under 24-hour CCTV surveillance. Many cameras are fitted with facial recognition technology and microphones to listen into nearby conversations. British¹² and US authorities have also started to use unmanned aerial drones to monitor citizens and gather evidence for prosecutions. In the US, these aircraft can stay airborne for up to 15 hours, and watch from a height of up to 7,000 metres, using cameras, infra-red sensors and radar.

In England and Wales, the police have collected DNA from 6 million citizens* – more than one in eight adults, creating the largest database of its kind in the world. Samples are taken from anyone detained at a police station, even if they are not charged with a crime. Although the police wanted to retain these samples indefinitely, a ruling by the European Court of Human Rights means that samples of those convicted of non-serious crimes will only be kept for between six and twelve years. Others will be retained indefinitely.

Records of people's emails, telephone numbers dialled, online games playing, web-browsing and chat-room activities are also now stored in many Western countries for many years, by law. This includes information about text messages, Google searches and Facebook friends. Many authorities record all travel into and out of their country too, including details of itineraries, seat reservations, addresses, credit cards and phone numbers accessed.

Those wanting to avoid such intrusions will find it hard. Not being on the Internet and not having a smartphone does not mean you cannot be tracked. Your face has probably already been logged, apart from your being followed through other electronic activities such as credit card use. Thanks to automatically tagged photographs on social media sites, the FBI¹³ is now tapping this as a new source of intelligence. With the latest security cameras able to search through 36 million faces in just one mouse-click, remaining anonymous is hard. Even

* As of the end of 2012

wearing a mask, dark glasses and a wig will not help. Thanks to another part of the IAO initiative, Human Identification at a Distance (HumanID) software makes it possible to identify your gait, the way you walk, from up to 150 metres.

8. Yesterday's Idea And Tomorrow's Too

With so much snooping, it is easy to imagine an Orwellian future, with televisions spying on their viewers, microwave ovens recording dinner conversations and beds reporting the dreams of those who sleep in them. At issue is not just how much of our lives is suddenly being recorded; it is also the pace of change that matters. Thanks to technological developments and new pieces of legislation, the level and sorts of monitoring have expanded astonishingly quickly in little more than a decade while laws designed to protect us have struggled to keep up.

"Basic freedom to behave as individuals is being compromised."

The reason most people are unperturbed by these developments is that the risks attached to them still remain unclear. Moreover, we are led to believe that the changes are both necessary and useful.

Although privacy is protected under Article 8 of the European Convention on Human Rights (ECHR),* additional rules will come into force by 2016 to provide new safeguards. Companies operating in the EU will need to gain consent, which will be strictly defined, before they can use or process data about European citizens. They will only be permitted to collect the information they need and they will only be able to keep it when they need it. Moreover, any data held must be movable, so that it can be taken down from a social network site whenever a user wishes. European citizens may also be given a new right – the right to be forgotten. They will be able to see the information a company holds on them and demand that all copies be deleted.

While such regulations will undoubtedly help, and they only help those in Europe, they treat the symptoms, not the problem.

The question they fail to tackle is, why are these companies and our governments invading our privacy at all? Humankind has survived for centuries without this sort of intrusion and there is scant evidence that it is making the world any safer. It may have made the job of policing a little simpler and allowed companies to sell a few more products. But the majority of people are worse off, because their basic freedom to behave as individuals is being compromised.

It is especially hard to justify this government intrusion when the risk of terrorism is so small. The number of deaths caused by terrorist attacks in the US and Europe since 9/11 is tiny compared to those caused by heart disease, road accidents and even child-birth. Yet Western governments have built a massive network of computers to spy on their citizens, while doing little to address problems that are real and urgent – such as climate change and youth unemployment.

* Contrary to popular opinion this Convention and the Court which hears related cases are not part of the European Union (EU). The treaty came into force several years before those needed to form the EU were developed. There is a link now though, with any new member of the EU required to sign the ECHR. Even so, there are more than 20 signatories who are not members of the EU, including Turkey which was a founding signatory, and Russia.

9. Without Change, We Will Behave Differently

Of course, the right to privacy has been breached throughout history. The difference between then and now though, is that what used to be an exception is now done automatically and few people question it. Worse, much of the surveillance is done in secret, with little or no oversight by courts or elected bodies.

In *Delete – The Virtue of Forgetting in the Digital Age*, Viktor Mayer-Schönberger tells a story about a Vancouver-based psychotherapist, Andrew Feldmar.¹⁴ In 2006, Feldmar tried to cross the Canada-US border – something he had done many times before. On this occasion though, the guard searched online and found that he had written in a medical journal about taking LSD in the 1960s and so he was barred from entry.

“The invasions of privacy we have seen in the last ten years will gradually destroy our basic right to freedom unless they are stopped.”

The following year, Stacy Snyder, a Pennsylvania teaching student, posted a picture of herself at a party on MySpace.¹⁵ She was wearing a pirate’s hat and holding a plastic cup which may have contained alcohol. Classmates saw the photo and reported her for breaking college rules. As a consequence, she was denied her leaving certificate, which effectively ended her teaching career.

Many more examples illustrate that the information being collected by private companies and governments has the capacity to change our lives in ways we can barely imagine. It has the potential to change what we do, write and say. What we do will be recorded, posted and stored. What we write will be read by people other than those intended. What we say will be taped and filed.

If we cannot delete or modify these data, the information being uploaded about us risks imprisoning us in our past, never allowing us to forget. It takes away a vital and natural part of what it means to be a social person, the ability to put the past behind us at times. Without change, embarrassing pictures, angry tweets and bitter blog postings will remain in the ether forever, and with them our embarrassment.

Not being able to escape the past will make us frightened of the future too. We will worry that information we post tomorrow might be used against us later. That will make us change how we behave. As more non-digital records are scanned and uploaded, even those things we did before the Internet era have the potential to haunt us again too.

If we do not stop these trends, they will force us to organise our societies and handle our relationships differently, making us become more secretive and frightened. They will infect our ability to make judgements and act spontaneously. They will affect our ability to live our lives as we choose.

The invasions of privacy we have seen in the last ten years will gradually destroy our basic right to freedom unless they are stopped.

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Notes

1. "Google circumvented privacy settings for Safari on iOS, Mac," *Macworld* http://www.macworld.com/article/165455/2012/02/google_circumvented_privacy_settings_for_safari_on_ios_mac.html
2. "Facebook's Eroding Privacy Policy: A Timeline," *Electronic Frontier Foundation*. <https://www.eff.org/deeplinks/2010/04/facebook-timeline> "Facebook addresses several privacy problems," American Civil Liberties Union Blog. <http://www.aclu.org/blog/content/facebook-addresses-several-privacy-problems>
3. Matt Warman, "Google failed to delete Streetview data," *Daily Telegraph*, 27th July 2012 <http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/9433908/Google-failed-to-delete-Streetview-data.html>
4. "Social apps 'harvest smartphone contacts'," *BBC*, 15th February 2012 <http://www.bbc.com/news/technology-17051910>
5. "The Program," *New York Times*, 22nd August 2012 http://www.nytimes.com/2012/08/23/opinion/the-national-security-agency-domestic-spying-program.html?_r=1
6. "The NSA Is Building the Country's Biggest Spy Center (Watch What You Say)," *Wired Magazine*, 15th March 2012 http://www.wired.com/threatlevel/2012/03/ff_nsadatacenter/4/
7. "Occupy vs Tea Party: what their Twitter networks reveal," *New Scientist*, 17th November 2011 <http://www.newscientist.com/blogs/onepercent/2011/11/occupy-vs-tea-party-what-their.html>
8. Jason Ethier, "Current Research in Social Networking Theory," *Northeastern University*. <http://www.atkinson.yorku.ca/~sosc2410/Social%20Network%20Theory2.pdf>
9. "FBI's secret software keeps track of teen who made bomb threats," *Wired Magazine*, 18th July 2007
10. "Monitoring America," *Washington Post* <http://projects.washingtonpost.com/top-secret-america/articles/monitoring-america/>
11. "International Privacy Ranking," *Privacy International* <https://www.privacyinternational.org/reports/surveillance-monitor-2007-international-country-rankings>
12. "Drone makes first UK 'arrest' as police catch car thief hiding under bushes," *Daily Mail*, 12th February 2010 <http://www.dailymail.co.uk/news/article-1250177/Police-make-arrest-using-unmanned-drone.html> "Police drone crashes into River Mersey," *BBC*, 31st October 2011 <http://www.bbc.co.uk/news/uk-england-merseyside-15520279>
13. "FBI would like to follow you on Facebook and Twitter," *Russia Today*, 26th January 2012 <http://www.rt.com/news/fbi-social-networks-privacy-781/>
14. "LSD as Therapy? Write about It, Get Barred from US," *The Tyee*, 23rd April 2007 <http://thetyee.ca/News/2007/04/23/Feldmar/>
15. "How to Lose Your Job on Your Own Time," *New York Times*, 30th December 2007 http://www.nytimes.com/2007/12/30/business/30digi.html?_r=1

Something America and China Could Do Together

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Abstract

Neither China nor America has a system of governance geared to solving 21st century problems. To discover governance models that can deal efficiently and wisely with imminent technological and global challenges, experiments could be conducted, in both countries, and in tandem, in realms such as academia, healthcare, and business. By the time efficient global governance becomes crucial to human survival, China and America could have developed and tested models of organizational governance that show us how to proceed at national, regional, and global levels.

It may be an exaggeration to say that as Chinese-American relations go, so goes the world, but it's probably not far from the mark. I'm not only thinking of China's and America's common interest in avoiding war on the Korean peninsula, but looking ahead to a time when, if the two twenty-first-century superpowers trust each other well enough to act together, the world could take an irreversible step away from the twin perils of environmental degradation and war.

At the moment, the greatest threats to China and America come not from each other, but from flaws in their own systems of governance. Chinese and Americans alike are burdened by political systems that are not keeping pace with the times.

In the spirit of trial-and-error, why couldn't the two giants conduct experiments designed to discover forms of decision-making that are better suited to deal with the technological, environmental, and political challenges that we face?

Each nation would draw on its own traditions and could borrow from the others. As many have noted, the political philosophies of Confucius, Mo Zi, and Huang Zongxi are as rich as those of the Founding Fathers.

Confucius taught that a harmonious relationship is one in which both partners take care to protect each other's dignity. To affirm dignity is to confirm belonging and grant a voice in decision-making while disallowing exclusion, paternalism, and coercion.

Dignity is a universal desire, not something liberals favor and conservatives oppose, or vice versa. So too, every faith and every political system supports equal dignity in principle, if not in practice. This suggests that instead of choosing between libertarian and egalitarian models of governance, we should seek a dignitarian synthesis that incorporates both Jeffersonian and Confucian principles.

Though he didn't call it dignitarian governance, Confucius was one of its earliest advocates. Confucianism argues that rulers should be chosen on the basis of merit, not entitlement, and that the governing class is not above the law, but rather, honor-bound to serve not their own but the people's interests.

Interpreted in today's language, good governance means honoring legitimate rank, but abjuring rankism – abuse of the power inherent in rank. Dignitarian governance – be it academic, corporate, or civic – rests on precisely that distinction. Rankism, not rank, is the source of indignity, so by barring rankism, dignity is secured.

Though many subspecies of rankism – corruption, cronyism, favoritism, predatory lending, insider trading – are unlawful, these laws are nowhere consistently enforced.

“Wherever accountability is weak, rulers may be tempted to use the power of their office not to serve others but to strengthen their own hold on power.”

Western democracies cannot ignore the fact that many of today's issues are too complex to be settled at the ballot box. “One person-one vote” style democracy may have been up to the tasks of governance in an agrarian age, perhaps even in an industrial age, but it is no match for the intricacies and perils of hi-tech, knowledge-based societies.

It can be argued that humankind has come this far only because science was in its infancy and we lacked the means to destroy life on Earth. But now, avoiding irreversible damage to the planet and to each other is too important to leave to autocrats, ideologues, or amateurs. Society pays a steep price when its leaders learn on the job, much as it does for on-the-job training in business, education, and medicine.

But there's the rub. Wherever accountability is weak, rulers may be tempted to use the power of their office not to serve others but to strengthen their own hold on power, if not to enrich themselves. Put the other way round, any model of governance that would substitute expertise for popular elections must have a solution to the age-old conundrum of holding accountable those to whom authority is entrusted. Be it the “experts”, Confucian sages, Platonic philosopher kings, or highly trained professionals, the burden of proof is on those who would make light of the warning implicit in William Buckley, Jr.'s remark: “I should sooner live in a society governed by the first two thousand names in the Boston telephone directory than in a society governed by the two thousand faculty members of Harvard University.”

Dignitarian governance offers an alternative to traditional democracy by providing accountability through layers of governing bodies comprised of a fine-tuned mix of professionals and representatives chosen by those who have a stake in the decisions of those bodies.

Take academic institutions as an example. In the university, dignitarian governance means that students, staff, faculty, alumni, administrators, and trustees all have a voice and

a share of the votes. Votes on policies affecting distinct aspects of academic life are apportioned according to the responsibility that constituencies bear for those aspects. Thus, the faculty holds a majority of votes on educational policy, students hold the majority on issues of student life, and administrators hold a majority, but not a monopoly, on budgetary issues. Trustees, in consultation with the other constituencies, periodically choose new leadership for the institution, and hold fiduciary responsibility, but they delegate day-to-day internal governance to faculty, students, and staff.

Many of the issues facing our globalized hi-tech world call for technical solutions, not political compromises. It would be naïve to suggest that effective mechanisms of accountability already exist, but it's not too soon to begin designing and testing alternatives to find ones that work. Much experimentation will be needed to learn how to apportion votes among stakeholders so as to optimize the overall quality of decision-making while ensuring accountability.

We could begin in education and healthcare, and then apply what we learn to management and business. As we gain confidence in the capacity of dignitarian models to bring more knowledge to bear on decision-making without weakening accountability, we can introduce them into civic affairs, first in municipal government and then at the state, regional, national levels and even at the global level.

Democratic governance took time to develop, and so will dignitarian governance. But we must try because the only way to create and maintain the global harmony that will protect us from self-destruction is to create forms of self-governance that ensure dignity for everyone.

Both China and America have traditions and institutions that hold vital lessons for modernizing decision-making. While it's a stretch to imagine either country undertaking fundamental reforms in the near term, it's not quite so hard to imagine them doing so in the context of a loose partnership. As for our global future, what could be more auspicious than the two current superpowers working in tandem to invent governance tailored to meet the challenges of the twenty-first century?

"The only way to create and maintain the global harmony is to create forms of self-governance that ensure dignity for everyone."

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Limits to Nature

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Abstract

We like to think that we live in a world without limits. In practice though, everything is defined by the limits it imposes on the environment in which it exists. Our societies too, are defined, and made possible, by their limits, by the rules and values we impose. Throughout history, humanity has sought to understand and modify the limits that surround it, to cross boundaries and achieve ever more. As man-made limits are changeable, and as we have learnt more about the workings of nature, we have become conceited. We have begun to believe that we can change the limits of nature too. This is an illusion. We cannot manage the limits of nature and it is probably dangerous for us even to reach them. The amount of carbon we have pushed into the atmosphere in the last century shows that we should not test the limits of nature. We have started a process and the consequences will last for centuries to come. It is essential that we stop worsening this process and prepare ourselves for the changes ahead.

1. We cannot manage the limits of nature, even if we think we can

It is easy to want to live in a world without limits. We don't want to be constrained by anything, to be held back. Like long distance runners and formula one racing car drivers, humankind is always trying to push the limits, to achieve ever more. As technology allows us to breach ever more barriers, it is easy to think that we already live in such a world.

Yet everything has limits and it is unrealistic to wish otherwise. There is a maximum speed human beings can run, even drug enhanced. There is a maximum speed that racing cars can achieve, before they take flight. We don't understand where these limits are, simply because we haven't reached them yet. One day we will reach them though, and we will understand then that these limits are hard, that they cannot be overcome.

When we talk about boundless oceans, endless horizons and infinite possibilities this is just poetic. The oceans and the horizon are not limitless at all. They are bound by the planet. While possibilities may be many, they are never infinite. Even our universe has limits. What is in our head has limits too. Our imagination is limited by everything we currently understand. It is impossible to conceive anything more.

When we reach natural limits, even the cleverest technology cannot overcome them. They are not limits that can be breached, despite what we all like to believe. We only think that

they can be overcome because we have not encountered many of them so far, and because the limits we have breached until now were man-made.

Some of the natural limits are known. Light cannot travel faster than 300,000 km per second in space. Nothing can be colder than -273.15°C . Water ice cannot be heated above 0°C under normal pressure. That is the limit of its existence as ice.

Life is, thanks to limits. Cells are limited from their environment by membranes. Plants are limited in their rate of growth by nutrients, gases, water and light. The climate is limited by the heat of the sun, the activities of the oceans and the atmosphere.

The ability of living creatures to multiply has limits too. They are limited by the availability of resources, particularly energy, and by competing with other living beings. These limits are tightly woven into food chains.

Practically, as well as philosophically, everything is defined by limits, even things that are man-made. A house is bound by walls and a roof, the limits of its physical presence. It also imposes limits on the environment around it. It limits the amount of the rain that gets in. The bricks from which it is built are limited too, defined by their dimensions. A pile of bricks is chaos. When they are built into a wall, there is structure. Bottles, gas tanks and even the hulls of ships are designed to limits too. They are made to keep one substance in and others out. Their function is to limit the influence of what lies outside.

These are not natural limits but artificial ones.

In society too, we are defined by limits. The size of our society, from prehistoric times until now, has been limited by the rules we have imposed on it, to encourage a group of people to live together in an orderly way. At first, those limits were defined by rituals and taboos. Later, they became laws.

The difference between man-made limits and natural ones is that they are changeable. They can be overcome. We can knock down walls and smash the bottles we have made. We can change the laws. But we cannot change the laws of nature.

2. We do not know what nature permits us to be

Man-made limits have made our development possible. But they have also made us think that all limits are changeable. Our technological advances over decades support this idea, that we can master and then manipulate what is around us. We can take energy from the wind, modify cells and split atoms into their tiniest components. But this understanding of the world and our ability to manipulate it have also made us foolish.

Foolish, because the discoveries we have made are really rather modest. When we take energy from the wind, we simply change what was already there. When we change the contents of cells, we copy what nature could do. We do not create new life. And when we split atoms into their tiniest parts, all we are doing is looking inside.

There is so much that we do not understand, especially when it comes to the natural world and its limits. We do not know the limits of consciousness, or even what it is. We have not explored most of the oceans or understood their importance, though they are the largest part

of the planet. We cannot predict the weather more than seven days ahead. We do not even know what substance or force makes up more than 80% of the universe – and only discovered this very recently.

We also keep changing our ideas. Our theories about the origins of life and the birth of the universe have changed completely in the last 150 years. Many of them have changed in the last 50. Despite this, we are now certain that we have the right answers, or at least most of them. Like small children who have taken a few tentative steps, we think we are able to run.

This may be natural of course. We are ambitious and, for the majority of the structures we deal with day to day, because we made them or have studied them for centuries; we mostly understand their limits. We understand the tolerances we need to work within. We know, at least generally, how far we can heat a piece of glass before it melts. We made the glass. We know too, more or less, how hard we can hit it, before it breaks. We have tested it.

The difference, between knowing precisely and knowing generally what will happen, are the tolerances. These are the boundaries to the limits. Tolerances can be big or small and they depend on a wide range of factors. They depend on how thick the glass is, for example, or what additional chemicals it contains.

When we, as humans, create complex physical systems that could cause problems if something goes wrong, we take time to understand these tolerances very carefully. This allows us to improve the design. So, we limit the chances of human error in factories by controlling them with computers. We build walls around nuclear power stations, to limit the consequences of very large waves. We limit the effects of a tear in the hull of a ship by giving it a second skin. And we limit the result of a failure in aircraft control mechanisms, by installing backup systems.

Similarly, there are tolerances in our complex social systems too, though not always by our design. These may be linguistic, religious or cultural. They may stem from our values or our political structures. In such cases, the tolerances act as buffers and warnings, to limit the consequences of a rupture. They allow wars or revolutions to be avoided, or permit them to be embraced, so that a new system is established.

In man-made systems, the tolerances are usually broad and flexible. In nature however, the tolerances are often poorly understood. As Rousseau said, “we do not know what nature permits us to be”. Nor do we know what nature permits us to do. This is particularly important when we consider very complex and interlinked natural systems, such as those that control our climate.

In nature, because tolerances are often extremely small, signals only appear when change is unavoidable. When a hurricane forms, there is nothing that anyone can do to stop its development or change its path. A process has begun. We can only watch the damage it unleashes. Similarly, melting Arctic icecaps and rising sea levels are not nature’s warning signals; they are signs that we need to change. They are the start of a transformation that we will have to witness.

In nature, the concept of time is different. For us, the impact of new political philosophy or a declining empire might last for many generations. This is a long time to us. In nature, tens of millions of years are but a moment.

We are used to simple, flexible systems that we designed and understand. Eager to gain the most for ourselves in the shortest possible time, and failing to understand the hard limits of natural system however, carries the risk that we can enter forbidden territory. If the environment wakes up and begins to defend itself, with its own peculiar means, and we continue thinking about how we can profit from the change, the consequences could be grave.

"We need to classify the environment as a global security issue, to place it above every other concern."

The changes humankind has unleashed on the planet are already unstoppable, certainly within any timeframe that we really understand. The effects of our pumping large amounts of carbon into the atmosphere have become visible within a century, a flash of earthly time. It will take many hundreds of years before the effects have passed.

3. It is tempting to reach a limit, unsafe to go beyond

It is human to want to breach limits. It is what fuels the fires of passion in explorers and pioneers. But it has also brought us a conceit. We think that we are the masters of everything around us. Our curiosity for the brink, and our willingness for conflict, adds to our belief that every battle can be won.

Nature is easily the most complicated system we know. We are part of it and cannot survive without it. It provides us with our food, energy and somewhere to live. It does this by working within limits. The acidity of the oceans and the gases in the atmosphere are *exactly* as most living creatures require. We know of no other place where this happens, or has ever happened. We know too, that an average temperature rise of even a few degrees will change all this.

We have set a process in motion that will force us to confront the limits of nature. Unlike the limits we make, these cannot be overcome, no matter how clever we are.

It is therefore essential that we stop everything we do that is bringing about this change.

4. Change is in all things sweet

How do we do that? The steps we need to take are much clearer than many of us imagine. We are making them happen, and the consequences are hard. First, we need to classify the environment as a global security issue, to place it above every other concern. We need to adopt a war-footing, in effect.

Future generations also need to be given representation in governance structures, to have a voice in all the decisions we take. Clear international targets for the reduction of greenhouse gas emissions need to be identified, and quickly, with a detailed plan and timetable for it to be achieved.

As well as reducing fossil fuel use progressively to zero, we need to stop deforestation and begin a programme of reforestation. Countries with large forested areas need to be compensated for doing this, or economically debilitating sanctions need to be applied if they refuse. We need to capture man-made methane and cut emissions from livestock.

We also need to prepare for what is to come. Many parts of the world will suffer badly from climatic extremes in the decades ahead. Everyone will need to pay more for food, water and energy. Without a response, this will bring instability. We also need to protect ecosystems, build flood defences in vulnerable areas, and develop the capacity to cope with more pests and droughts.

How much will it cost to reduce our carbon emissions and build defences against the climate change we have already unleashed, that will be with us for centuries to come? It really does not matter.

If we can print money to solve a financial crisis, we can pay whatever it takes to protect our future. Destroying our economies is better than destroying our world.

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