



PROMOTING LEADERSHIP IN THOUGHT
THAT LEADS TO ACTION

THE WEALTH OF NATIONS REVISITED

CADMUS

NEW PERSPECTIVES ON MAJOR GLOBAL ISSUES

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The CADMUS Journal

The acronym of the South-East European Division of The World Academy of Art & Science—SEED—prompted us to initiate a journal devoted to seed ideas—to leadership in thought that leads to action. Cadmus (or Kadmos in Greek and Phoenician mythology) was a son of King Agenor and Queen Telephassa of Tyre, and brother of Cilix, Phoenix and Europa. Cadmus is credited with introducing the original alphabet—the Phoenician alphabet, with “the invention” of agriculture, and with founding the city of Thebes. His marriage to Harmonia represents the symbolic coupling of Eastern learning and Western love of beauty. The youngest son of Cadmus and Harmonia was Illyrius. The city of Zagreb, which is the formal seat of SEED, was once part of Illyria, a region in what is today referred to as the Western Balkans. Cadmus will be a journal for fresh thinking and new perspectives that integrates knowledge from all fields of science, arts and humanities to address real-life issues, inform policy and decision-making, and enhance our collective response to the challenges and opportunities facing the world today.

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E-mail: editor@cadmusjournal.org

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CADMUS

NEW PERSPECTIVES ON MAJOR GLOBAL ISSUES

Volume 3, Issue 4

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CADMUS VISION

The world is in need of guiding ideas, a vision, to more effectively direct our intellectual, moral and scientific capabilities for world peace, global security, human dignity and social justice. Today we face myriad challenges. Unprecedented material and technological achievements co-exist with unconscionable and in some cases increasing poverty, inequality and injustice. Advances in science have unleashed remarkable powers, yet these very powers as presently wielded threaten to undermine the very future of our planet. Rapidly rising expectations have increased frustrations and tensions that threaten the fabric of global society. Prosperity itself has become a source of instability and destruction when wantonly pursued without organizational safeguards for our collective well-being. No longer able to afford the luxury of competition and strife based primarily on national, ethnic or religious interests and prejudices, we need urgently to acquire the knowledge and fashion the institutions required for free, fair and effective global governance.

In recent centuries the world has been propelled by the battle cry of revolutionary ideas—freedom, equality, fraternity, universal education, workers of the world unite. Past revolutions have always brought vast upheaval and destruction in their wake, tumultuous and violent change that has torn societies asunder and precipitated devastating wars. Today the world needs evolutionary ideas that can spur our collective progress without the wake of destructive violence that threatens to undermine the huge but fragile political, social, financial and ecological infrastructures on which we depend and strive to build a better world.

Until recently, history has recorded the acts of creative individual thinkers and dynamic leaders who altered the path of human progress and left a lasting mark on society. Over the past half century, the role of pioneering individuals is increasingly being replaced by that of new and progressive organizations, including the international organizations of the UN system and NGOs such as the Club of Rome, Pugwash and the International Physicians for the Prevention of Nuclear War. These organizations stand out because they are inspired by high values and committed to the achievement of practical, but far-reaching goals. This was, no doubt, the intention of the founders of the World Academy of Art & Science when they established this institution in 1960 as a transnational association to explore the major concerns of humanity in a non-governmental context.

The founders of WAAS were motivated by a deep emotional commitment and sense of responsibility to work for the betterment of all humankind. Their overriding conviction was on the need for a united global effort to control the forces of science and technology and govern the peaceful evolution of human society. Inhibiting conditions limited their ability to translate these powerful motives into action, but they still retain their original power for realization. Today circumstances are more conducive, the international environment is more developed. No single organization can by itself harness the motive force needed to change the world, but a group of like-minded organizations founded with such powerful intentions can become a magnet and focal point to project creative ideas that possess the inherent dynamism for self-fulfillment.

Ivo Šlaus

Orio Giarini

Garry Jacobs

CADMUS
New Perspectives on Major Global Issues
Volume 3, Issue 4, May 2018

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Inside this Issue

Bitcoin, blockchain, fake news, populism, the polarization of societies, the 2008 financial crisis, the revival of Cold War tensions, renewed proliferation of nuclear weapons, the 4th Industrial Revolution, neoliberalism, the retreat from democracy, rising intercultural tensions and fundamentalism all have something in common. They are all reflections of the stress and uncertainty generated by the rapid globalization, technological innovation and social evolution. They are all the result of the inability of prevailing social theory, institutions and culture to adjust to the emerging opportunities and challenges of the 21st century.

This issue of *Cadmus* explores these symptoms, their underlying causes, and the outdated theoretical concepts that unpin the present global dilemma. It reinforces the need for reinvention and integration of Economics and other social sciences, rapid development of the institutions of global governance, and reaffirmation of the cultural and spiritual values that irresistibly draw humanity into the future. It also compels us to rediscover the power of literature, history, philosophy and the other humanities to restore wholeness to our highly fragmented view of the world by reuniting the objective and subjective dimensions of social reality.

We hope you enjoy this issue.

Editors

The World in Transit: Going Beyond Myopic Visions

Alexander Likhotal

Professor, Geneva School of Diplomacy;
Member, WAAS Board of Trustees

Abstract

The world has entered the new Axial Age. Numerous transformations are taking place in the models of social, economic, and political activity, in projections of power and authority. The political landscape and its relevant “content structures” (democracy and liberalism, right and left, globalisation and nationalism etc.) are acquiring new systemic qualities. If we want to avoid fighting with the ghosts of the past, it is necessary not only to take into account these transformations but examine them from within. To see the complexity of things, to understand the transformation of the world in transit, we need to get rid of myopic, linear interpretations of seemingly familiar but morphing notions like “globalism and nationalism”. Who can manage the complexity of the “plurilateral” world we are stepping into? What kind of political architecture will be needed to support the nascent multi- or rather “pluripolarity”? How can we synchronise governance with inevitable digitalisation of politics? How can we enable decision-making mechanisms at the global level? These questions need to be answered. Nobody will miss the train to “a bright tomorrow”. Historical time flows for everyone—you cannot hide “behind the wall” to avoid it. No actor of a historical process can bury his head in the sand of the comfortable present, indulging in “counter-clockwise revolt”. The future will come for everyone, but not everyone will hold an equal place in it.

The most troublesome concepts are the ones we take for granted. This is not because they are familiar but because they are embedded in our way of thinking. They roll off our tongues without our even attempting to think what they really mean. We take them axiomatically as established truths.

One of these concepts is the idea that nationalism is the antonym of globalism.

And indeed, when you read a newspaper today, you get the impression that the nationalist challenges confronting the globalist model have moved to the centre of political discourse, winning supporters in the United States, the United Kingdom, as well as many other places in Europe, and rising in strength all over the globe. The rise of nationalism looks like the decisive character of the day, placing globalism on the defensive side.

The so-called anti-globalisation wave has become one of the most popular themes in panel discussions, articles, television programmes and the like. Do not take it too seriously. Globalisation cannot be stopped.

A short article will not suffice for dealing with such complex issues, but to begin with, globalisation is a much older phenomenon than the notion of nations. Contrary

to widespread misperception by Friedrich Hayek and other liberal economists of Mont Pelerin Society following the end of World War II, that a nation is something “natural and primordial”, while globalisation is “imposed” on the world, globalisation is an objective process, according to a majority of historians, which dates back to the 15th century. It was then that, thanks to some great geographical discoveries, human history became global and human societies started exchanging goods, ideas, diseases and people within a single global network. After that the rapid improvements in communications and transportation have steadily tightened these links, integrating the entire world into a single network of exchange.

“What is labelled today as the “nationalist wave” is reflective of dissatisfaction with domestic affairs rather than a conscious disengagement with the rest of the world.”

Nations in their turn, according to modern theories, are the product of mainly 17th and 18th centuries. Their creation was largely rooted in the process of globalisation and was to a certain extent a social construct rather than a natural phenomenon, as brilliantly put forth by Benedict Anderson in his 1983 classic *Imagined Communities*.

What is labelled today as the “nationalist wave” is reflective of dissatisfaction with domestic affairs rather than a conscious disengagement with the rest of the world. While public sentiment regarding changing national identity or political and economic power is very real, de-globalisation is highly unlikely.

Look at Brexit that is used as a “canonical argument” supporting the crisis of globalisation. If we look a little deeper than media laments we will see that this process can hardly serve as a proof for de-globalisation. On the contrary, the brexitiers wishing to leave EU were in fact seeking more globalisation, more free market, more deregulation than the EU provided. One of the major drivers of Brexit were British based hedge funds that wanted to get rid of EU limitations and regulations which complicated their global aspirations.

Next, demographic shifts suggest multiculturalism is refining our present and future. In the US, for instance, demographers are predicting a “minority majority” in the next 40 years. The fact that Silicon Valley CEOs have vocally opposed the Trump administration’s “Muslim ban” demonstrates that aside from being unethical, xenophobia is actually bad for business.

In fact, terms like “domestic” and “foreign” have become increasingly obscure, and for good reason: during the last few decades, transnational corporations have increasingly constructed global value chains in which the “head firm” outsources production through intricate global networks that it establishes and controls.

“American” cars, for instance, often contain less than half of locally produced parts while “Japanese” cars are often comprised mainly of US parts and assembled in Kentucky or Ohio.

No matter what political leaders say and how often anti-immigration proponents go to the streets to demand, interdependence is growing. The volumes of goods, services and capital

crossing borders continue to increase, and so do the numbers of people working outside their home countries.

“We have entered the disruptive world of risk societies when globalisation and the progress of digital technology are altering power structures and reshaping individuals, organisations, states and societies.”

As Or Rosenboim points out in *Foreign Affairs*, “Globalism, in this post-war definition, meant an awareness of the political implications of the interconnected globe. The recognition of the world’s “oneness” did not mean that political or cultural homogeneity was inevitable or desirable. Very few globalists argued for the abolishing of existing states or the banning of patriotic ideologies. Rather, the most influential globalist thinkers measured the desirability of balancing unity and diversity, according to their understanding of how best to create a stable, prosperous, and peaceful world order.”

So why then did the entire world hold its breath due to what appeared to be routine votational process (Brexit, Trump, Putin, Erdogan, the Netherlands, France, Venezuela, Filipinas, Austria, Germany, Czech Republic, Hungary, Poland, Catalonia etc.)?

The answer is simple: what was at stake was neither the electoral success of one party or another, nor globalism versus nationalism battles but the victory or defeat of democratic values. The fear of catastrophe, which was palpable in the case of all these elections, demonstrates the consensus collapse in the area of fundamental values on which the democratic system is built.

Therefore, the name of the threat is populism, not nationalism that it camouflages in, and consequentially it is not globalism that is the victim but pluralism of modern political culture rooted in the Enlightenment ideas of liberalism which stands basically for respect for freedom as the highest human value.

This value has generated the relevant norm of behaviour—respect not only your own freedom, but also others’, thus turning pluralism into the basis for a true democratic system.

As Jan-Werner Müller rightly argues in his recent groundbreaking book *What Is Populism?*, populism is inimical to pluralism. Its target is pluralist, liberal democracy, with those vital constitutional and social checks and balances that prevent any “tyranny of the majority” from prevailing over individual human rights, safeguards for minorities, independent courts, a strong civil society, and independent, diverse media.

It is worth noting that the nature of populism has changed because today, populism shapes its constituencies rather than representing them. As a result, it aggregates values and phobias sometimes making very strange “bedfellows”. Timothy Garton Ash brilliantly exemplified these issues in his recent lecture “Does European populism exist?” at the Minda de Gunzburg Center for European Studies at Harvard University.

In 1997 Fareed Zakaria concluded his prophetic article “The Rise of Illiberal Democracy” that largely predicted the modern political process’ fall into the archaism trap by pointing out that “Woodrow Wilson took America into the twentieth century with a challenge to make the world safe for democracy. As we approach the next century, our task is to make democracy safe for the world.”

Indeed, we have entered the disruptive world of risk societies when globalisation and the progress of digital technology are altering power structures and reshaping individuals, organisations, states and societies.

With the acceleration of globalisation, the risks to the international system have grown to the extent that former localised threats are no longer locally containable but are now potentially dangerous to global security and stability.

“External competition is a consequence of internal disruption.”

“Illiberal democracy is the price the world pays for years of undemocratic liberalism, which was practiced after the end of the Cold War, after which democracy has increasingly mutated into a decorative instrument of neoliberal economic optimisation.”

At the beginning of the century, threats such as ethnic conflicts, infectious diseases, and terrorism as well as a new generation of global challenges including climate change, energy security, food and water scarcity, international migration flows and new technologies are increasingly taking the centre stage.

A new world is emerging, in which a multitude of actors (not necessarily state ones) are competing with each other through hybrid wars, economic sanctions, virtual deterrence, cyber and information wars.

On the other hand, world politics is increasingly defined by countries’ internal problems, and not their direct competition. Or, rather, external competition is a consequence of internal disruption, when growing contradictions become increasingly difficult to untangle, as exemplified by the Russian intervention in Ukraine.

At this turning point, the skidding mechanisms of democracy along with the growing assertiveness of autocratic regimes point to a danger that the international order of the past quarter century—rooted at least nominally in the principles of liberalism and multilateralism—will give way to a world in which individual “strongmen” and authoritarian regimes pursue their own narrow interests without meaningful constraints, without regard for global peace, freedom, prosperity and sustainability.

Unfortunately, incompetent foreign policy of the current US administration exacerbates these dangers because it not only provides these regimes’ internal legitimisation but also stimulates their consolidation as a distinct “interest group” in international relations.

In particular, it is worth recalling Zbigniew Brzezinski's important warning to avoid developing political pressure simultaneously on three neighbouring countries—Russia, China and Iran. Such pressure can lead to a new continental union of autocracies, because despite the contradictions and mistrust between these countries, the external threat can unite them. The world will be lucky if conflicts are contained in cyberspace and propagandistic media battles. Therefore, it is disturbing that a new “authoritarian international” is already increasingly succeeding in defining international political discourse.

Illiberal democracy is the price the world pays for years of undemocratic liberalism, which was practiced after the end of the Cold War, after which democracy has increasingly mutated into a decorative instrument of neoliberal economic optimisation.

In fact, neoliberalism has been poisoning liberal values. According to *Freedom House*, 2016 marked the 11th consecutive year of decline in global freedom which demonstrates that we deal with a dangerous trend rather than an accidental phenomenon.

Furthermore, two of the 15 countries which saw the greatest fall in the level of freedom last year are EU countries: Hungary and Poland. There was reportedly a negative trend in four other member states. In the case of Hungary, and increasingly also in Poland, this is not just a ‘blip on the road to democracy’, but a systemic action to dismantle the pillars of the rule of law, judicial independence, attempts to curtail freedom of the press and the pluralism of civil society.

‘Post-democracy’ has become a standard term in contemporary political theory and some intellectuals like Wendy Brown claim that today democracy has become a ‘gloss of legitimacy for its inversion’ insofar as ‘even democracy’s most important super icon—“free elections”—has become circuses of marketing and management, from spectacles of fundraising to spectacles of targeted voter “mobilisation”’.

A recent study by the *Pew Research Center* demonstrates that the support for democracy is dwindling across the world. Globally only 23% still believe in democratic values, while 47% are less committed and 13% prefer non-democratic options. Based on the factors considered above, even in the US, the correlation is a staggering 40%-46%-7%.

The popular reasons for this “growing vulnerability of liberal democracy” are: economic strains, rising social inequality, political squabble, the effects of globalization, migration and moral and cultural decadence.

While some of these phenomena are regional or local, the rise of authoritarianism and populism is global, affecting both non-Western and Western countries.

Clearly, many are unhappy with the current state of affairs all over the world. But the neoliberal economic system, and not globalisation, is the culprit. The neoliberal rhetoric was all about prosperity “trickling down” from above. But it never worked that way. Those workers and their children, now languishing in impoverished rust-belt cities, received another blow during the banking crisis of 2008.

A feeling of growing disempowerment has led to political cynicism and a disconnect between the general public and the body of politics. Rates of public participation and

confidence in institutions and traditional parties have plummeted. With popular anger on the rise, populism has made a spectacular (re)entry on the political scene.

“The main issue today is not the future of globalism but who can manage the complexity of a “plurilateral” world we are stepping into.”

What disquiets the electorate is perhaps not the adverse effects of globalisation, palmed off to them by populist leaders, but their position in host countries and particularly inequality, which is not uniquely economic.

In the deindustrialised rust-belts, with their jobs gone, people lose not only income and social security, but meaning, dignity and social involvement. They are frustrated by inequality of opportunities, inequality of respect, inequality of attention.

Just recall your latest local newspaper stories. A majority of them are dedicated to global abstractions: human life has become obscured by discourse focused on security, geopolitics and national interest when authored by hardline realists, or deliberations about democratisation, globalisation and humanitarian interventions by intransigent liberals. And if they speak about individuals, we hear mostly about the “monstrous Harvey Weinstein”, but when was the last time you read about the families from low-income communities? It is only natural that they shout out to those in power: we exist, notice us, pay attention!

We should not forget that politics is always local and democracy is not about who shines on TV screens. It is about people, their life and...(!) dignity.

The main issue today is not the future of globalism but who can manage the complexity of a “plurilateral” world we are stepping into. What kind of political architecture will be needed to support the nascent multi- or rather “pluri-polarity”? How can we sync democracy with the inevitable digitalisation of politics? How can we enable democratic decision-making mechanisms at the global level?

And only this truly transformative agenda, reflective of the challenges and growing complexities of the 21st century, has the potential to “trump” populists’ strongest card, to be the only alternative to the bankrupt neoliberal mainstream.

These questions need to be answered. Nobody will miss the train to “a bright tomorrow”. Historical time flows for everyone—you cannot hide “behind the wall” to avoid it. No actor of a historical process can bury his head in the sand of the comforting resentment, indulging in “counter-clockwise revolts”. Globalisation is here to stay, and the economic logic of openness will supersede any political aberrations but at what price? The future will come for everyone, but not everyone will hold an equal place in it. History always punishes those who are late.

Author contact information

Email: likhotal@bluewin.ch

The Future of Democracy: Challenges & Prospects

Garry Jacobs, João Caraça, Rodolfo Fiorini, Erich Hoedl,
Winston P. Nagan, Thomas Reuter, Alberto Zucconi*

Abstract

Unprecedented speed, interconnectivity, complexity and uncertainty are impacting all spheres of global society today, presenting challenges that were not foreseen even a few years ago. The end of the Cold War was interpreted by many as the final victory for democracy and capitalism over authoritarian socialism. A quarter century after the sudden collapse of communism and the emergence of a new democratic consensus, liberal democracy itself is under threat. Former bastions of democracy are exhibiting a level of populism and polarization previously associated only with nascent, tenuous democracies in countries with low levels of education and economic development. The shared vision that constituted the foundation for the democratic consensus is breaking down. Doubts, fears and insecurity have shaken faith in the institutions of governance and the confidence of youth in a better future. Nations are closing their borders, retreating from global cooperation, and casting the blame on minorities and foreigners in a manner reminiscent of an earlier century. Participants in the WAAS Roundtable on the Future of Democracy at Dubrovnik on April 3-5, 2018 recognized that this shift in direction is the result of a complex nexus of forces that have been shaping the future for decades. The group shared valuable insights into our present dilemma while maintaining the diversity of perspective essential for understanding a complex, multidimensional global phenomenon still in the process of unfolding. The discussion identified numerous practical steps that can be taken to moderate extreme aberrations resulting from the misuse of social power. It also recognized that fundamental changes are needed to develop more effective systems of governance capable of fully supporting the aspirations of humanity, maximizing the equity and effectiveness of social institutions and the future evolution of global society.

1. The Context

Colossal political, economic and social changes followed the sudden end of the Cold War and the associated ideological competition. These include the collapse of the Soviet Empire and Warsaw Pact, the rapid expansion of NATO, the establishment of the European Union and Eurozone, the dramatic expansion of world trade after the founding of the WTO, the birth of

* Authors' profile:

Garry Jacobs: Chief Executive Officer, World Academy of Art and Science; Vice President, The Mother's Service Society, India;
João Caraça: Senior Advisor, Calouste Gulbenkian Foundation, France; Fellow, World Academy of Art and Science;
Rodolfo Fiorini: Professor of Bioengineering, University of Milan; Fellow, World Academy of Art and Science;
Erich Hoedl: Vice-President, European Academy for Sciences and Arts; Fellow, World Academy of Art and Science;
Winston P. Nagan: Chairman of the Board of Trustees, World Academy of Art and Science; Professor of Law Emeritus, University of Florida;
Thomas Reuter: Professor, University of Melbourne, Australia; Fellow, World Academy of Art & Science;
Alberto Zucconi: President, Person-Centered Approach Institute, Italy; Treasurer, World Academy of Art and Science.

the World Wide Web as the first truly global social institution, the rise of global civil society, the globalization of multinational corporations and financial markets, the financialization of economies, the resulting global impact of the 2008 financial crisis, the intensification of multicultural contacts in a shrinking world of intensified cross-border communication and immigration, rising expectations of an increasingly educated young population, accelerated technological development and application threatening existing job security and future job creation, rising levels of economic inequality and concentration of wealth, increasing influence of money and economy on national policy and international relations, the recent emergence of China and India as economic powerhouses, the recent proliferation of nuclear powers and reliance on nuclear weapons reversing the dramatic breakthrough in nuclear arms control in the early 1990s. These changes are themselves both the causes and results of rapid and radical change.

This remarkable confluence of diverse factors has shaken conventional theories and beliefs, generated widespread confusion, and raised fundamental questions about the future of humanity. Concerns about the future have not reached this intensity since the end of World War II led to the founding of the UN and the Bretton Woods institutions. In combination, they signal disillusionment with the prevailing intellectual paradigm that has dominated global thought for the past few decades, but without clearly signaling the characteristics of the new paradigm that is yet to emerge and replace it. As in the past, one result has been a reversion to earlier dogmas and discredited doctrines in search of greater certainty. Competitive and aggressive nationalism, isolationism, mutual suspicion and xenophobia are rearing their heads. Prevailing philosophies, institutions and policies have been discredited. But a new shared vision of pathways to a more peaceful, prosperous and sustainable human community has yet to emerge.

The end of the Cold War was viewed by many as the unilateral defeat of authoritarian communism and the final supremacy of liberal democratic capitalism. Few perceived that the victory was to be so short-lived. For in their extreme forms, these two ideologies were mutually reinforcing. The threat of global communism was a factor that kept advocates of western capitalist democracies aware of the need to maintain its legitimacy by ensuring that its citizens were wealthier and enjoyed greater liberty than those in competing communist countries. Each extolled values and social realities that the other ignored. In the aftermath of WWII, European thinkers concerned by the ominous threat of fascism and communism founded the Mont Pelerin Society to extol economic liberalism as the ultimate safeguard and antidote to authoritarianism. They acted on the premise that so long as the acquisition and possession of property are free and unrestrained, human freedom will be preserved. Ironically, today unbridled economic liberalism has become a principal threat to liberal democracy. Dismantling the constraints previously imposed by social democratic policies to shield Western Europe and North America from the lure of communism, a more aggressive form of neoliberalism emerged to tear down the fetters that protected the economic rights of the working class and freed corporations to wholeheartedly pursue shareholder value, unmindful of the essential responsibility of business to serve the wider interests of the whole society.

Globalization added fuel to the fire of market fundamentalism. Freed from the constraints imposed by nation-states, stateless multinational corporations took refuge in offshore tax havens and compelled nations to compete with one another for investment, jobs and foreign exchange earnings. The surplus profits accruing to the wealthy multiplied global financial assets from a mere \$12 trillion in 1980 to in excess of \$150 trillion by 2015. A small and declining percentage of this accumulated capital is being reinvested in the real economy to create jobs and meet human needs. The remainder is circling the globe in search of speculative returns giving rise to a Global Casino.

This complex array of disparate facts is an expression of a nexus of powerful forces compelling us to rethink and reshape our conception of the future. The changes impacting the world today are impacting on every existing social institution. Democracy too is inevitably influenced and modified, both positively and negatively, by the advent and action of every further development of social force or power resulting from developments of technology and social organization, law and human rights, science and education, travel and transport, communication and media, entertainment and enjoyment.

2. Future Prospects

Answers to the current dilemma lie in the future, not in the past. The lines of future social development are being drawn by irresistible evolutionary forces working behind the confusion and disillusionment generated by recent events. The future is on a fractal trajectory to increasing affirmation of fundamental human rights for all—political, economic and social—that can be traced back for centuries, in spite of frequent detours and reversals. Current and emerging challenges present humanity with the inevitable necessity of developing more effective institutions for global governance. The democratic revolution launched in the late 18th century and aided by successive technological revolutions continues to press inexorably for devolution of greater freedom of choice and authority to communities and individuals.

The demands of rapid social evolution fuel global demand for universal access to more and better quality education. At the same time they make evident that education as practiced today is part of the problem. A different type education is needed that shifts the focus from traditional silo-based academic disciplines to multi and transdisciplinary perspectives and focus on development of independent thinking, values, character, social skills and life-long learning—essential prerequisites to prepare youth for the complexities of the future. The untold ravages caused by humanity's propensity to subordinate itself to the inventions and instruments it creates for its advancement compel us to consider impacts in advance and, to impose where appropriate rational constraints on the application of technology, use of money and power of economy. Self-mastery of these creative powers is essential for promoting human welfare and future well-being.

Underlying all these forces is the inexorable march toward universal human values. Values are not merely pious intentions, utopian ideals or political slogans. They represent the quintessence of the collective wisdom of humanity regarding the essential conditions for continuous and sustainable human accomplishment, welfare and well-being. Technologies,

institutions and life styles may change almost beyond recognition over centuries but the evolution of values stays on course, regardless of the duration and intensity of temporary reversals. It is true that the USA had to fight a catastrophic and nearly fatal Civil War in order to affirm the values of freedom and equality enshrined in the Declaration of Independence and Bill of Rights. But it is also true that the movement toward the abolition of slavery and recognition of human rights began centuries earlier and was sweeping the world even at the time civil war was raging in America on the pretext of preserving a barbarous form of extreme inequality. Atavisms may die hard, but they die all the same. The battle for women's rights playing out today in the workplace and parliamentary elections had its origins two centuries ago and will persist until all relics of discrimination are abolished. So, both the historical record and developments in the 21st century strongly support the conclusion that the full gamut of political, social and economic rights embodied in the Universal Declaration of Human Rights, the constitutions of nations, and by implication in the 17 Sustainable Development Goals recently affirmed by 200 nations of the world will continue to press for full legitimacy and realization.

The challenges confronting humanity compel us to accelerate progress along these and other lines of social evolution, rather than retreat to flawed ideas and failed strategies of the past. Practical solutions do exist to many of the deficiencies presently undermining democratic practices today. Proven remedies are available for curtailing or even eliminating the direct role of money in electoral politics, increasing transparency of campaign financing, closing the revolving door of influence connecting business and government, reducing electoral fraud, increasing transparency, devolving decision-making to the local level, raising people's participation, redirecting financial capital from speculation to meet real economic needs and create new jobs, making politicians more accountable to the electorate for truthfulness in word and faithful implementation of the policies for which they are elected.

Even if all these proven remedies could be fully implemented, fundamental flaws will persist due to the inherent inadequacies of the present system that we call 'democratic', but which has always favored some elites and special interests over the welfare of the majority. The stresses resulting from globalization, rapid technological development and rising levels of economic power will not be resolved until a new consensus arises concerning a new, more inclusive, human-centered paradigm better suited to promote the welfare and well-being of all humanity. It is the responsibility of thinking humanity to direct our attention beyond short-term incremental panaceas to frame the outlines and content of that new social consensus.

3. Social Power, Accomplishment and Evolution

At the root of all these complex interconnected evolutionary developments lie the algorithms of Social Power. All power is the result of a social process through which human beings develop ever more organized, complex and integrated relationships with one another. Power has always determined the course of human history. The military power of Alexander the Great and Napoleonic France, the economic power unleashed by the first agrarian revolution in the Levant 10,000 years ago and the First Industrial Revolution in Europe during the 19th century, the unparalleled organizational capacities of ancient Rome

and China or the modern British Empire, the power of rapidly accelerating communication and transportation technologies which characterize the Information Age and the nascent 4th Industrial Revolution, the power of knowledge and the scientific culture of critical thinking that have multiplied exponentially since the Reformation and the Enlightenment, the power of universal education and health care, and the unprecedented political power unleashed by democratic forms of governance over the last half century—all these represent interconnected and interdependent dimensions of social power. For we mean by this term the power that issues from constructive human relations. This capacity of the society for mutually beneficial cooperation exponentially enhances the power available to individuals and the social groups to which they belong to accomplish whatever goals they aspire for. For all power is power for accomplishment and all forms of power contribute to the overall capacity of individuals and social groups to accomplish the goals they set for themselves.

“The greater the distribution of all forms of social power to the population at large, the greater the overall power of the society for accomplishment, development and sustainability.”

Democracy is a political system designed to more widely distribute all forms of social power through increasing individual freedom of thought and action, greater equality of access and opportunity, greater knowledge and choice. Diffusion of power reduces or prevents the concentration of power in the hands of a few. Active participation of the population in its own self-government by exercise of the popular will, either directly or through representatives, is the means adopted to broaden the distribution of power. Peace, the right of self-determination, physical security and economic welfare are its fundamental pillars. Political power is inseparable from economic power, since the survival and development of any society depends on its capacity to continuously enhance its capacity for production, distribution and individual welfare. Therefore, the right to property, access to education and right to enjoyment are fundamental. Laws protecting private property, the invention of double-entry bookkeeping, the printing press, newspaper, education, steam engine, railways, telegraph, telephone, automobile, radio, television, antibiotics, airplane, modern science, tourism, access to information, mobile phone and internet have simultaneously enhanced the overall power of society and the wider distribution of power to its individual members.

Never before has human society possessed so much power for good or for evil. Never before has power been so widely distributed among the people and nations of the world. At the same time never before have so few possessed such a vastly unequal proportion of humanity’s total capacity for accomplishment. The history of humanity traces the continuous discovery and development of new and greater forms of social power. So too, it traces the irresistible and inevitable tendency of individuals and groups to seek to garner and direct that power for their own personal benefit and domination over the rest, resulting in an endless series of power struggles, mutually destructive wars, violent revolutions and peaceful evolutionary transitions.

But history also clearly reveals behind all the struggles, victories and retreats one irrefutable fact. The greater the distribution of all forms of social power to the population at large, the greater the overall power of the society for accomplishment, development and sustainability. The power of any language for communication is limited by the size of the population that knows it. The power of education is limited by the number of people who possess it. The utility of telephone and internet are a function of the number of people who have access to them—the greater the number, the greater their value. So too, the power of money is a function of the extent to which it is distributed to all. A nation of super rich elites is still impoverished in the measure it has citizens who lack basic necessities and economic security. None can be fully secure until all are. A world of nuclear superpowers spurs the rise of acts of terrorism by individuals who have nothing to lose because they possess nothing. War between nations only ceased in Europe when nations could no longer afford the catastrophic destruction wrought by warfare. Napoleon discovered that a nation of free citizens willing to fight to preserve their freedom was infinitely more powerful than an army of mercenaries. Hitler vastly underestimated the power of England to resist invasion because he failed to realize the measure of its citizens' determination to preserve their freedom.

“Though all forms of social power are fundamental to human life and interconvertible, the power for self-governance stands out as absolutely critical to the effectiveness of human society—local, national and global.”

For the first time in history, humanity now possesses more than sufficient power to meet the basic needs and fulfill the higher aspirations of all human beings. Yet today we confront a paradox of unprecedented capacity for accomplishment coexisting side by side with persistent hunger, poverty, insecurity, unmet needs and existential threats. For all our remarkable achievements, something fundamental seems to be lacking. For all our power, humanity finds itself powerless to manage, regulate and master the multitude of powers it has created and developed.

In our quest to understand, explain and address this flawed equation between the potential capacities humanity has collectively developed and the actual achievements it collectively enjoys, we find ourselves continuously brought back to the issue of governance. Though all forms of social power are fundamental to human life and interconvertible, the power for self-governance stands out as absolutely critical to the effectiveness of human society—local, national and global. Political power guided by universal human values is the leaven for effectively combining and kneading together all the others into a vibrant living organism.

Just two decades ago it appeared that we were nearing mastery of this most elusive and intractable form of social power—the power of governance. After centuries of experimentation with military rule, feudalism, theocracy, aristocracy, monarchy, colonialism, imperialism, communism, fascism and other varieties of authoritarianism,

consensus seemed to be emerging that democracy represents the best solution, however imperfect, to the challenges of self-governance and world-governance and to the full development and harnessing of the power of human society to promote individual and collective security, welfare, and well-being.

“The very notion that the maximum welfare of all could be achieved by a system in which each individual seeks to maximize their own individual self-interest regardless of its impact on others is about as rational as the assumption of efficient market theory that each individual makes rational decisions in pursuit of their own economic self-interest.”

Recent developments already referred to cast a shadow on that elusive or illusory goal. Today we view democracy—even in the liberal bastions in which it seemed so deeply entrenched and invincible—as not only incomplete and imperfect, but even at risk and in peril. Nations which whole-heartedly embraced the principles of liberal democracy as panacea for all social ills are now retreating from that conviction and commitment. Nations which preached the virtues of democracy to the world and spread its seeds far and wide seem to be losing faith and commitment to their own political heritage. Populism and polarization are replacing a unifying identity and shared values. Respect for democratic values, culture and institutions is being tarnished and slandered by vulgar speech, blatant disregard for truth, gross manipulation of the powers of law and government to serve the interests of elites, subordination of political power to money, plutocracy and state capture, rampant assertion of tyranny by minorities and majorities proclaiming electoral victory as a license to pursue narrow parochial agendas rather than the will of the collective.¹

Does all this herald the decline of a once perfect but now deteriorating system? Or does it signal that we are approaching the point where democracy itself must evolve, as economy and every other aspect of society has evolved, to reflect the emerging values and harness the emerging powers of society in the 21st century? Like the crisis that overwhelmed authoritarianism a quarter century ago and colonial imperialism a half century earlier, is the crisis of democracy a sign of decline or an invitation and call for further advance? Is democracy an imperfect work in progress or an aging and soon to be obsolete stage in the evolution of something else?

4. Institutions and Culture

In retrospect, it is clear that our use and abuse of the term democracy are nothing new. Only now we are more sensitive and conscious of the hypocrisy that has always cloaked the rule by privileged elites and special interest groups by terms such as government by and for the people, peoples’ democracy, and what not. After all, the very proclamation of freedom and equality embodied in the Declaration of Independence two centuries ago was for a long time

thereafter applied in practice only to white males with landed property. So, to speak of the demise of democracy is as inadequate as it is to speak of its perfection. It was never more than an elusive ideal to aspire for and seek to approach ever more closely, never a realized fact.

“The accelerating speed of change, increasing complexity and growing uncertainty regarding the future in recent times present fertile soil for populism to seed and sprout luxuriant but pernicious weeds of discontent.”

The very notion that the maximum welfare of all could be achieved by a system in which each individual seeks to maximize their own individual self-interest regardless of its impact on others is about as rational as the assumption of efficient market theory that each individual makes rational decisions in pursuit of their own economic self-interest. The constitutional constraints imposed on individual freedom by protection for the rights of other individuals and for the rights of the collective are distorted by polarizing populism into a competitive battle to see whose claim to rights will gain a temporary upper hand. But the selfishness of all may be no more rational or virtuous than the selfishness of a single monarch or autocrat, especially when that all is merely the all of a single class, community, race, religious group, nation or group of nations. It is simply more balanced and constrained in its expression by countervailing forces. Is this really the best we can do?

Many of the problems associated with the practice of democracy have arisen from a misconception of what it actually is. As Francis Fukuyama reminds us, modern democracy evolved in combination with two other social institutions—the nation state and rule of law, the capacity to preserve secure national boundaries and the capacity to regulate activities within those boundaries according to impersonal principles and administrative processes.² Democracy flourished in the past only under conditions where populations were able to exercise the freedom for self-determinism and the effective power for self-governance. Efforts to introduce or impose democratic forms of government on populations which had not yet developed the capacity for self-defense, self-governance and rule of law have always been doomed to failure or a very long period of gestation until these two other conditions could be met.

Moreover, the very notion of democracy as a particular variety of political institutions and political processes which include a constitution, popular election of leaders, checks and balances on legislative and executive power, an independent judiciary and a free press is flawed because it is incomplete. These represent only the hardware or objective aspect of democracy. As Fareed Zakaria pointed out, these institutions are themselves the product and external trappings of an underlying subjective dimension—a liberal democratic culture founded on commitment to the inalienable rights and value of the individual and a unifying national identity founded on those rights and values—regardless of how diverse and heterogeneous that population may be. A culture of liberalism has always been the software of tolerance and inclusiveness, the spring of energy and the foundation of strength on which

the institutions of democratic governance developed and depended for their effectiveness. Only in the measure that the population accepts these values can democracy take root and thrive. No mechanism can take their place. Efforts to transfer or impose democracy on populations which had not previously developed or accepted its cultural basis have always been doomed to failure.

The inseparability of political institutions and social culture is increasingly apparent, not only in the reversion of nascent democracies to authoritarianism but also in the degeneration of democratic practices in the former bastions of freedom. For both the hardware and the software, the institutions and culture, are vulnerable to attack and deterioration. Like all forms of organization, institutions tend to become rigid and ossified over time. The very act of organizing any activity imposes constraints on its plasticity and its future development. Like any other structure, a rule once made tends to ignore exceptions and resist modification. Authority once given seeks to preserve its power. Organizational efficiency inevitably degenerates into habitual repetition and inflexibility. But what is true of the hardware of democracy can also be true of its software. Culture too is a form of organization—subtle and psychological—which tends to become attached to forms appropriate to the age in which it develops. The spontaneity of spiritual experience becomes ossified as religious doctrine and orthodox ritualistic practices, the insight of inspiring new ideas becomes codified and entrenched as dogma, and the idealistic values enshrined in word and symbol are negated by literal interpretation and rigid application. The right to bear arms enshrined in the US Bill of Rights was intended to protect a nascent population of American colonists against foreign or domestic oppression by military forces, at a time when arms referred to flintlock muskets with an effective range of 100 meters capable of firing one round per minute. Today it is being applied to justify the possession of automatic weapons that can fire 600 to 1000 rounds per minute with an effective range that is 5 to 10 times greater. Thus, a symbol of individual freedom has been transformed into an ominous threat to public safety. In a similar manner, the doctrine of nuclear deterrence has been transformed into a doctrine of mutually assured destruction, giving new life to the nuclear arms race 30 years after the end of the Cold War.

Life evolves and every living thing must either evolve with it, die and disappear, or become an anachronism and roadblock to further evolutionary advance. Much of what we revere as democracy today is an ossified relic that has lost its utility. Nowhere is this more apparent than in the field of economics, where money and property command the inalienable freedom and protection originally intended to protect human beings. Today corporations in America have the legal right to influence elections, regardless of whether they are owned by American citizens or foreign states, regardless of whether they seek to promote the welfare of their employees and society or to maximize the gains of their shareholders at the expense of all others. Today the freedom of speech intended to promote protection of the individual from oppression by a foreign or tyrannical government has degenerated into the freedom of political leaders to lie and slander, insinuate and obfuscate, incite to anger and hatred the very people it was intended to protect. Political and social culture is as essential to the operations of democracy as the institutions designed to protect universal human values. That culture too must evolve with the times or risk degenerating into cancer.

5. Populism and Pluralism

One of the greatest threats to democracy today issues from the resurgence of populism. Populism is a social-psychological phenomenon that undermines the pluralism on which democracy depends. The right of the people to struggle against entrenched powers and privileged elites was once regarded as a sign of democratic vibrancy. Today populist appeals are being applied as a divisive force to generate confusion, prevent intelligent debate, fuel disharmony, polarize heterogeneous populations, weaken social cohesion, obscure a shared vision and undermine the sense of unity and common identity on which nation-states are founded.

“The control of the media by authoritarian governments, the take-over of the press by oligarchs, infiltration of social networks by disruptive foreign influences, and conscious misuse of media as an instrument for falsification by political parties cannot be easily remedied, as long as the public is willing to be misled.”

A culture of free inquiry, questioning and critical thinking is central to democracy and the wider distribution of social power. Trust in democratic leadership and institutions is founded on that freedom. Effective human relationships are associated with the promotion of the human and professional, scientific, artistic and spiritual potentialities. Populism undermines the trust generated by constructive human relations and tends to replace these qualities with simplistic slogans, cloistered virtues, empty platitudes, suspicion and incriminations.^{3,4} These divisive trends are further aggravated and intensified by the conscious falsification of electoral promises by populist candidates and the misrepresentation of facts by biased mainstream media outlets and surrogate purveyors of fake news. They constitute as much a violation of the principles of free speech as efforts of central authorities to suppress public expression.

Rising expectations are a powerful instrument for social development. They release the energy of the population for new endeavors and higher forms of accomplishment. But in times when social expectations rise far faster and higher than the opportunities to fulfill them, they can result in increasing levels of frustration, discontent and disillusionment that readily respond to populist appeals. So too, rising levels of uncertainty and insecurity regarding the future increase the appeal and susceptibility of populist slogans and remedies. Resentment toward the privileges of entrenched elites, hostility toward identifiable groups as scapegoats, groundless accusations and conspiracy theories find a receptive and responsive audience. Assigning blame to others for the people’s failures or sufferings has been the path to leadership followed by many a demagogue.

The accelerating speed of change, increasing complexity and growing uncertainty regarding the future in recent times present fertile soil for populism to seed and sprout

luxuriant but pernicious weeds of discontent. The dramatic changes since 1990 referred to earlier have added fuel to populist tendencies. The anticipated impact of the 4th industrial revolution on employment and job security has aggravated fears of unemployment and a future without sufficient work opportunities for the next generation of youth everywhere. The shift of entire industries overseas, the change to new energy sources, the suffering generated by the 2008 financial crisis, the shift of economic power to Asia, concern regarding a military resurgent Russia and more assertive China, reports of rising inequality and the increasingly global competition and the flood of immigrants entering Europe from the Levant have all become additional fuel for a pernicious form of populism.

Populism exists in every democracy in the form of fringe movements led by those who are excluded, disillusioned or opposed to the established order. But so long as mainstream society remains wedded to a central vision, its impact will remain minimal or can prepare the ground for constructive future developments, as the anti-establishment youth protests of the 1960s in support of the environmental movement, women's liberation and equal rights for African-Americans paved the way for mainstream evolutionary changes in subsequent decades. But populism can also become a tool wielded by seasoned politicians to undermine pluralism. Here the objective is not social progress but rather opposition to it by entrenched interests. Like the Fascist appeal of anti-Semitism in pre-war Germany, the gun lobby in the USA and anti-immigrant fervor in Europe are efforts intended to divide the population in order to carve out a section of adherents for political support, based on spurious or self-interested motives opposed to the welfare of the nation and the well-being of the entire population. The turmoil and confusion resulting from such movements dissolve the bonds of inclusiveness, tolerance, cooperation and shared vision on which societies depend for their integrity and future development.

There are no sure short-term remedies to the threat of populism. The control of the media by authoritarian governments, the take-over of the press by oligarchs, infiltration of social networks by disruptive foreign influences, and conscious misuse of media as an instrument for falsification by political parties cannot be easily remedied, as long as the public is willing to be misled. Imposition of stricter regulation of electoral campaigns can moderate the tendency toward extremism. It is ironic that American law strictly prohibits and punishes perjury under oath in the courtroom, while permitting candidates for the highest political offices in the country to make wild accusations and false promises without any accountability under law. Laws regarding election conduct exist, but are rarely enforced. The right to free speech becomes a shield that undermines the very power of free speech by obfuscating truth with an impenetrable barrier of conscious falsehood and confusion. Rising levels of general education can shield the more educated from susceptibility to its more extreme forms. But recent events in Europe and North America show that education alone or in its present form may not offer sufficient protection.

The only assured protection against populism is neither unlimited free speech, rigorous enforcement of electoral conduct nor universal education. Resistance and immunity to populism in democracy can only be achieved by building truly inclusive and equitable societies in which rights and social power are extended universally. Without addressing the

underlying causes of populism—economic insecurity and social inequality—populist calls will always find both powerful sponsors and willing audience.

“A century after their discovery, Relativity Theory and Quantum Mechanics are still searching for an integrating principle that may necessitate a complete reformulation of our fundamental view of reality.”

6. Towards Integration

Those who seek simple institutional solutions are bound to be disappointed and bewildered by the complexity of the issues. But viewing recent developments in an evolutionary perspective we realize that the current confusion and turmoil signify the possibility and opportunity for transformation of the still imperfect algorithms of governance. Much of the difficulty we confront in understanding and remedying current problems arises from the fragmented conceptual system imposed on our perception of social reality due in part to the fragmentation of the social sciences. The arbitrary division of society into separate, independent fields of activity and theories of knowledge at a time of unprecedented interconnectivity, convergence and complexity is deeply flawed, as is the artificial division of the human organism into separate and distinct physiological systems. However theoretically convenient for study and practically useful for treatment of some types of disorders, the reductionist view of the organic unity of the human body and society represents a gross distortion of reality. There is no such thing as a metabolic system separate and distinct from the respiratory, circulatory, nervous, muscular, lymphatic and skeletal systems on which it depends for its functioning and with which it is inseparably integrated. It may be useful for treating some specialized diseases, so long as the practitioner never loses sight of the distortion it imposes on our view of reality. But it does not present us with an integrated organic understanding of human health as a positive property of the organism, any more than knowledge of warfare offers a knowledge of the full conditions and best strategies for promotion of lasting peace in society. And when we add to physiology the impact of conscious and subconscious psychological factors, external social conditions, and environmental factors on health, the limitations of disciplinary reductionism become even more apparent.

Disciplinary fragmentation and reductionism have their limits. This is even more blatantly apparent in the social sciences than in the natural where conceptual and disciplinary integration is far more advanced. Today it seems difficult to comprehend how prevailing mainstream economic theories could have for so long excluded the interaction and interdependence between environmental and economic factors on human welfare and well-being, until the consequences of that intellectual exclusiveness threaten to wreak havoc on the entire economic, social and ecological system of the planet. The separation of the social sciences into specialized disciplines is a convenient and effective means of exploring the intricacies and infinitesimal details of human behavior, just as the microscope enables us to

zoom in to discover hidden structures and processes imperceptible to the human eye. But to mistake the microscopic view as ultimate reality is no more truer than to ignore it—for the behavior of a subatomic particle, atom, molecule, cell, organ and physiological system only becomes fully intelligible when viewed in the wider context and fully integrated with the macrolevel functioning of the whole organism, social collectives and the environments in which these microlevel functions exist. True knowledge must be an integral knowledge of the infinite whole, not merely a piecemeal, patchwork glimpse of many of its fascinating infinitesimal component parts. Microscopy is incomplete without telescropy. A geocentric view of the universe which sees the sun circling the earth may serve a practical and even a religious utility, but it will always be subject to limitations and error as Copernicus realized nearly 500 years ago. Nor are the two sufficient when regarded as separate and independent dimensions. A century after their discovery, Relativity Theory and Quantum Mechanics are still searching for an integrating principle that may necessitate a complete reformulation of our fundamental view of reality.

We need not wait until then to realize the limitations and errors arising from a disciplinary approach to social sciences. It generates errors that are much more catastrophic than the 0.002% inaccuracy in the length of an earth day corrected by migration from the Julian to the Gregorian calendar. In the social sciences partial, fragmented theories that view political, economic, social, psychological and cultural factors in isolation can lead to absurd and even monstrous consequences—the divine right of kings, feudalism, slavery, national sovereignty, imperialism, colonialism, fascism, dictatorship of the proletariat, the Great Crash and the Great Depression, the two World Wars, the veto power, ethnic cleansing, the nuclear arms race, the Cold War, the 2008 Financial Crisis, the myth of shareholder value, two Nobel prizes in economics for the algorithms that underpin computerized trading, to name but a few.

The division of the original discipline of Political Economy into two separate and increasingly independent fields of study is one instance of mental illusionism and reductionism run amuck. Economy and economics only exist within a framework of human rights, values, institutions for governance, laws and mechanisms for their enforcement, social culture and human relationships which constitute the foundation and framework for all economic activity. Outside this context, we have only the economy of warfare, conquest, piracy and the mafia.

Politics is as inseparable from economy as it is from technology, social organization, science, human psychology, cultural values and ecology. Thus, a theoretical and practical understanding of democracy requires a holistic perception of all the interactions and interdependencies that influence and determine the functioning of democratic institutions in specific periods, places and under particular circumstances. As democracy was transformed by the newspaper, railroad, telephone, automobile, radio, and television, it is now being shaped by the internet, the globalization of society and economy, financialization, the corporatization of the media, immigration, multiculturalism, the mobile phone, Facebook, Twitter, Fox News, the National Enquirer, and religious fundamentalism. With equal surety it will be further reshaped in future by the rapidly approaching 4th Industrial Revolution, blockchain and cryptocurrencies.

These observations are obvious and self-evident, but they are often lost sight of in our efforts to comprehend the bewildering nature of recent events. Those who emerged with high expectations from the terrors of the Cold War or were raised on the doctrinal superiority of a particular political, economic or religious dogma may be deeply disillusioned and disappointed by a shattering loss of confidence and faith. But for those conscious of the imperfections and injustices inherent in all past experience, no matter how glorified and romanticized by false comparisons and wishful thinking, the arrival of humanity at a cross roads of consciousness in which it recognizes the deficiencies of all existing systems and the urgent need to realize more fully in practice the highest values enshrined in our most sublime literature, both sacred and secular, this moment presents an unprecedented opportunity—an Hour of God—to transcend the limitations of the past and evolve a new and better world for all to live in.

“Mind thrives in freedom—freedom of speech, freedom of thought, freedom to aspire and choose, and free access to knowledge.”

As the immense destruction and suffering wrought by two world wars and the Great Depression gave birth to the United Nations and emergence of modern democratic institutions and the modern welfare state, a new vision and a new paradigm are needed to address the blatant injustices and insufficiencies of the present dispensation. A reversion to economic imperialism, whether by nations, corporates or wealthy elites, is no remedy for the current ills of the world. A retreat into aggressive nationalism or isolationism is no path to the future. A revitalization of the nuclear arms race is no solution to the challenges of global security. A denial of fact or responsibility is no answer to existential ecological threats. These responses are merely the feeble helpless reactions of those who are blind to the painful lessons of the past and the extraordinary opportunities staring humanity in the face. It is time to move on, to move forward, to a new vision and a new paradigm.

7. Lines of Future Evolution

To state that we must move forward would be an empty platitude void of utility parading as sage advice were we able to say nothing more about the direction, complexion and essential dimensions of the future toward which we must move and are moving. But there is more we can say with considerable certainty, greater in both its wisdom and practical utility than most of the prevailing diagnosis and prognosis for present ills.

7.1. Evolution of Mentality

The dimensions and lines of humanity’s future evolution are known, even if the method, process, timing and stages of its progression remain to be discovered or fully understood. First, is the progressive evolution of humanity from physicality to mentality, from action defined by past experience to that guided by emerging mental knowledge, from the power of force to the power of ideas, from the battlefield to the negotiation table, from physical compulsion to human rights, from divine right to the ballot box. Our ancient past was a period in which physical prowess, subordination to established authority, tradition and

seniority ruled. Physical causality is determined by what has occurred in the past. The stone rolls because it is pushed or thrown. The force precedes the event.

Our emerging future is governed by the growing influence and domination of mind over matter and of the future over the past and present. The development of reason and logic in ancient India and Greece, creativity and imagination in Renaissance Italy, mechanical invention during the Industrial Revolution, scientific discovery and technological innovation during the 20th century, and the accompanying social and organizational resourcefulness that accompanied each of these phases are hallmarks of the ever growing and accelerating shift from reliance on the powers of the physical to the powers of mind. The application of mind to matter has transformed sand into silicon chips and created an endless plethora of ever more powerful technologies. The application of mind to production took us from the stage of simple tool-making hunter gatherers in the forest to sedentary rural agriculturalists, urban-dwelling craftsmen and merchants, national manufacturers and global service providers. The application of mind to society and human relationships has taken us from the family and feudal community to the modern nation state, from the workshop to the multinational corporation, from the moneylender to the global financial network.

This progression gave birth to language, money and the Internet. It has extended our conception of resources from land, labor and trade to social organization, law, technology, science, money, information and the value of the human being as the ultimate resource that lends value to all other resources. By this progression, humanity is in the process of emerging from an age of scarcity into an age of material abundance, where all real human needs can be met and there is no longer any excuse for deprivation and denial, if only we are willing to forego extravagant wastefulness and mindless greed. Mind transforms causality from a force of the past exerting inexorable, predetermined consequences on the present and future into a force of the future presenting countless choices, creating alternative pathways and transforming even the most threatening challenges into opportunities for evolutionary advancement.

Mind thrives in freedom—freedom of speech, freedom of thought, freedom to aspire and choose, and free access to knowledge. These are the psychological endowments by which democracy grows. Mind liberates humanity from helpless dependency and subservience to the compulsions of past habit and tradition. It harnesses the powers of imagination, aspiration, expectation and anticipation to transform the visible, tangible, status quo into something quite different. From fatalistic, finite predetermination mind transforms life into a field for unlimited freedom for creative self-determination.

7.2. Emerging Individuality

The second inevitable line of evolution is from the collective to individual identity. Man is a gregarious social animal that survives and develops through association and cooperation with other human beings. The first necessity of that survival was always loyalty, subordination and obedience of each individual member to the group. Early attempts to develop larger social units could brook no deviation or dissent from the ideas, beliefs and hierarchy of authority necessary to ensure the strength and coherence of the collective. History traces the

gradual individualization of consciousness from conformity, subordination and subjection to the group. Ancient Greece cherished the power of independent thinking and freedom of moral choice, provided they did not transgress certain limits as in the case of Socrates. Renaissance Italy extolled the creativity and virtuosity of the artist. The Reformation freed the individual to read and interpret scriptures. The Enlightenment liberated the philosophical thinker, bold explorer, investigative scientist and social idealist from blind adherence to established doctrine and practice. The free-thinking individual became the political, social and economic revolutionary. Subordination to the collective very gradually and reluctantly gave way to respect for and even nurturing of individual distinctness. The 20th century has been called the century of the common man. The talented individual could rise politically, socially and economically. Society elevated the status of the explorer, entrepreneur, and genius. It extended the right to vote to the commoner. It sought to universalize education. It broke down barriers of social, religious and ethnic discrimination to abolish discrimination and promote the development of every citizen.

Yet, individuation remains the exception more than the rule. We may all be increasingly free to have our own favorite color and form of dress, to marry outside our class or nationality or not to marry at all, to vote according to our own political persuasions and worship according to our own personal faith. But still, the bonds and boundaries of collective authority impose strict limits on the development of the consciousness and autonomy of the individual. Tolerance of individual differences and dissent vary from one place to another, but still the preference and pressure for conformity persist. Even in the august halls of academia, respect and tolerance for differing views can be extremely limited or be replaced by virulent hostility. True mental individuality will only emerge when the principal objective of education becomes the development of independent thinking rather than rote memorization and acceptance of established academic perspectives. Electoral politics and parliamentary debate too often degenerate into a demand for mindless political correctness, so that the variety of candidates disguise the absence of real choice for voters. Yet the evolution of the individual is as inevitable and inexorable as the irrepressible urge of the awakened mind to think and question. Once awakened, individuality cannot be repressed. Once tasted, the freedom to decide for oneself cannot be suppressed for long.

The individual has always played an essential role in the evolution of the collective. Every new idea, innovation, and creative initiative finds expression first in the mind and actions of an individual and only later becomes a possession of the collective.⁵ The individual is the catalyst for the development of the group, the creative mutant gene that spurs the creativity of society. But the evolution of individuality is not synonymous with the aggrandizement of individualism. Freedom to develop one's own uniqueness does not imply unlimited freedom for the pursuit of self-interest in neglect or opposition to the legitimate interests and aspirations of others. The relationship between individual and collective is always reciprocal but not always balanced. Many societies in the past have restricted freedom and privilege to a small number of individuals to think, decide, exercise power and enjoy on behalf of the collective. But all individual achievement ultimately belongs to the collective. All that the individual possesses and utilizes for advancement—language, concepts, ideas, knowledge, skills, imaginations, tools, organizational capacities, technological innovations and physical

infrastructure—are a legacy of the cumulative accomplishments of countless individuals and groups in the past. The individual cannot think a thought without borrowing heavily from the legacy of the group. The accomplishments of the individual are the accomplishments of society. All that the individual achieves is accomplished on the strength of that inheritance and therefore belongs rightfully to all, if not in whole, then most certainly in part.

The evolutionary direction is from subordination of the individual to the will of the group to a balanced relationship and partnership of the individual and collective, based on their mutual interdependence. At different times and places, all manner of relationship has been attempted. Recent history testifies to the enormous power unleashed by the liberation of the individual from subordination and domination by the collective. But it also testifies to the need for balance and limits on individualism when it descends into flagrant self-aggrandisement and dissipation of one at the expense and to the detriment of all. The inalienable right to freedom is counterbalanced by the inescapable responsibility to utilize that freedom in a manner supportive of the betterment of all.

Prevailing democratic practices flagrantly invite the electorate to support that which will benefit them or their group personally, even at the expense of other citizens, all humanity and future generations. Such a system can never lead to the fullest development and emergence of individuality. Self-actualization and service to humanity are complementary rather than mutually exclusive aspirations. Neither can be fully achieved separately without pursuit of the other.

7.3. Dissemination of Power

A third visible dimension of social evolution is the evolution of power discussed earlier in this paper. That evolution proceeds simultaneously from lesser to greater power of accomplishment for and by the collective and from a domination by privileged elites to a more equitable distribution of power among members of the collective. Neither goal can be fully achieved independent of the other. The increasing power of the collective is patently evident. Global society and its individual members are many times more empowered to communicate and transport locally and globally, improve health and prolong lives, acquire and disseminate knowledge and skills, act remotely, reach out and organize collectively, pray or learn or laugh together.

The increasingly equitable distribution of power is less obvious and more complex. Recent research, such as Thomas Piketty's *Capital in the 21st Century*, suggests that economic power is more concentrated than at any time since the roaring 1920s and the power of organized labor has declined dramatically. Studies show that this is true within nations, but on a global level, economic power is becoming more and more widely distributed between countries. China is already the second largest economy and India is growing rapidly. The power of corporations relative to national governments is increasing. National governments are less able to exercise power over multinational corporations, who seek refuge and leverage by shifting their assets and production facilities to the highest bidder overseas. So too, power is increasingly accessible to enable individuals around the world to communicate, travel, acquire knowledge, improve their health, prolong their lives, and fulfill other aspirations. Today there

are more than 10 million non-governmental organizations operating globally as a fifth estate for self-expression and coordinated action by global civil society. Nuclear weapons no longer are a guarantee of security. Aristocratic elites have given way to new generations of wealth and power. The rights of women, the disabled, racial and religious minorities, immigrants and foreigners are more secure than ever before. It is easy to identify exceptions, but the overall direction and trend from decade to decade is evident. Public exposure and punishment for political corruption, police brutality, sexual misconduct, corporate malfeasance and financial malpractice are on the rise. But clearly the shifting of power from established elites to new centers of power by itself can be only an interim stage in the process of its devolution.

The strength of democracy is that it more widely distributes political power than other political systems. The freedom, self-confidence, self-respect and self-reliance that result release more of the energy of each individual than any other social system. Education informs that energy and raises the aspirations of individuals to further develop their capacities and transcend the limits of their inheritance. Social rights combined with social organization and technology empower the individual to more fully utilize the opportunities afforded by freedom.

Yet for all its virtues, the prevailing system of democracy severely constrains the true exercise of power by the individual. The right to vote may be granted, but freedom of choice implies alternatives, which are very often severely limited. Freedom of choice is often illusory, as power resides more with the party than elected individuals and the behavior of elected officials is constrained by their preoccupation with re-election. True distribution of political power cannot be achieved under a party system in which the individual voter only has the option of choosing between two increasingly polarized viewpoints and value systems. Life is too complex to be reduced to multiple choice questions.

8. Promise and Threat of Technology

Ever since the invention of the printing press, newspaper, radio and television, technology has exerted considerable influence on the evolution of democracy. The role of the mass media and social media in the recent US Presidential election dramatically illustrates their central role today. During the 19th century, dissemination of information to the public was quite limited and depended largely on local newspapers, which reflected the prevalent views of the editors or of a specific region. The mass broadcasting media of the 20th century tended to unify the national electorate by presenting a common mainstream view of unfolding events. Today the multiplication and fragmentation of media sources inundate the public with different, contrasting and conflicting news reports purporting to be factual but heavily skewed to influence public opinion in one direction or another. Of special concern is the tendency noted in the 2016 US elections of the public to give preference to sources of information that validate and reinforce their own existing values and beliefs and to ignore or disparage those sources which contradict or challenge their views. As Nobel laureate Amartya Sen once pointed out, no famine has ever been recorded in a democratic country with an independent judiciary and a free press. But today a free press is not necessarily synonymous with a fair, objective or factual one.

The promise and threat of technology are also apparent with respect to the future of employment. Humanity now possesses the technological potential to meet the needs of all human beings. But in the absence of a coherent overall social strategy, the indiscriminate application of this technology could as well impoverish as improve the lives of countless millions. A full exploration of the impact of emerging technologies on society and democracy is beyond the scope of this article, but it is necessary to emphasize that political stability and social cohesion necessitate that technologies invented by human beings with the intention of promoting welfare and well-being are not permitted to blindly dominate and rampantly undermine social and economic security. As the quality of food and medicine is not regulated universally to protect the general public, society has a right and government has an obligation to ensure that the impact of technology on human beings is beneficial or to introduce other measures to compensate for any negative consequences it may entail. Technology can unite or divide, augment cooperation or competition, support democracy or destroy it. It is the task of government to ensure that emerging technology becomes part of the solution to make democracy more effective.

The participation of individual members of society in its governance—either directly through participative processes or indirectly through election of representatives—lies at the heart of all forms of democracy. Technology has played a key role in reducing or marginalizing the importance of the individual in innumerable ways, such as the mechanization of warfare, the mechanization and automation of economic functions, and most recently the automation of knowledge acquisition and decision-making processes through artificial intelligence. At the same time technology has played an immense role in empowering the individual citizen by enhancing access to information, communication, transportation, education, health, economic productivity, and so forth. Today, it greatly empowers individuals to acquire knowledge, project their views and ideas, communicate with a wider audience, network of other people and multiplying their individual capacities through association with other people.

9. Known Remedies

The Nordic countries are well-known examples of countries where the practice of democracy appears to avoid many of the pitfalls evident elsewhere. Among the common characteristics these countries share are a relatively homogeneous population, high levels of investment in human capital, a long tradition of liberal values and pluralism, high levels of participation in democratic processes, and the application of the principle of subsidiarity to decentralize decision making to the local level.

In other countries where these characteristics are difficult to emulate, there are still known remedies that can dramatically increase the efficiency and effectiveness of democratic institutions while reducing the common abuses, such as the following:

- Decentralizing authority to the local and state level to encourage local participation in decision-making.
- Limiting campaign financing and making fully transparent the amount and source of funding received by candidates.

- Imposing term limits to attract non-career politicians to seek elected office.
- Most nations already have laws in place to punish false statements by parliamentarians and other public officials during parliamentary proceedings, but they are either neglected or only enforced in extreme circumstances. Legislate and implement stricter codes of accountability for truthfulness by elected officials and those running for office, regardless of whether the statements are made in parliament, during election campaigns or to the media. Intentional falsification by public officials must be as punishable as testimony under oath in court.⁶
- Implement a wide range of practical and effective ethical standards in government and the civil service, including transparent government decision-making, protection for whistle-blowers, merit-based promotion of civil service, external and internal compliance and redress procedures.*
- Measures to eliminate election fraud.
- Rigorous anti-corruption standards and enforcement to fight corruption.
- Regulate the revolving door between elected office in the private sector and the powerful influence of lobbyists.
- Establish weekly state-of-the-union and state-of-the-state broadcasts conducted by a cross-section of representative civil society organizations to revitalize participative democracy at the national and local level. This would act as a check and balance on the biases of public broadcasting networks, political parties and private media.[†]
- Establish annual state-of-the-world and global citizenship broadcasts conducted by a cross-section of representative international civil society organizations from the perspective of the world's citizenry, rather than that of governments, corporations and mainstream media. This would act as a check and balance on the biases of public broadcasting networks, political parties and private media.[‡]
- Establishment by the national academies of science of Evidence-Based Policy Centers for high priority problems relating to education, health, public safety, the environment, law enforcement, corruption, justice, etc. to more closely align and direct the capabilities and resources of the scientific community to address pressing domestic and international issues.[§]

These and many other known remedies have been applied successfully by different nations at one time or another and could be included on a more comprehensive set of democratic standards.

* Howard Whitton, February 2001 <https://www.oecd.org/mena/governance/35521740.pdf>

† Proposal by Lloyd Etheredge, Director, Policy Sciences Center, Fellow, World Academy of Art & Science

‡ Proposal by Lloyd Etheredge

§ Proposal by Lloyd Etheredge

10. Alternative Pathways

“Prevailing policies and institutions are founded on and draw their legitimacy from entrenched economic doctrines, which need to be challenged and replaced by a human-centered, value-based transdisciplinary conceptual framework.”

The Dubrovnik Roundtable also explored meaningful efforts to envision systemic political reforms that could more successfully fulfill the potentials of democracy. The Independent Constitutionals of the United Kingdom, for example, have developed a platform for radical decentralization and devolution of democratic processes to address some of the central ills of the present system.*⁷ Their recommendations include—

- Shift from elective representative democracy in which citizen participation is limited to voting in elections to participative representative democracy which combines the involvement of citizens in the management of public affairs with genuine bottom-up representation, mandated and accountable.
- Shift from adversarial bipolar party politics to one that fosters loyalty of elected officials who place loyalty in their constituencies over party allegiance and compliance.
- Shift from winner-loser take all electoral systems to ones based on proportionality to maintain a greater correlation with votes cast and the resulting representation.
- Adoption of an ethical code for elected representatives that establishes high standards for truthfulness and accountability for acting on the promises and pledges made during elections.
- Measures to increase opportunities for citizens to represent their communities on specific issues now under the purview of professional politicians.
- Wider use of referendums to directly ascertain the views of the electorate and allow the direct action of citizens on decision-making.
- Fair political funding that limits the influence of any individual, corporation or lobbying group to determine the outcome of elections while also enhancing campaign financing transparency.

These and similar prescriptions need to be seriously considered. The exact form in which they are cast and the means of implementation must necessarily differ from country to country and level to level, but the intention behind them is applicable to most democratic societies. Both conventional and new approaches can be adopted to address them more effectively. For instance, governments can mandate that all election expenses, such as media advertising,

* ICUK declaration of purpose <http://www.icuk.life/declaration.html>

must be paid for by a special digital currency issued by the government and fully redeemable in national currency. By this means, the government could electronically track the identity of those making the expenditure and the use to which it is put and make that information transparently available to the general public in real time.

A fully effective system would have to extend changes far beyond political institutions and processes to address the economic and financial practices that threaten the stability and viability of contemporary society. The New Economic Theory Working Group established by the World Academy of Art and Science (WAAS) in collaboration with a consortium of partner organizations and concerned social scientists, has concluded that piecemeal modification of policies and institutions will not be sufficient to bring about the magnitude of changes required. Prevailing policies and institutions are founded on and draw their legitimacy from entrenched economic doctrines, which need to be challenged and replaced by a human-centered, value-based transdisciplinary conceptual framework.⁸

Similarly, WAAS and the World University Consortium have concluded that effective measures to address the multidimensional challenges confronting humanity today will require radical changes in the global educational system. The capacity of the system will have to be rapidly expanded and upgraded to provide the huge number of aspiring youth in developing countries with opportunities for accessible, affordable quality education. But a mere extension and replication of the existing system will not be sufficient. The present fragmented system of education is itself part of the problem. There is need for a new value-based paradigm in education that shifts the focus from the subject to the student, from passive indoctrination to active learning, from memorization of information to independent thinking, from competition to collaborative, peer-to-peer forms of learning.* Institutions and procedures can only go so far in eliminating the ills democracy confronts today. The only real and lasting solution is a culture of liberalism. Such a culture cannot be established or safeguarded simply by legal provisions and institutional measures. It must be established in the minds of the people through a spirit of independent thinking, rational analysis and allegiance to truth rather than personal preference. These are the greatest endowments rightly bestowed by a progressive system of education that places emphasis on thinking rather than facts, questioning rather than learning all the right answers, and perceiving reality in its rich many-sided complexity. The truths on which democracy can prosper are truths that complement and complete other truths rather than those that contradict, negate and deny them.

The challenges to the future of democracy extend beyond the nation-state to the governance of the global community. It is ironic that the institutions established by the world's leading nation-states with the specific ideal of promoting freedom and democracy at the national level should cling to outdated, undemocratic principles and practices for global governance. The evolution of the international political system is beyond the scope of this article, but it is important to consider the intermediate territory that lies between national and international systems of governance. Globalization has placed many of the issues confronting nation-states and citizens today beyond the sole authority of national governments to address on their

* See <http://wunicon.org/files/reports/Report%20Conference-Future-Education-Rome-Nov-2017.pdf>

own. International financial crises, financial speculation, tax havens, economic inequality, immigration, nuclear proliferation and global warming all require concerted action by groups of nations. The present democratic system provides little opportunity for citizens to influence the policies of their governments that require international cooperation. Innovative approaches, such as those by SIMPOL to establish a means for citizens to promote simultaneous policy formulation internationally on issues of critical importance, deserve to be experimented on widely. The SIMPOL model is an innovative approach to encourage electoral candidates to support a set of policy measures that require international collaboration.⁹

“The blockchain could serve as the basis for establishing a globally inclusive system of polling for conducting referendums of the entire world population on issues of critical importance to the future of humanity.”

11. Envisioning the Future

The recent development of distributed ledger technology, commonly known as blockchain, opens up new and unprecedented opportunities as great in variety and magnitude as those generated by the development of the World Wide Web (WWW) over the past two decades. The blockchain is essentially a parallel system to the WWW that also rides on the foundations of the global electronic communications network we call the Internet, but with a fundamentally different structure and distribution of authority. The blockchain is a global database distributed on a large number of independently owned and operated computers around the world that enabled fully verifiable and highly secure transactions to be carried out without resort to a central repository of data or a centralized authority for verification. This permits a level of decentralization or uncentralization far beyond that realized by the WWW.¹⁰

It is still too early to clearly envision the ultimate implications of the global blockchain, but its revolutionary character is already apparent. It could make possible the development of a rapid, low cost, peer-to-peer global payments and lending system, an inclusive system of banking accessible to every human being with access to a mobile phone, a universal registry for property ownership and transactions (roughly 70% of landowners in the world today lack legally verifiable documentation to establish their rights), a universal registry for human identity to replace the innumerable means by which individuals have to prove their identity today, a universal inventory of the earth’s resources and consumption, and countless other applications until now unthinkable.

More specifically with reference to democracy, the blockchain has the potential to usher in a whole new age of participative democracy. At the national level, it could support tamper-proof online voting systems that reverse the steep downward trend in electoral participation in the world’s mature democracies. It could enable voters to transparently track in detail the actual voting records of elected officials on any issues of importance to them. It can make

possible very low cost public referendums to assess public support on specific issues. It can serve as the basis for transparent tamper-proof reporting of suspected criminal or civil wrongdoing by public officials and submission of evidence.

“Democracy can thrive only under conditions in which power is widely distributed, in which peace, freedom, equality and prosperity are widely shared, and in which a culture of democratic values is freely and fully embraced by both leaders and the electorate.”

Representative democracy as it is practiced today is predicated on the recognition that informed decision-making on many legislative issues requires in-depth knowledge, which many voters are unlikely to possess. To circumvent this limitation yet still significantly enhance voter participation, the blockchain could also serve as a vehicle to make the introduction of *delegative democratic* processes in which voters assign their voting rights on specific issues to different representatives whom they regard as better informed, trusted experts or advisers.*

At the international level, the blockchain could serve as the basis for establishing a globally inclusive system of polling for conducting referendums of the entire world population on issues of critical importance to the future of humanity, as envisioned by this journal seven years ago.¹¹ This would, for the first time, represent a direct voice for humanity in its own governance and, perhaps, an essential step in the establishment of an effective system of global governance that transcends the narrow provincialism of nation-states to establish the sovereign right of the entire human community.

The newly emerging technologies of the 4th Industrial Revolution present both unprecedented opportunities and challenges to humanity. This brief discussion of the potential impact of blockchain technologies points to emerging opportunities to dramatically enhance participative democracy. But the decisive determinant of humanity’s future will not be technology. It will be *human choice* whether to subordinate ourselves to the power of the technology we develop or assume authority and responsibility as its creators for ensuring that it is applied to promote human welfare and well-being.

One of the characteristics of paradigm change is that it is very difficult to conceive until it is already upon us, as the potentials of the World Wide Web were understood by only a few visionaries until they began to be realized in practice, as the world’s financial experts grapple to comprehend the significance of the digital currency revolution which is now in an early stage of unfolding. That is why in this article we have focused on the irresistible long term forces that are driving global society to progressively embrace universal human values

* For an extended discussion of the potential impact of blockchain on democracy, see Chapter 8 of *Blockchain Revolution: How the Technology Behind Bitcoin is Changing Money, Business and the World*, by Don Tapscott and Alex Tapscott, Penguin Random House LLC, New York, 2016.

and to develop more free, equitable and effective systems for the governance of humanity's ever increasing social power. Democracy can thrive only under conditions in which power is widely distributed, in which peace, freedom, equality and prosperity are widely shared, and in which a culture of democratic values is freely and fully embraced by both leaders and the electorate. Democracy is incompatible with a social environment in which human welfare is at risk and individuals are left to fend entirely for themselves. Secure borders, rule of law, economic development, investment in quality education and social equity are essential conditions. But even more so, it is at risk when the underlying values of liberalism are reduced to platitudes or discarded as impediments to imposition of central authority. Representative government must be truly representative of the will of the people, but it must be respectful and inclusive of the will and well-being of all the people, rather than that of being either a dominant elected majority or powerful ruling elite.

Authors' Contact Information

Garry Jacobs – Email: garryj29@gmail.com

João Caraca – Email: jcaraca@gulbenkian.pt

Rodolfo Fiorini – Email: rodolfo.fiorini@polimi.it

Erich Hoedl – Email: erich.hoedl@aon.at

Winston P. Nagan – Email: nagan@law.ufl.edu

Thomas Reuter – Email: treuter@unimelb.edu.au

Alberto Zucconi – Email: alberto.zucconi@iacpedu.org

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The Future of the Nation-state in an Era of Globalization

Keith Suter

Managing Director, Global Directions;
Fellow, World Academy of Art & Science

Abstract

This article uses the scenario planning technique to examine the future of the current nation-state system. Scenario 1: “Steady State” argues that despite all the talk of global governance, the basic nation-state structure will remain; it may have its problems but it is the best of the options. Scenario 2: “World State” is based on there being no purely national solutions to transnational problems, and so governments have to work together through some form of global governance to solve common problems. Scenario 3: “Earth Inc.” suggests that national governments lose control over their countries and transnational corporations fill the vacuum; with the decline of the nation-state, the only organizations capable of driving the pace of change are transnational corporations, which then knit the world together into one market as they fill the governmental vacuum. Scenario 4: “Wild State” suggests that national governments lose control over their countries and there is no organization to fill the vacuum and so there is increasing chaos; this is the “nightmare” scenario, in which nation-states fall apart, there is an increase in “failed states”, mass movements of peoples and increasing environmental and health problems. These are scenarios—and not predictions as such. There are many signs of the world moving to “Wild State”. There needs to be a greater sense of urgency to confront the globe’s looming problems.

The nation-state system has worn well—but is it now wearing out? If it is wearing out, how could it evolve? Over a decade ago, I wrote a book about how the global order could evolve and developed four scenarios¹. With recent events such as the UK’s decision to leave the European Union (“Brexit”) and the election of Donald Trump as US president, it is interesting to see how the world is evolving towards one of the four scenarios.

1. The Current System

National governments are a comparatively new idea. International lawyers date them from 1648: the end of the Thirty Years War in Europe and the Treaty of Westphalia (“Westphalian System”). Prior to that time people in Europe lived in small tribes, possibly as part of a large empire. There were few countries, as we know them today.

No one suddenly decided in 1648 to create the Westphalian System. It was only with the benefit of hindsight that people could see that a new world order had been created as a result of the breakup of the Holy Roman Empire. European peoples (“nations”) were now to be governed by “states”, hence the title of nation-states (as distinct from, say, the previous

“city-states”). As the Europeans colonized the world, they took this system with them. The newly-independent colonies based themselves on the nation-state system (such as in Africa, where over 50 nation-states have been imposed on a patchwork quilt of about 200 major tribes).

The nation-state system is now so prevalent that it is seen as the norm in world politics. But national governments are no longer so relevant to world politics. Instead, they are having to share their power with international organizations, transnational corporations and non-governmental organizations (NGOs). The erosion of the Westphalian System has crept up on governments and citizens. It was not done in secret. It is simply that the attention of most people, politicians and academics was focused elsewhere (such as on the Cold War).

What could come next?

“Beginning at the time of World War I, world history could be described as an experiment in global governance.”

2. Thinking About the Future

There are three main ways of thinking about the future. First, “prediction” means extrapolating current trends out into the future. This is the most common form of thinking about the future. Lines on graphs, for example, will often reveal a pattern. Economic predictions are perhaps the most widespread—and most criticized—branch of forecasting covered by the mass media.

Second, there is a “preferred” future, where a person or organization has a vision towards which they work. For example, when President John F. Kennedy took office in January 1961 he knew there was a need for a bold vision to revive American spirits, which had been dampened by all the Soviet space “firsts”, such as the 1957 Sputnik. On May 25, 1961 Kennedy laid out his vision of putting a man on the Moon and returning him safely before the end of the decade. This was achieved in 1969. With a “preferred” future we move from what is currently being suggested by prevailing trends (“prediction”) to what we would like to see happen.

Third, possible futures are what *could* happen. They are not necessarily being currently suggested (via prediction) and they may not necessarily be what one would like to see happen (via preferred futures). The signs of possible change may be there—but one is simply not “seeing” them. Unfortunately, in all walks of life, there is a tendency to get into a “comfort zone” and to mix with a narrow range of people. A good technique to get out of the comfort zone is scenario planning. This is not so much about getting the future right—as to avoid getting it wrong. Done properly it reduces the risk of being taken by surprise.

Here are the four scenarios on how the globe could evolve.

3. Scenario 1: “Steady State”

This is based on *strong nation-state/ weak international social cohesion* (national governments remain in control of their destiny and are unwilling to work together on common problems). This scenario argues that despite all the talk of global governance, the basic nation-state structure will remain. It may have its problems but it is the best of the options.

“The world is now too interdependent—with one part affecting others—to try to operate on a piece-by-piece basis.”

The scenario logic is as follows. National sovereignty is here to stay because governments are unwilling to surrender it. There has been little progress in establishing non-partisan standards of behaviour between governments. All forms of international cooperation are viewed in the context of how a government can maximize its own gain.

This may be regrettable but that is a fact of political life. All politics is local—and foreigners do not vote in national elections. For example, all western countries are now troubled by the risk of the mass movement of peoples into their own territories. As long as some countries are extremely wealthy and others are extremely poor, national boundaries will have to remain in place to restrict the movement of peoples. Given the nature of the international economic system, it is unlikely that this gap between rich and poor will disappear for many decades to come (if ever)—and so national border protection will remain very important.

This concern with national sovereignty is not simply a Western one. Developing countries also have a strong determination to maintain national sovereignty. They fought hard for their independence from their colonial masters. Now they are troubled by threats of tribalism, fragmentation, and the erosion of national unity by cultural diversity and foreign influence. These countries are not going to surrender their national sovereignty for the fear of being swamped by a fresh form of imperialism. There may be problems—but at least they are their own problems.

4. Scenario 2: “World State”

This is based on *strong nation-state/ strong international social cohesion* (national governments, while they remain in control of their destiny, are willing to work together on common problems and this evolves gradually into some form of global governance). This is based on there being no purely national solutions to transnational problems, and so governments have to work together through some form of global governance to solve common problems.

This scenario argues that this is the first time in history that people have been confronted with the need to organize and manage the world as a totality. Beginning at the time of World War I, world history could be described as an experiment in global governance. Underlying all the conflicts and upheavals, there has been a basic question: how is humanity to govern

itself? The problems are a long way from being solved but there is no choice but to continue the quest. The world is now too interdependent—with one part affecting others—to try to operate on a piece-by-piece basis.

Therefore, there is a need for some form of world government. The tendency among NGO advocates is now to talk more about “governance” because it is less threatening to the general public than “world government”. Also, it may well be that its eventual form will have to be different from existing notions of national “government” and so the term “world government” is misleading because of the connotations of “government” at the national level.

Just how the world evolves to a different form of governance is not yet clear. There are three ways of trying to get countries united:

- i. Federalist approach: the deliberate decision by national governments to transfer certain powers (such as maintaining armed forces) to a world government while retaining other powers (such as establishing laws concerning ownership of property) for themselves.
- ii. Functionalist approach: the creation of more global agencies (such as the World Health Organisation and International Telecommunications Union) to handle a particular function (such as health or telecommunications) because experts can cooperate in a less politically-charged environment, and eventually the globe will be covered by a network of such agencies.
- iii. Populist Approach: the creation of a grass-roots people’s movement to establish a democratic world government directly responsible to the people of the world, and in the meantime to generate ideas for world government and a groundswell in favour of it.

There is a chicken and egg dilemma. We cannot discuss world government because we have no world community to support it. Indeed, the discussion of world government may even retard the development of world community (because of the evil overtones of “world government” and “Big Brother”) and hence retard the movement towards world government.

The way to promote world community is to have world government. But since private citizens cannot establish a world government, the next best thing to promote world community is to talk about global governance. Global discussion of world government may have some chance of uniting it. The consideration of what is necessary to unite the world and the discussion of a common problem of overwhelming importance, could lead to a growing sense of community among all peoples.

An important reason for talking about world government is to clarify what it would be. Should a world government aim at limited measures designed to maintain what is called security, or is security itself dependent on the pursuit of broader purposes? Should a world state be federal or unitary, or should it, perhaps, contain the best features of each? What should be the relation of the world government to the citizens of existing states? What taxing powers should the world state have, and what order of military forces, if any?

Consequently, many global governance activists prefer to campaign on all three of the above approaches simultaneously. For example, they deal with the need for governments to

work together at the political (federal) level and on common problems (functional approach) and the importance of people being involved in the campaign for world government.

“Transnational corporations have eroded the notion of a national economy; there is now only a global one.”

5. Scenario 3: “Earth Inc.”

This is based on *weak nation-state/ strong international social cohesion* (national governments lose control over their countries and transnational corporations fill the vacuum). With the decline of the nation-state, the only organizations capable of driving the pace of change are transnational corporations, which then knit the world together into one market as they fill the governmental vacuum.

National governments will not necessarily disappear (any more than the rise of national governments necessarily caused all forms of local government to disappear). But national governments will need to get used to the fact that the nation-state system is over and that corporations are the major player in world affairs.

Money is now the measure of all things. This new era can be taken as beginning in 1776, with the publication of Adam Smith’s *The Wealth of Nations*, which saw the rise of modern capitalism. The market—rather than government involvement or religious dictates—has increasingly set the pace for economic activities. Smith placed emphasis on individuals being left free to pursue their own interests. Self-interest guides people, as though by the influence of an “invisible hand”, to the exercise of the intelligence that maximizes productive effort and thus the public good. Private vice becomes a public virtue.

Therefore, a free market—not government—is the best allocator of resources, and the best promoter of the public good. Government should be as small as possible, with limited responsibilities. Thus, the individual should be left to maximize their own income and determine how that is to be spent.

Meanwhile, with money as the measure of all things, national identity ceases to be such a major issue—except where it can be commodified, as in corporations manufacturing support for local or national sporting teams. People are principally consumers or aspiring consumers. Politics and patriotism are not as pleasurable as the latest fashion in clothes, music or technology. They are consumers rather than citizens. This helps explain the reduction in armed conflicts since 1950—they are consumers and not warriors.

Transnational corporations have eroded the notion of a national economy; there is now only a global one. For example, if a government tightens the money supply by increasing interest rates, loans may come in from abroad and make the country’s monetary policy nearly meaningless because cheaper funds flow in from elsewhere.

These trends help explain the low voter turnout in many elections: voters think that the elections are increasingly irrelevant. A political party may come to office—but not necessarily

to power. That power is held elsewhere. The people who really run a country do not stand for election.

“We tend to focus on single issues—and do not pay enough attention to the overriding issue of where the globe is heading... There needs to be a greater sense of urgency to confront the globe’s looming problems.”

6. Scenario 4: “Wild State”

This is based on *weak nation-state/ weak international social cohesion* (national governments lose control over their countries and there is no organization to fill the vacuum and so there is increasing chaos). This is the “nightmare” scenario, in which nation-states fall apart, there is an increase in “failed states”, mass movements of peoples and increased environmental and health problems.

The previous scenarios are all too optimistic. They have focussed too much on order, rather than disorder. There are many sources of disorder in the world. Each nation-state will have to do the best that it can with what it has because it will not be able to rely on anyone else for much assistance.

For example, transnational corporations are not a force for good. They are motivated only by money. They are out to make money for their owners/ stock holders and they are not out to improve the world. They are not really accountable to anyone (not even their own stockholders, many of which are pension funds which are only concerned about the rate of return and not how it is acquired).

Corporations have no allegiances and no loyalties. Thus, they can move production and service centres from one country to another looking for the best rate of return. They can also set one government off against another in a bidding war to attract the corporation to be based in that country. Thus, they get special “export zones”, exemptions from labour and environmental regulations and favourable tax treatment.

Because the corporations are mobile, they have created a race to the bottom. Manufacturers search the world—the single borderless economy—for greater returns on investment by moving their assembly lines to low-wage countries. The globalization of industrial production is resulting in excess supplies of goods and labour, which in turn exert downward pressures on prices and wages.

Corporations also move in search of low-tax regimes and so governments lack the funds for the supply of services. It is not just a “tax-payers’ revolt” by individuals but there is also a resistance by corporations to pay taxes. All this extra money in the hands of individuals and corporations has helped finance a vast consumer expansion over the past four decades or so, but it means that there are shortages in essential services and infrastructure.

Meanwhile there is the rise of “failed states”. Somalia has gone for about two decades without a government; Afghanistan acquired a government only through international intervention in late 2001 (and it is not clear how long that will last). Instead, the pattern is more one of warlords and bandits controlling fiefdoms. The world is slipping back into a pre-Westphalian era. The nation-state system is less than 400 years old. There is no law of the universe to say that it should always exist. The 21st Century way will see its slide into chaos.

7. Conclusion

These are scenarios—and not predictions as such. I am publicizing my research to stimulate more debate on the “big picture” of global governance. We tend to focus on single issues—and do not pay enough attention to the overriding issue of where the globe is heading. There are many signs of the world moving to “Wild State”. There needs to be a greater sense of urgency to confront the globe’s looming problems.

Author contact information

Email: keith.suter@bigpond.com

Notes

1. Keith Suter, *Global Order and Global Disorder: Globalization and the Nation State* (London: Praeger, 2003)

Literature as a Key to Understanding People, Society and Life

Janani Ramanathan

Senior Research Analyst, The Mother's Service Society, India;
Associate Fellow, World Academy of Art & Science

Abstract

This article uses Jane Austen's 19th century novel Pride and Prejudice to illustrate the power of literature as a source of knowledge that transcends the insights of history, sociology, psychology, philosophy and conventional literary criticism. Pride and Prejudice shows how England avoided a French Revolution of its own. The story depicts the process of social integration that resulted in the harmonious integration of different classes in the country. Through every character and incident in the story, Austen depicts the rising aspiration among the lower classes, and the reluctant willingness of those above to accommodate this aspiration. The English aristocrats sacrificed their egoistic pride and prestige to save their heads. In the marriage of Mrs. and Mr. Bennet, in the friendship between Darcy and Bingley, in the rise of Collins, the fall of Lady Catherine and the exploits of Wickham, Austen portrays a society that is giving up the old world order and embracing change. Pride and Prejudice is also a profound study of human psychology. Austen portrays five very different characters in the five Bennet girls, all from the same stock, but at the same time shows us with mathematical precision how each of the girls is a unique combination of the various characteristics of Mrs. and Mr. Bennet. The story is full of profound insights into human nature that cannot be obtained from studies of psychology or biography. It shows how the constant altercations between Mrs. and Mr. Bennet are more than an expression of the underlying rivalry between the couple. They are also an outcome of a marriage between two different classes. The role of a well developed individual in spearheading a revolution or social movement is seen in the changes Darcy and Elizabeth are able to bring about with their strong individuality. Austen's in-depth knowledge of human nature creates men and women with characteristics that are perfectly true to life. Pride and Prejudice goes beyond a study of the individual and the society. It is pervaded with a deeper knowledge of the character of life itself. Some or perhaps all of these great truths were known to the ancients but forgotten or rejected by the modern mind so preoccupied with the external appearances of things. But Austen has consciously or subconsciously exquisitely captured many of these truths of life with the apparent effortlessness of a true master. Do our words come true? Can our thoughts and attitudes determine the events in our lives? What is the science behind coincidence? Is there such a thing as chance? Through Pride and Prejudice, Austen gives us the answers and illustrates the precise laws according to which life works. She even possesses insights into life missed by the renowned Shakespearean critic A.C. Bradley. Literature entertains and educates us. It can teach us about the past, help us understand the present and empower us to

create the future. Read with this insight, Pride and Prejudice, as all great works of literature, offers us all the knowledge required to promote individual accomplishment and human welfare. New canons of literary criticism need to be evolved that discover the knowledge of life in literature.

“Life is the raw material from which the creative imagination of great writers generates works of fiction that are truer than life—truer because they probe and reveal more deeply its real character.”

1. Understanding the Character of Life

Entertaining literature enralls us with suspense, humor and the intense action of an engaging plot. Superior literature transcends mere action. It presents to the reader the author’s insights into human character and reveals the complex ways in which human character, action and circumstance interrelate to generate chains of consequences and results. Still finer literature reveals the complex interactions between action, individual character and the evolving character of the society in which the action takes place. The greatest literature goes still further. It reveals not only insights of individual and social character but of the character of Life itself. A new genre of literary criticism that studies literature as a mirror of life and draws from it deeper insights into the character of Life will open up a window to the profound wisdom that resides in our vast repository of world literature. Even personal experience cannot match its value, for in our own lives we are but half-conscious and too involved in the action to truly decipher its significance. Only the knowledge that comes from direct spiritual experience can exceed the intuitive perceptions of great literature. And like the scientist who in recent centuries has acquired more and more powerful instruments to delve more deeply into the mysteries of the infinitesimal and the infinite, we shall find that great literature offers an unending revelation both of the minute details revealed by critical analysis and the integral knowledge offered by a synthesis that exceeds the limitations of mental logic to reveal the logic of the infinite.

2. The True Purpose of Literary Criticism

‘Three or four families in a country village is the very thing to work on’, Austen advised her niece in a letter, and her novel *Pride and Prejudice* seems to be just such a story. It is about the Bennets and their neighbours the Lucases in the village of Longbourn. The story follows the lives of the members of the two families, their relatives and friends over a period of a year. In the little bit of ivory on which she worked with a fine brush, as she described her own work, there are plenty of dances and dinners, disappointments and heartaches, engagements and weddings. Many have criticized Austen for her commonplace stories with fairy tale endings. Raymond Williams, author and critic, uses her own classic opening line to summarize his criticism of her work: ‘It is a truth universally acknowledged, that Austen

chose to ignore the decisive historical events of her time.’ But Austen did not ignore anything. It was her critics who have missed the point for over two centuries. In her works, Austen writes about the condition of the church, the decline of aristocracy, the treatment of the poor, greater rights for women, the rising aspirations of people and the French Revolution. She shows us how England managed to avoid a similar revolution. Her books, as all great literature, offer insights into human psychology. They go further and reveal the great truths by which society and life function. They analyze the science behind chance happenings and lucky coincidences. They offer us all the knowledge required to promote individual accomplishment and human welfare.

“The more subtle the message, the more powerful it comes across.”

Austen ignores neither the historical events of her time, nor the social conditions of her land. She was born during the American Revolution, and England was at war throughout her life. She wrote her six novels during the French Revolution and the Napoleonic Wars. She had two brothers in the navy, and one in the army. Her cousin married a French nobleman who was later sent to the guillotine. Unlike other European countries, England had not imposed a ban on newspaper reports about the Revolution initially. Groups that were loyal to varying degrees to the principle of the Revolution found support in England. Their meetings and pamphlets received wide attention. As a result of all this, Austen was clearly aware of and touched by the socio-political movements of the period. So when a fierce war was raging in a neighbouring country, and aristocrats were being beheaded, how could she be engrossed in a tale of country girls, their dresses and dances, their affairs of love and marriage?

To this, there is a simple, incontrovertible response, that contrary to the generally held belief, and in spite of her own advice to her niece, Austen was not writing simply about three or four families in a country village. It is not possible for any writer, especially one of Austen’s stature, to create something that is not true to life. Great writers consciously or subconsciously reflect truths of life and the happenings in society in their writing. No creativity, not even in a tale of fantasy or science fiction, can describe something that is untouched by the trends and values of society, either current or pertaining to some period in history. Life is the raw material from which the creative imagination of great writers generates works of fiction that are truer than life—truer because they probe and reveal more deeply its real character. Life, no matter how disguised as fiction, is the reality they portray in people and events. Some writers describe them explicitly. They weave historical events into their story, the very plot is based on these events. In *Les Misérables*, Victor Hugo devotes entire chapters to the Napoleonic Wars and the 1832 June Rebellion. Other writers describe historical movements more implicitly. In Charles Dickens’ *David Copperfield*, the Industrial Revolution and its impact on Britain form the backdrop of the protagonist David’s life. There are yet other writers whose works capture social changes more subtly. This is where Austen fits. The more subtle the message, the more powerful it comes across. Moreover, she had a compulsion to be subtle.

Mindless violence rapidly replaced the ideals of the Revolution across the English Channel. Then England became engaged in prolonged wars with Napoleonic France. The

English government that had not gagged the press initially became stringent. Any pro-Revolution sentiment became treasonous. Not only the views challenging the monarchy, but any view that seemed to question the status quo in society, be it the social structure, law, government policy, or the power of the church was considered treasonous. The climate of fear, insecurity and uncertainty that prevailed in the country induced as well as provided an opportunity for the government to crush any revolutionary and reformist ideas. In order to limit the spread of ideas and information, the government imposed a substantial stamp duty on newspapers, which the working class press was unable to afford. This restricted the spread of ideas among people of the working class. Authors, printers and publishers could be prosecuted for seditious libel, a tactic used by the government to silence criticism and quell any demand for reform. In 1789, discussion and comment on the Revolution were prohibited on theater stages. Even fiction could not broach on a radical idea. At such a time, Austen could not but be subtle in her critical social commentary.

Pride and Prejudice, to which we limit our focus here, is about the French Revolution, and the peaceful social evolution in England as a response to it. Through the characters and events in the story, Austen makes a critical social statement in an atmosphere that does not permit her to state her case more explicitly. She portrays what is happening around her in so subtle a manner that we almost miss it. But in every dialogue and description, Austen captures truths of society. All the characters' aspirations, attitudes and acts reveal them. Their friendships and relationships are determined by them. The success and failure of their initiatives echo universal truths. There is no mention of war or revolution in *Pride and Prejudice*. However, when we look beneath the surface of the story, we find the clear impact of the movement across the Channel on British society.

Helena Kelly, in her book *Jane Austen, The Secret Radical*,¹ analyzes in great detail every line of Austen, and shows how the author reveals views on political and social issues of the day when one reads between the lines. Living and writing at a time when any criticism of the status quo was seen as disloyal to the country, Austen had to write warily. Kelly argues that Austen's conscious or subconscious attitudes are depicted through her characterizations—such as in a comic clergyman and a boorish aristocrat. But Kelly has stopped short of taking the analysis to its logical conclusion. For the artist's intention is only of relative importance. What is more important is the nature of reality revealed in and through her works. That is the true purpose of literary criticism and of all art.

England had seen its own revolution a century earlier. It did not need such a violent uprooting of its social values. It had subconsciously imbibed the principles that formed the basis of the French Revolution. In fact, this was the reason its own version of the revolution, the Glorious Revolution of 1688, had been of a very different nature from the French. It had been bloodless and paved the way for the modern English parliamentary democracy. England was thus spared a revolution because it adopted a peaceful evolution.

The British society was stratified and class distinctions were present. But unlike in France, the distinctions were not rigid. With every century and then every decade, it became more and more easy to cross these boundaries. Birth was not the sole determinant of a person's

destiny. One could be born in the working class, and find a way up the social hierarchy, to the trading, middle, landed, and even the aristocratic classes. Work, income, fortune, marriage, valour, ambition, enterprise and talent were different paths that could take one into the highest circles of British society. Whereas in France, birth quite determined everything in life from the beginning till the end. This absolute rigidity resulted in the French aristocrats losing their heads to the guillotine. The contrasting flexibility in British society, giving a thought to others below, lending a hand to those in the lower rungs, and accepting new entrants into their circles saved the aristocrats their heads. They were not always done voluntarily or willingly, but the social progression followed that general direction.

The English historian G. M. Trevelyan said that if the French nobility had been capable of playing cricket with their peasants, their chateaux would never have been burnt. It is on the record that on that July day in 1789 when the Bastille was stormed, some 300 miles away in Hampshire, the Earl of Winchelsea was playing cricket, and was bowled out before he could score a single run, by an untitled man named William Bullen. Whether it was playing cricket with a commoner that saved the Earl's castle or not, it was definitely embracing other classes that saved the English nobleman his future. Cricket, football, or any other sport would have served the purpose, it was the underlying principle. The British played without segregation, aristocracy, gentry, traders, workers and all. This interplay across classes allowed integration in society. This silent evolution that saved England its revolution is captured in Austen's romance of Elizabeth and Darcy, who hail from different echelons of society. Every page of Austen's writing is an alternative social treatise.

3. The Process of Social Development

Pride and Prejudice begins with news of the arrival of a wealthy bachelor, Charles Bingley, at Netherfield Hall in Hertfordshire. But actually, the story begins much earlier. Twenty-five years ago, Mr. Bennet had been a young gentleman with an estate that provided him a comfortable 2000 pounds a year. Mrs. Bennet's father had been an attorney in the nearby town of Meryton. He had been fairly successful and left his daughter with 4000 pounds. Her sister had married their father's clerk who had succeeded him in business. Her brother was employed in trade in London. Mrs. Bennet had however set her sights higher. She was silly and foolish, but also very beautiful and vivacious. She wished to rise in society. Work and the trading class were not for her. Neighborhood dances and parties brought her and Mr. Bennet, the landlord of Longbourn estate, together. The charm of her youth and beauty, combined with the indiscretion of his own youth, led to their marriage. The first seed of social evolution that harmoniously wedded the landed upper class and the rising middle class was sown. Mrs. Bennet is now the mistress of Longbourn, and of the most prominent family in the neighborhood. Her sister, brother and their families are welcome at Longbourn, and her own daughters visit them in Meryton and London regularly. The girls have among their friends daughters of tradesmen and wives of soldiers. They are particularly close to the family of a neighboring knight. This union of one man and one woman symbolizes the larger union of two classes. It results at a macro level, in a gradual merging of various diverse sections of people and social groups.

Mrs. Bennet's aspiration for social rise continues and intensifies. Having become the mistress of Longbourn and found a foothold in the upper class, she sets about the task of having her daughters elevated further. When Bingley, with an income of four or five thousand pounds a year, occupies the neighboring estate of Netherfield, she exclaims, '*If I can but see one of my daughters happily settled at Netherfield... and all the others equally well married, I shall have nothing to wish for.*' This young man has recently inherited the fortune his father made in trade. Colonization and expanding trade were beginning to change the economic climate of the country. People were no longer dependent on the farmland for sustenance. Colonies supplied raw materials and served as vast new markets; railroad and shipping industries were developing; factories were coming up; and towns and cities were developing and expanding. Anyone with enterprise and diligence could improve his fortune. A new middle class was formed, that constantly sought to imitate and eventually join the wealthy classes. The social climate sanctioned this aspiration. Thus, Bingley, with his father's money that had been earned in trade, is trying to join the higher ranks. He has given up trade since the wealthy did not work or need to earn a living. He spends all his time hunting, riding and in such leisure activities. He keeps a house in London and an estate in the country. His friends are from circles that are more suited to his new life style. His closest friend, Fitzwilliam Darcy, belongs to an old, landed family. Bingley looks up to Darcy, is almost subservient to him, and brings him along to his new country home near the Bennet family. Darcy accepts Bingley's friendship and his invitation, and almost takes responsibility for the new entrant to his class. Just like the marriage between Mrs. and Mr. Bennet, the friendship between Bingley and Darcy is another facet of the social evolution that Austen captures in her story. Britain provided the opportunity for people to work their way up from the lower classes in one generation. The next generation found acceptance, sometimes readily, sometimes reluctantly, in the social circles above.

Darcy follows Bingley readily enough to his new estate, Netherfield Hall. However, he is more reluctant to accompany Bingley to the dances and dinners in the country. Bingley's rise is recent, and unlike some *nouveau riche* who are impatient to disown their humble roots, he is just as comfortable with the unsophisticated villagers as he is with the aristocrats. However, Darcy refuses to mix with the people of Hertfordshire. They are not exclusive enough for his taste. He is affronted when they speak to him. He finds their manners and values vulgar. He is eager to maintain his distance and distinction socially, if not physically. He comes to the first ball and is haughty and aloof. He does not find any girl good enough to dance with. To do so would be a punishment, he says, within earshot of the second Bennet girl, Elizabeth. Finally, it is this same girl to whom he proposes marriage, not once but twice. When his second attempt is successful, and his 'dearest, loveliest Elizabeth' accepts him, he feels a happiness that he has never felt before. His friend Bingley becomes engaged to the eldest Bennet girl, Jane, and the story concludes with the double weddings of the two friends with the two sisters. This 'fairy tale' ending for which Austen has been criticized is yet another symbolic step in the direction British society was taking. The highest levels of the landed gentry forged lasting relationships with the lower levels, erasing social boundaries. Darcy who was among the first circles in the land marries a girl without a fortune, the daughter of a

modest landowner, with ties to the working class in the country and tradespeople in London. Bingley and Jane's wedding too bridges a similar but narrower gap.

Austen captures this same movement in numerous events in the story. Collins, the Bennet girls' cousin, has very humble beginnings. He finds employment in the church in Rosings Park, Lady Catherine's estate. The Lady is Darcy's aunt, and belongs to one of the oldest and wealthiest families in the country. Collins' family is of the most modest means. But the new social atmosphere sees Collins invited frequently to tea and dinner at the Lady's estate. He enjoys his social elevation; she needs his sycophancy for her own self-aggrandizement. In this symbiotic relationship between two classes, Austen deftly paints many pictures. The merging of two ends of the classes is reflected again here. The Lady's foolish and boorish ways show the decadence that is set in the upper classes. The parson's servility shows the lack of divinity and values in the Church.

Collins' father-in-law, Sir William Lucas, had been a trader in Meryton, the town neighboring Longbourn. He had happened to receive a knighthood, and promptly closed shop to retire in the country and enjoy his knighthood. A trader could find entry into the king's court, and become a knight! His daughter, Charlotte, is an unmarried twenty seven year old girl without beauty or fortune. Austen takes this girl who has been visiting Longbourn estate for many years to meet her friends the Bennets, and makes her its mistress. After her marriage to Collins, who is the heir to the Longbourn estate, Charlotte is set to succeed Mrs. Bennet in the position of prominence in the locality. Sir Lucas' knighthood and Charlotte's elevation through marriage to Collins are again Austen's portrayal of the social changes taking place in the country. Lowly people are raised to heights they have never imagined, and find entry into circles they had earlier admired from a distance.

Wickham, the son of Darcy's estate steward, had not stopped with simply admiring, he had coveted Darcy's lofty position all his growing years. Where his father had been happy to serve, Wickham wants to be master. He connives with the family governess to convince Darcy's sister Georgiana to elope with him. This will gain him Georgiana's fortune of thirty thousand pounds, as well as entry into the house, he need no longer be restricted to the employees' quarters. Two employees of the Darcy estate daring to breach the social boundaries violently and commit this act of social violence on Miss Darcy shows the daring in the lower classes, and the weakness in the upper. An unexpected visit by Darcy results in the detection and prevention of the scheme. Later, Wickham carries out something similar with Lydia, the youngest Bennet girl. Darcy has all his life disliked Wickham, with very good reason. In his brief acquaintance with Lydia, he has seen no reason to think well of her. He belongs to a wealthy, distinguished family, and used to consider contact with anyone outside his social sphere a pollution. But the changing conditions, aided by his love for Elizabeth, make Darcy go in search of Wickham and Lydia, in areas he would otherwise not visit, with the assistance of people he would much rather avoid. He gets the two married, repays Wickham's debts, procures him a job, and salvages the Bennet family's reputation. The highest in the land stoops to save, for a number of reasons, a low scoundrel, a thoughtless girl and a family he initially considered unfit to relate to.

Whereas the earlier generation among the lower classes was happy to be at the service of aristocrats, the next generation is no longer content to be in the subservient position. Forgetting for a moment Wickham's morals and values, one sees in his attitude the resentment of the lower classes to remain where they are. They want to rise, and what comes out as servile fawning in Collins' case expresses as devious stratagem in Wickham. The social climate permits Wickham his ambition. He is not called out to a duel by Lydia's family, he is not murdered or sent to jail. The Bennets and Darceys continue to support him and his wife, and grudgingly accept him into their family circle. It takes Austen's genius to make Darcy and the son of his former steward both sons-in-law and hence, in some regard, equal in the Bennet family.

"The English aristocrat gave up his superiority, and saved his head, unlike his French counterparts who absolutely refused to bow down, and ultimately lost all."

The shades of Pemberley, the Darcy estate would be polluted, fears Lady Catherine de Bourgh, because of her nephew Darcy's connections with the Bennet family. She is titled, and even higher than Darcy in the social order. She is forced by circumstances to go to Longbourn, to attempt to bully and coerce Elizabeth into giving up Darcy. When her threats fail to have any impact on Elizabeth, Lady Catherine is unable to comprehend it! She is steeped in class consciousness, and tries to maintain the old order. She is unable to understand, let alone accept, change. But her attitudes and beliefs are fast losing ground, and in the face of the powerful changes taking place in society, she and her opinions are swept aside.

The stratification of society was in fact based on real differences in cultural attainment. A class that owned vast acres of land and great wealth had the leisure and means to improve itself culturally and intellectually. This further widened the social differences between itself and the rest of the population, and raised real barriers to compatibility and harmony between the classes. These differences were self-reinforcing. The barriers which egalitarian modern society today tends to dismiss as mere prejudice did exist, as Lady Catherine insists. The long gradual decline of aristocracy leads us to overlook the real cultural attainments which characterized their ascendancy and long period of social dominance. However, the barriers were fast becoming flexible, thanks to developments in science, trade, travel, empire building, education and economic progress. That is how the sons of traders are able to enter higher social circles and daughters of country attorneys can marry the landed gentry. To Lady Catherine's great indignation, Elizabeth does marry Darcy and enter Pemberley. She declares she will have nothing to do with the couple anymore. But eventually, she responds to her nephew and his wife's reconciliatory invitation, and visits them. In the story, she represents the last citadel of the old world order that crumbles, giving way to a more integrated and inclusive society. Austen shows how those who bowed to change, gracefully or otherwise, survive. Pemberley that had been the seat of the distinguished family of the Darceys is now open to the relations of Elizabeth. The runaway sister and her soldier husband visit.

Elizabeth's mother and aunt, the daughters of a town attorney, can come. Most welcome are her uncle and aunt, the Gardiners. This uncle in trade who lives in an unprestigious locality in London has impressed Darcy with his culture, refinement, intelligence and fine values. He makes Darcy renounce the stereotypes he had formed of people outside his social sphere. A young man from one of the highest levels in the land receives an important lesson from a city tradesman, and is thankful for it. The English aristocrat gave up his superiority, and saved his head, unlike his French counterparts who absolutely refused to bow down, and ultimately lost all.

The British government had banned any mention of the French Revolution in fiction, and even if Austen had wanted to talk about it, she could not have. But instead, she depicted without commentary the changes that were taking place in British society, changes that had prevented a similar revolution there. *Pride and Prejudice* is the story of romance in the Bennet household, and Elizabeth and Darcy are its hero and heroine. But at the same time, *Pride and Prejudice* is also the story of the peaceful social evolution that took place in Britain, as a subconscious reaction to the movement across the Channel. Upward social mobility replaced the relatively static barriers that prevented social movement between the classes. Whereas in France, the impenetrable walls of class compelled violent revolution. This is one of the profound insights that can be drawn from the book about the social process that was taking place at that time, and about the process of social evolution in general. If one novel can provide us such a perspective of human history, what would a deeper understanding of all literature give us? And this perspective is only a fraction of what *Pride and Prejudice* itself can offer. The genius of Austen goes far beyond tracing social processes.

4. Human Psychology and the Individual

Literature that is true to life offers intuitive knowledge about human nature, rarely found in textbooks on psychology, history or biography. Is everything that comes to us related to us in one way or another? Do we sanction, subconsciously, every act in our lives? Do aspects of the non-physical plane, such as our words, thoughts, emotions and attitudes have the power to manifest themselves in the physical plane? Does every outer event reflect the inner state of our consciousness? In *Pride and Prejudice*, Austen shows the unmistakable connections between the inner and outer worlds. She depicts five unique characters in the five Bennet girls, but at the same time shows us with mathematical precision how each of the five girls is a combination of the various characteristics of Mrs. and Mr. Bennet.

Mr. Bennet belongs to the landed gentry. He is an educated and well-bred gentleman, with an estate and a comfortable income. He has high values and principles. He is not mercenary. On hearing that Elizabeth is engaged to Darcy, he warns her against marrying for money. Later when he learns the truth about the man, he respects Darcy's character, not his wealth or status. He has been born and brought up in plenty, and has no petty traits. He is also intelligent. From just reading Collins' letter, he can make out that the man is an absurd mixture of servility and self-importance. He is perhaps the one person in Meryton who sees through Wickham from day one. His daughters are immensely relieved, and his wife wildly happy on receiving the news of Lydia's marriage. But Mr. Bennet sees the truth behind the

development. He realises that a huge amount of money must have changed hands before this can be brought about. He declares “Wickham’s a fool if he takes her with a farthing less than ten thousand pounds”. If he can see through Wickham, then why does he not stop his daughter Lydia from going to Brighton? Mr. Bennet does not because he cannot be bothered to take the trouble. Having erred in his choice of wife, he prefers to distance himself from her ambitions and schemes, taking refuge in books in the solitude of his library rather than facing her in open combat for supremacy in the daily life of the family. Mr. Bennet is content with watching and being amused, he does not act. Be it Mrs. Bennet’s lack of sense, Lydia’s wild behavior, Jane’s disappointment, or Elizabeth’s concerns, he is a bystander, laughing silently. He has failed to provide for his family. He does not attempt to control his wife or discipline his daughters. He refuses to exert himself. He lacks the energy and mental will for the task. His wife is a quite perfect contrast to him.

Mrs. Bennet, the beautiful daughter of a country attorney, has married a land owning gentleman and risen in society. She wants her five daughters to rise further. She relentlessly pursues the task of finding suitable—that is wealthy—husbands for her girls. Her aspiration is so great she simply seems to draw eligible men from all parts of England towards Longbourn. While her husband thinks and understands more, and talks and acts less, Mrs. Bennet wastes no time in exercising her mind. She believes only in taking initiative. She is strong, seems to have infinite energy, and never gives up. When Bingley arrives in town, she plans and schemes to make him fall in love with Jane. Her constant mood swings and irrational behavior are beyond others’ understanding. She has no sense of social propriety. She is only aware of what she wants.

The five Bennet girls are all unique, each with her own characteristics. Jane is pleasant, beautiful, and thinks well of everyone. Elizabeth is a strong individual, intelligent and with positive values. Mary is dull and lacks energy. Kitty is petulant and irresponsible. Lydia is foolish, strong willed and full of energy. But none of them have even a single aspect of their nature that cannot be traced to one or the other of their parents. Jane receives all her beauty from her mother. Like her, she is also without keen intelligence. She gets her natural goodness from her father. Like him, she is also without much energy or initiative. As a reaction to her mother’s boorishness, she develops the opposite, a pleasing social behaviour. Next is Elizabeth who owes her strength of will and energy to her mother, and intelligence, positive values and pleasant manners to her father. If Elizabeth has got the best combination from her parents, the exact opposite seems to have been reserved for the next daughter. Mary’s foolishness is her mother’s; her lack of energy is her father’s. Kitty knows about Lydia’s planned elopement, but does not bother to inform her parents. Such irresponsible behaviour is from the father. She finds nothing wrong in eloping, her sense of right and wrong coming from her mother. Lydia is irresponsible in not giving a thought either to her own or her sisters’ future before eloping. This again is like her father. All the rest of her nature, the impulsiveness, initiative, foolishness and wild energy, are from the mother.

Austen goes further in her analysis of human character. One likes the child who is most like oneself. Of Mrs. Bennet’s two great characteristics, her beauty and foolish impulsiveness, she has passed on one to her eldest daughter Jane, and the other to the youngest, Lydia.

Jane and Lydia happen to be her favourite children. Mr. Bennet is endowed with values and intellect that he has passed on to Elizabeth, sparing a little for Jane. Not surprisingly, his two favourite daughters are Elizabeth and Jane, in that order. Just as parents are able to identify most with the children who are like themselves, they seem to identify least with the children who are most like the partner, especially in a not so harmonious partnership as in the case of the Bennets. Elizabeth is the least favorite of Mrs. Bennet's, and Mr. Bennet is glad to keep a distance from Lydia.

“Experiential, subjective truths that touch the emotions have a greater learning impact than abstract scientific knowledge in a textbook.”

There is a constant tension, sometimes humorous, sometimes bitter, between Mrs. and Mr. Bennet. When Mrs. Bennet and her daughters return from the assembly where they meet Bingley for the first time, Mr. Bennet is unusually awake late in the night, waiting for their return. With an astonishing insight for a young unmarried woman to perceive in parental relations, Austen tells us that Mr. Bennet stays up hoping to hear that his wife is disappointed in Bingley. A good marriage for one of his daughters would be welcome, and he shares his wife's concern for their future. But the rivalry with the wife is so intense that it overrides even his goodwill for his daughters. He would like to see his wife's plans stymied even if that means disappointment for the girls. So he would like to hear that Bingley turned out to be a disappointment, there is no chance of one of his daughters profiting by the new connection, and Mrs. Bennet has no reason to celebrate. He displays the same behaviour when Elizabeth rejects Collins' proposal. Charlotte gets engaged to Collins instead, leaving Mrs. Bennet disappointed and enraged. Mr. Bennet has five unmarried daughters on his hands, the estate is entailed to cousin Collins, neighbour Charlotte Lucas is to become its mistress. But all that Mr. Bennet cares for is to enjoy his wife's disappointment. Apart from the rivalry between Mrs. and Mr. Bennet, this tension is also an outcome of the marriage between the two classes to which they belong, the working class that is striving to rise and the upper class that is struggling to accept the new world order.

Austen has captured such minute elements of human psychology in her portrayal of the Bennet family. Shakespeare critic A.C. Bradley talks about Jane Austen's *“surpassing excellence within that comparatively narrow sphere whose limits she never tried to overpass... which... gives her in that sphere the position held by Shakespeare in his.”* If such knowledge of human psychology can be learnt from one of the six novels written in Austen's narrow sphere, then what is the learning potential from Shakespeare and other great writers! Such knowledge is impossible to obtain from a textbook of psychology for the simple reason that experiential, subjective truths that touch the emotions have a greater learning impact than abstract scientific knowledge in a textbook. Such knowledge that touches the human emotions can be found only in literature. Take the first assembly at Meryton for instance. Bingley and Darcy have newly arrived in the neighbourhood. Bingley has just taken a house

of his own. He has been invited to a ball. Everyone seems to take an interest in him. He is dancing with the prettiest girl present, Jane. All these make a usually tractable person who waits for Darcy's approval before taking a step actually give Darcy an order. He finds Darcy standing by himself, and says he will not have him stand in a "stupid" manner. *You had much better dance*, he orders his friend, offering to introduce Jane's sister to him. This is the one occasion in the entire story spanning a year where we find Bingley speaking in this way to Darcy. Darcy usually takes decisions, and Bingley complies, even in matters such as whom Bingley should fall in love with, and whom he can marry. But this temporary aberration, which Austen's genius captures with the alertness and clarity of an expert photographer, results from the momentary reversal of their fortunes. Darcy stands alone, while Bingley is clearly adored by the crowd and has a very pleasant and beautiful girl for a dance partner.

Darcy gives an uncharacteristic response in return. In a voice loud enough to be overheard by Elizabeth, he curtly describes her as just 'tolerable' to look at, and dismisses Bingley's offer saying dancing with her would be a punishment to him. An educated, well-bred gentleman from a wealthy and distinguished family speaks ill of a country girl in her hearing, and insults her in public. It appears inexplicable, unless Darcy is really as boorish as Elizabeth comes to believe. The truth is that Darcy is attracted to Elizabeth. The attraction is subconscious and therefore not under his control. The dislike of Meryton's common vulgarity is a well-formed conscious attitude which he is proud to proclaim. The ungentlemanly act of expressing his opinion so loudly that Elizabeth could overhear it, is not in his character—at least the conscious part of it—but beyond his control. This initial act at their indirect contact announces the inner conflict that will possess him and compel him to propose to her at Hunsford almost against his will and it anticipates in the beginning the final outcome of the story. But why? The rude act is reflective of the internal turmoil in Darcy. He hates to move in social circles outside his own. But he makes Bingley his friend and accepts the invitation to go to Hertfordshire. He claims that he does not enjoy the company of the country people, yet he accompanies Bingley to the dance. He believes in the superiority of his class, but he finds in Elizabeth and some of her friends and family qualities that he can admire. He does not want to fall in love with Elizabeth, but he is unable to stop himself. He cannot embrace change, although he knows he has to. This internal conflict in Darcy results in the insulting words. He does not intend to hurt or offend her, but the jarring words are an echo of the inner clash between his mind and emotions. He thinks he should not marry her for her family and her class, although he loves her. This is not mere story telling or artistry. It is intuitive perception of human character and life.

As almost universally proclaimed, Darcy is Austen's best hero. Austen has a deep and mature insight into human nature that is far from romantic fantasy. It may or may not reflect her own personal experience in romance as some critics conclude. However, it expresses a clear dispassionate knowledge of the complexity of human character that exceeds in its subtle complexity the superficiality of most prevailing psychological theories. A deep study of literature, be it Austen, Shakespeare or any other writer, can make real and concrete to our experience what scholarly articles only theoretically describe.

5. A New Science of the Arts

Every story has a beginning. ‘Once upon a time’, ‘In the year 1856’, ‘There once lived in a village’, ‘In the kingdom of’, ‘It was a sunny morning’, and so on. We accept that as the beginning of the story. We read it from that point and do not ask what happened before that time, why does the story start in that year and not a year earlier, why is it set in this city and not that, why is the protagonist given that name and not any other, or why does this family have exactly this number of children, and not one more or one less. We accept the given conditions as the beginning of the story and go on to trace the causality of subsequent events from that point onwards. We do not question why the story begins where it does.

Science does not know why there was a Big Bang. Physicists extrapolate backwards in time to one picosecond, a trillionth of a second after the Big Bang, and explain the universe, the development of its electronuclear force and magnetism, the formation of all matter from the hydrogen nuclei to the stars and planets, up to the evolution of plant and animal life. But they still do not know why there was a Big Bang, or what existed before that.

Biologists try to explain everything from the advent of the first living cell onwards: when and where life first appeared, how the plant kingdom became diversified, how animal life first appeared in the sea and then spread and evolved into complex species, how some species became extinct and others adapted and survived. But any effort to explain how that first carbon compound came to life as a living cell is purely speculative imagination.

Even an infinitesimal difference in the atomic bonding of an element such as Hydrogen or Carbon would have left Earth without life as we know it today. So what determined those right conditions? Physics starts with constants and explains matter. Biology starts from the first living cell and describes life. But Science does not have an answer to the question, ‘How and why did it all begin in the first place?’. Science describes these phenomena as singularities, but description is not explanation. Naming phenomena is not knowledge.

All physical science is based on the past determining the future, but today, a new science has emerged, the science of Anticipation². The future is being studied to determine the present. It is now recognized that the future can shape and determine the present, whether consciously through our values, ideas, dreams and aspirations or subconsciously through our deepest fears and biological conditioning. If we take this science to study the arts, then, instead of beginning a story by implicitly accepting the initial conditions, a new and intriguing question arises: what happened before the beginning, before the Big Bang!

Austen’s *Pride and Prejudice* begins with the arrival of the friends Bingley and Darcy in Hertfordshire. As we saw earlier, the characters reveal great insights into human psychology. Their actions and experiences also reflect the emerging social process. We can go further.

Countless are the lovers of this lively romance, yet few are those who have delved beneath its superficial charm, delightful humor, entrancing energy and emotional intensity to uncover the profundity of wisdom it contains. To the occidental intellect, society is an empty space, a playing field in which the separate and independent lives act and interact with one another.

But to the Asian mind, society is a living organism of which every individual member is an inseparable part, a universal unified existence, as real in itself as any living, breathing, feeling individual.

“We need to delve deeper into the context, circumstances and individual character of the players to discover principles and forces that are concealed by the veil of chance and accident.”

Literary criticism is an Occidental science, an attempt to apply the analytic mental faculty to the comprehension of that which cannot be divided, for Life is an integrated whole that can only be understood in totality and in context. The limitations of analysis can be found even in the most profound works of literary criticism. Some great critics sense its importance but struggle to reconcile it with a rational view of life.

In Act IV of *Hamlet*, Hamlet's uncle, King Claudius, dispatches the young prince to England as a representative to the English king accompanied by two courtiers, Rosencrantz and Guildenstern, who have been secretly missioned by Claudius to ensure that Hamlet never returns alive to Denmark. Claudius' sealed letter to the English monarch denounces Hamlet as a traitor and threat to his realm and calls on the English king to remove the threat. On the ship to England, Hamlet awakes restless during the night. An intuitive suspicion prompts him to sneak into the cabin of the two courtiers, unseals the king's missive and discover the fate that is awaiting him. He reseals the letter using the signet ring he bears as Prince of Denmark and replaces it.

So far, the story conveys the high drama and passion one would expect from great tragedy. But then something remarkable occurs. The following morning, the ship conveying Hamlet to England is attacked by pirates. In the intense combat that ensues, Hamlet boldly jumps into the pirates' ship demonstrating his leadership as prince of the realm. Surprised by the intensity of resistance they meet, the pirates withdraw to their own ship and the ships separate. Hamlet finds himself alone with the pirates, their prisoner. But once he reveals his identity and offers them a reward, he readily secures swift transport back to Denmark where he pursues his confrontation with Claudius that ultimately ends tragically in the death of Claudius, the queen, Laertes and the prince himself.

Commenting on this incident, A.C. Bradley³ acknowledges the right of the dramatist to employ dramatic device reflecting the admission of chance in the course of tragedy. Bradley's profound insight into human nature exceeds that of all but the greatest psychologists and sometimes seems to rival that of Shakespeare himself. But his view, like our own, is obscured by the narrow perspective of early 20th century scientific material culture. He never considers another explanation because he lives in an age in which knowledge of life has been reduced to a philosophical abstraction rather than a living vision of reality. He acknowledges accidents as a prominent fact of human life. He never considers the possibility that Shakespeare has perceived and is either consciously or subconsciously pointing to a deeper truth of life that can

attract our attention only when it occurs in circumstances that appear inexplicable according to any normal conception of causality. A cursory review of the great literature of the world reveals that these works are replete with such inexplicable incidents, unnecessary and avoidable to the logical mind, irrational and implausible to the scientific intellect, other than as expressions of the inherent uncertainty and randomness of life, but natural and extremely common to the vision of those who perceive the deeper workings of life in its integral reality.

If the determining influences of fate, chance and accident are all we can learn from such incidents in great works of literature, we may well have grounds for questioning their greatness. But it is not. For awakening to the reality of the unexpected and inexplicable is only the first step in the revelation of the character of life and the greatness of the author's vision of it. We need to delve deeper into the context, circumstances and individual character of the players to discover principles and forces that are concealed by the veil of chance and accident. *Pride and Prejudice* can be used as raw material for that inquiry. Without psychology, philosophy, or intellectuality, it reveals a relationship between our subjective thoughts and feelings and the response of life around us. Not only *Pride and Prejudice*, any of Shakespeare's plays or the works of Hugo, Dumas, Trollope, Hardy, Tolstoy or the great Indian epics *Mahabharata* and *Ramayana* suffice for the purpose of discovering the character of life and its ruling principles. Literature has amassed vast volumes of experiential knowledge of human nature acting in life. It is a great field for studying not only human psychology and sociology, but also understanding the relationship between our inner thoughts and the external acts in life.

Of course, without the arrival of Bingley and Darcy at this place and time, there is no story, no *Pride and Prejudice*. We can give a plausible explanation in hindsight, much as by looking in the rear view mirror, we can tell where we have been. Bingley has come into a considerable fortune. He enjoys the respectability that comes from being a wealthy gentleman, and would like to take on the trappings of that class. He would like to go to the country for the summer, to a place not too far away from the attractions of London. He would like to rent a large house, until he is ready to buy an estate of his own. He needs to cultivate friendship with a man from the highest circles in the land, as Darcy is. He wishes to own a carriage, indulge in shooting and have a life style appropriate to his newly found status. He happens to receive a recommendation about a place in the country at a short distance from London. But none of these reasons distinguishes Bingley's coming to Hertfordshire, selecting the estate of Netherfield, when Jane, twenty-three years of age, beautiful and good natured, is waiting to find a suitable man she can love and marry. Science, in such a situation, assumes it is singularity or chance. But is it possible that the key to the whole story of *Pride and Prejudice*, and similarly, to many stories including those of our own lives, is in understanding why that first step was taken? And then go on to understand the next step, and the next step?

Early in the story, the Bennet girls go out for a walk and have an interesting encounter. Their cousin Collins, who is on a two-week long visit, accompanies them. The youngest Bennet girl, Lydia, seeks news about one of the soldiers who have just been posted in the nearby town of Meryton. Their father is eager to be rid of the annoying company of Collins. So he encourages all the girls to go out, taking their cousin with them. Meanwhile, Bingley and Darcy set out towards Longbourn to call on the Bennets. Bingley particularly wants to

meet Jane, who has just recovered from an illness. As the girls enter Meryton, their attention is caught by the good looking and charming soldier, Wickham. Just as they exchange greetings, Bingley and Darcy ride into town and come upon this group. Here are three parties, comprised of people who have been acquainted for periods ranging from a few weeks to a few minutes. Darcy and Wickham alone have known each other since childhood. They have always had a turbulent relationship, and would like to avoid each other. The Bennet girls did not know of Wickham until they meet him in town. They did not expect to meet Bingley, and do not care to meet Darcy. Collins is without any other expectation than to marry one of the elder Bennet girls. Life brings this disparate group together as they all walk or ride into Meryton at the same time. At the end of the story, they have all become interconnected through marriage. Bingley and Jane are married. So are Darcy and Elizabeth. Collins marries his cousin Elizabeth's friend Charlotte, and through his cousin, becomes related to Darcy. The soldier ends up married to Lydia. Wickham who tried and failed to become Darcy's brother-in-law by eloping with Georgiana ends up as his brother-in-law through Elizabeth's marriage to Darcy. Seven of the eight people who are to become related thus, are brought together by life a year earlier, without their conscious will or intention. A chance event? An amazing coincidence? A dramatic literary technique used by the author? Luck? Or is there another explanation? Does life indicate the end subtly in the beginning?

In saying Austen wrote fairytale endings, critics mean she gives everyone, or almost everyone what they want at the end of the story. In dismissing the outcome as romantic fantasy, we fail to recognize what every high achiever intuitively perceives—the power of aspiration for self-realization in life. In *Pride and Prejudice*, we definitely see that almost all get what they aspire for. Jane and Bingley wish to marry pleasant, mild mannered people, and they find each other. Elizabeth and Darcy wish to marry those they can respect and love. Their longings are fulfilled. Lydia gets a more than dashing husband, and adventure too in ample measure. Wickham wants to become Darcy's brother. He hopes and fails to do so by marrying Georgiana, but succeeds through another path when he and Darcy marry sisters! Collins wants to be at the feet of aristocracy. He firmly establishes himself near it, first by acquiring Lady Catherine as his patroness, then when his cousin marries Darcy. Charlotte wants physical and social security, and she gets just that in her marriage to Collins. Mrs. Bennet wants her daughters married, and gets three of her five girls married in a single year. Mr. Bennet wants some peace and quiet, and the best for Jane and Elizabeth. Life grants him all these. Everyone's true aspiration is fulfilled. Are all our deep, intense aspirations similarly fulfilled in life? Even Lady Catherine, who claims that she loves to be useful, succeeds at least in this measure. In her attempts to prevent Elizabeth and Darcy's marriage, she unintentionally plays the role of a messenger and prompts Darcy to propose to Elizabeth. She has, indeed, been very useful, though not in the manner she intended!

When news of Bingley's arrival comes and the Bennet family is excited at the thought of a marriage, Lydia exclaims that she would like to be the first in her family to get married. And she becomes the first! After her elopement with Wickham, the two are caught and a marriage is hastily arranged. Do all our words come true? We see an instance of the same phenomenon in the author's life. Austen wrote in a letter to her sister Cassandra, "I write only

for fame.” This was in 1796, fifteen years before she was to have a book published. Till the publication of *Sense and Sensibility* in 1811, her readership was limited to her own family members and friends. So her mention of fame was more a facetious remark. 222 years on, life has obediently given Austen spectacular fame. And just as she implied that she was not writing for profit, she was granted about 600 pounds from the publication of four novels in her lifetime, nothing more. But numerous stage and movie adaptations, sequels and spin-offs, museums that enshrine her life and societies dedicated to her works have given her just what she asked for, fame!

“Reconciling art and science, the subjective and objective views of reality through literary criticism may well provide a means to transcend the limitations of a purely material life science and discover a true science of life.”

Bingley’s sister Caroline teases Darcy over his future mother-in-law Mrs. Bennet, all the while hoping to marry Darcy herself. Unfortunately for her, the hypothetical joke comes true. Does life have a sense of humour? At the first ball, Bingley chooses Charlotte for the first dance. The choice turns out to be a subtle indication. Charlotte is the first in the story to be married, though not to Bingley! Does life always throw out such pointers? When Charlotte announces her engagement to Collins, Elizabeth responds with an unthinking, insensitive ‘Impossible!’ When she informs her family of her own engagement to Darcy, the same word is echoed. When we say history repeats, we have in mind large scale political happenings, mass movements, and events based on great ideals. Do even our little, individual acts repeat in our day to day lives? Is there a pattern to the repetition? Can literature give us the knowledge to make sense of apparent coincidences?

When Elizabeth is on a holiday with her aunt and uncle the Gardiners, she is persuaded by Mrs. Gardiner to visit the Darcy estate at Pemberley. Elizabeth last met Darcy at Hunsford when he proposed to her boorishly, she turned him down, and the encounter ended in a heated argument. Both of them had parted, wishing never to meet each other. But gradually, subconsciously their feelings have undergone many changes over the past few months. Elizabeth reluctantly agrees to go to Pemberley only after she learns that Darcy is not in town. However, once she sees the place, she is greatly impressed by the beauty and elegance of the house and the grounds surrounding it. She feels a twinge of regret for having turned down such magnificence. After hearing a glowing description of the master by Darcy’s old housekeeper, Elizabeth is filled with a gentle sensation towards him, and a deep sentiment of gratitude for what he had offered in proposing to her six months earlier. After leaving the house, as Elizabeth is walking in the grounds, Darcy suddenly comes into view. He has returned a day earlier than planned. He is also a changed man now, and renews his relationship with Elizabeth after a long abrupt hiatus. Her recent change of attitude is immediately followed by a sudden change of circumstances. Does life respond to our deepest thoughts and feelings?

Literature is filled with such curious incidents and ironies, seeming coincidences and lucky or unlucky meetings. Life is full of them too. Literature reflects life. Early societies and ancient wisdom from around the world claim to have discovered relationships between human consciousness and life events which the modern mind summarily dismisses as superstition. Science studies objective external facts and regards subjective inner experiences as secondary or incidental, rather than causal factors. Literature revives the debate which science ignores or dismisses as unscientific. It intuitively points to a knowledge which rational thinking overlooks, ignores or dismisses. Reconciling art and science, the subjective and objective views of reality through literary criticism may well provide a means to transcend the limitations of a purely material life science and discover a true science of life.

Author contact information

Email: harish.janani@gmail.com

Notes

1. Helena Kelly, *Jane Austen, the Secret Radical* (New York: Knopf Doubleday Publishing Group), 22-30
2. Roberto Poli, "Anticipation: A New Thread for the Human and Social Sciences?," *Cadmus* 2, no. 3 (2015): 23-36.
3. A.C. Bradley, *Shakespearean Tragedy* (London: Macmillan, 1971), 9-10.

Book Review of *Come On!*: A Report to the Club of Rome: New Frontiers

Reviewed by Michael Marien

Senior Principal, The Security & Sustainability Guide;
Fellow, World Academy of Art & Science

Come On! Capitalism, Short-termism, Population and the Destruction of the Planet. A Report to the Club of Rome. Ernst Ulrich von Weizsäcker and Anders Wijkman (CoR Co-Presidents), with 34 more CoR Members. New York: Springer Science, Jan 2018, 220 pp, \$29.99.

The Club of Rome is an unusual organization with an unusual history. The initial 1972 report to CoR on the predicament of mankind warned of “exponential” population growth, and potential collapse around 2100, due to overshoot. **The Limits to Growth** went viral, to use a contemporary term, receiving a huge amount of worldwide publicity and pushback by economists. Arguably, success was due to an early use of a computer model, sponsorship by a mysterious club, and the OPEC oil crisis in early 1973 that dramatically highlighted resource scarcity, albeit only oil and temporary at that.

But there were many other books on population/resource issues in the early 1970s¹, and there were even books in the early 1950s explicitly noting “limits to growth.”² The 1974 second report to the CoR,³ arguing for a nuanced distinction between undifferentiated and organic growth, has scarcely been noticed.

Since its extraordinary lift-off in the early 1970s, the CoR has sponsored more than 40 reports, distributed by a wide variety of publishers, many of them obscure (see the CoR website for a colorful array of book covers and brief descriptions). **Come On!**, prepared for the CoR’s 50th anniversary in 2018, attempts to synthesize some of these reports. Rather than an anthology of several dozen essays, von Weizsäcker and Wijkman have melded together a wide variety of contributions received in draft form by 34 CoR members and a few non-members. The result is somewhat encyclopedic, with lots of ideas to chew on, arranged in three long chapters, each with numbered parts and sub-parts.

But first an explanation for the unusual title. In casual language, it is often spelled “C’mon,” meaning “don’t try to fool me.” Chapter 1 is thus titled “C’mon! Don’t Tell Me the Current Trends Are Sustainable!”, while Chapter 2 is “C’mon! Don’t Stick to Outdated Philosophies.” Chapter 3, “Come On! Join Us on an Exciting Journey Towards a Sustainable World” employs the other usage of “Come On” as an invitation to join the authors. Despite the casual style, the authors admit that “this book **Come On!** is hard stuff. It will not be easy to digest.” (p.11) More on this later. First, a glimpse of the contents.

1. Don't Call Current Trends Sustainable

The first chapter surveys 18 trends, listed below in the order that they appear. It could have been organized better, in my opinion; moreover, most people are unaware of these important trends or ignore them, rather than calling them sustainable.

- A crisis of *global capitalism*, moving from economic development of countries and regions toward maximizing corporate profits, largely from speculation;
- The phenomenon of *right-wing populism* due to weakening of developed-world middle classes over the past 20 years and a booming global elite (not mentioned are growing migration pressures stoking nativist/nationalist positions);
- A massive increase in the world's *financial sector* (banking, finance, insurance, real estate) with declining levels of equity, extensive borrowing, opaque tax havens, and lack of action by most regulators;
- Transition from an "*Empty World*" of small populations and abundant natural resources to a "*Full World*" of large populations and increasingly scarce resources;
- The relevance of **The Limits to Growth** report despite some shortcomings of its World3 computer model and underestimation of innovation; "the core of the message remained valid" (p.13);
- The synthesizing idea of nine *Planetary Boundaries* as "a very effective means of gauging the state of the planet";
- The "*Anthropocene*" as an effective way to describe the current, human-dominated era (reproducing the striking dashboard by Will Steffen *et al.* of 24 sharply upward socio-economic and environmental trends);
- The *climate challenge* and the need for a crash plan to meet the 2015 Paris commitments;
- *Technological wildcards* with their uncertain consequences, such as geoengineering, artificial intelligence, and synthetic biology creating deadly viruses and bacteria;
- *Nuclear weapons* as "a nearly forgotten threat" (not so, especially as the US plays dangerous games of "chicken" with North Korea);
- Unsustainable *world population growth*, with two 2050 scenarios of "high education" resulting in 8.5 billion and "low education" with 10 billion people (see comment #4 at end);
- Seemingly unstoppable global *urbanization* and transport infrastructure swallowing space for agriculture and wildlife (also, rising sea levels threaten many big cities⁴);
- Unsustainable *agriculture and food systems*, with some 2 billion people overweight or obese, and some 800 million still suffering from chronic hunger;
- The *trade agenda* that seeks to expand production and consumption; a level playing field is needed between commercial and environmental objectives;

- The 17 *Sustainable Development Goals* of the UN’s 2030 Agenda (CoR supports this “supremely ambitious and transformational vision,” but expresses concern about trade-offs between socio-economic and environmental SDGs);
- *Disruptive and hyped technologies* such as digitization, 3D printing, and AI, as well as Ray Kurzweil’s “scary” and over-hyped vision of The Singularity;
- *The GDP Fallacy* of ignoring physical impacts and treating growing costs as benefits;
- The need for a *serious transformational agenda* of sustainable development enabled by a new mind-set and a new philosophy; “the Club of Rome is not alone in aiming at a profound transition.” (p.57)

2. Don’t Stick to Outdated Philosophies

The second part begins by discussing updated religious views on environmental ethics, notably the outstanding 2015 encyclical letter of Pope Francis, *Laudato Si’* (see review in *Cadmus*, 2:5, Oct 2015), and the little-known Islamic Declaration on Global Climate Change.

It also briefly notes **The First Global Revolution: A Report by the Council of the Club of Rome** (1991), which saw the end of the Cold War as “an enormous opportunity for humanity to change course and unify” in addressing the new “common enemy” of environmental degradation, global warming, poverty, military overspending, and scarcity of energy and water. But this visionary program never materialized: “capitalism got arrogant,” civil society stayed complacent, and a purist pro-market ideology got the upper hand. “Extreme free-market thinking is at the root of the damage humanity is inflicting on the planet.” (p.72)

The chapter goes on to describe people who promoted the extreme market model (Milton Friedman, Ronald Reagan, Margaret Thatcher), philosophical errors of the market doctrine, the distorted ideas of Adam Smith and Charles Darwin, the limits of reductionism to understand human reality, the need to anchor science and technology within ethical boundaries, the fragmentation of knowledge that shapes organization of universities and government, and the “massive effects” of the philosophical crisis on the way the world is governed.

It is then timidly concluded that “*We May Need a New Enlightenment*” (my italics) when the text goes on to firmly state that an Enlightenment 2.0 *is* needed, based on the great traditions of other civilizations, notably the Asian sense of Yin and Yang balance between humans and nature, short term and long term, speed and stability, public and private, women and men, equity and awards for achievement, and state and religion. Many trends are seen as moving in this “right direction,” but most of the good news is not environmental (or related to security matters).

3. An “Exciting Journey” Towards a Sustainable World

Following from the above chapters, “Humanity is racing with catastrophe. Total system collapse is a real possibility. The evidence of human impact on the planet is undeniable... So

let's not kid ourselves.” (p.101) For the Club of Rome and many others, crafting “basic principles of a new narrative is a first priority.” They include 18 categories:

- ***A Regenerative Economy*** that pursues Natural Capitalism, a circular economy, biomimicry, cutting wastes through efficiency, redesign of everything, regenerative management, restoring some 12 billion acres worldwide mostly ruined by human misuse, etc.;
- ***Alternative Development Strategies*** that are cheaper, deeper and longer-lasting, using human-scale technologies less wasteful of resources and responsive to human needs (citing the Development Alternatives organization in India, which has implemented some 700 projects enabling large-scale changes in lives of people);
- ***“The Blue Economy”*** proposed by Gunter Pauli in his 2009 report to the Club of Rome, promising “100 innovations, 10 years, 100 million jobs”; the book “became a huge success and so far has been translated into 41 languages.” (p.114) A box lists 21 principles of the Blue Economy from the 2016 edition, including resilience, optimized systems, value in everything, strengthening the commons, health and happiness, etc.;
- ***Decentralized Energy*** that is abundant, benign and affordable for all (a problem for transition to renewable energy is stranded carbon assets in energy corporations, estimated at some \$6 trillion; a carbon tax and an end to fossil fuel subsidies can accelerate positive change);
- ***Sustainable Agriculture*** or agro-ecology that preserves soil and water, avoids chemicals, sequesters carbon, encourages biodiversity and efficient use of all resources, practices holistic management, and protects decent jobs in rural areas;
- ***Regenerative Cities*** or “Ecopolis,” with circular resource flows, zero pollution, urban agriculture, building to avoid floods and sea level rise, recycling all organic waste; examples are provided from Adelaide and Copenhagen (two examples of low-hanging fruit; see comment #5 at end);
- ***Climate Action*** such as the worldwide divestment campaign, accelerating discussion of stranded assets, more electric vehicles, tree planting to absorb CO₂, emissions trading systems, the potential of algae as food and fuel, carbon-neutral or carbon-negative building construction, a price on carbon (a stress on cost-effective priorities is needed; see recent book by Paul Hawken⁵);
- ***New Economic Logic***: recycling and reuse of materials to save energy and reduce pollution; circular business models to replace linear ones; measuring well-being by stock instead of flow; use of products and property by leasing and sharing, making market prices bear full costs;
- ***Fivefold Resource Productivity*** with more efficient transport modes, reducing auto dependence, shifting freight from truck to rail, green buildings, geo-polymer concrete, efficient farms and industry (see **Factor Five** report to CoR, 2010);

- **Healthy Disruption:** infotech applications for food production, housing, availability of information, simulating complex living systems, a bit tax of perhaps a millionth of a dollar per bit, and prospects of IT-based democracy (but IT may be so hackable that democracy will clearly regress);
- **Financial Sector Reform:** arresting expansion of debt (the main driver of growth and instability), separation of commercial and investment banking, sufficient loss absorption capacity in banks, control of money creation, a small “Tobin tax” on financial transactions worldwide, curtailing the shadow banking system, independent regulators, taxing evasion of the rich in secret tax havens (as of 2012, one estimate was \$21-32 trillion in these offshore locations); curbing the big four accounting firms that assist large corporations in tax avoidance;
- **Reform of the Economic Set-Up:** Kate Raworth’s “Doughnut Economics” to meet needs of all with inner and outer rings respecting planetary boundaries; Riane Eisler’s “Caring Revolution” involving a major upgrade of caring work; Christian Felber’s “economy for the common good”; changing financial frame conditions for business; reducing unemployment by redistributing work; making the green transition more profitable;
- **Benign Investment:** more philanthropy addressing global environmental issues, following the UN’s Principles of Responsible Investing, Principles of Sustainable Banking (from the Global Alliance for Banking on Values), green bonds and impact investing based on Environmental/Social/Governance (ESG) concerns;
- **Measuring Well-Being vs. GDP:** alternative indicators such as the Genuine Progress Indicator (a version of the Index of Sustainable Economic Welfare proposed by CoR member Herman Daly and John Cobb in 1989), Ecological Footprint analysis pioneered by CoR member Mathis Wackernagel, measuring life satisfaction, publicizing differences between GDP (which dates from the 1930s) and GPI, the Sustainable Well-Being Index as a potential hybrid and highlighting positive contributions of natural capital and ecosystem services that it provides; includes two illuminating charts by Ida Kubiszewski *et al.* 2013 on GPI Additions (household capital, value of volunteer work, etc.) and Subtractions (cost of commuting, crime, underemployment, air and water pollution, forest loss, etc.); a second chart compares global GDP/capita vs. GPI/capita from 1950 to 2005;
- **Civil Society, Social Capital, and Collective Leadership:** on the important role of civil society in promoting sustainability transformation; but “trust, solidarity (and) collaboration are not dominant in the wide spectrum of CSOs; good-tempered conversation to engage citizens in public debate is a first and essential step towards a new understanding... (but) modern democracies have developed into elitist systems” (p.182), i.e. plutocracies. Also discusses building social capital by conscious multi-stakeholder collaboration, and collective leadership as encouraged by CoR member Petra Kuenkel (see review in *Eruditio*, 2:2, July-Aug 2016);

- **Global Governance:** top-down reform of the UN is unlikely; but help can come from the World Future Council's *Global Policy Action Plan*, Paul Raskin's *Great Transition* away from "Zombie ideologies", Gerhard Knies' *Cohabitation Model for a Viable World*, where nations and/or regions organize ways of living together, and focus on the need to reduce the role of tax havens, for technology assessment, and some mechanisms to rebalance public and private goods (all well and good, but likely more difficult with the erosion of democracy at the national level, e.g.: Freedom House reports marked decline in various aspects of freedom for the past 12 straight years);
- **National-Level Action.** Two countries stand as examples: giant China and little Bhutan, which has pioneered a Gross National Happiness Index as more important than GNP.⁶ In its 13th Five-Year Plan, China has set ambitious targets for renewable energy and energy efficiency, green manufacturing, green design with high resource efficiency, "Eco-Civilization," experiments with Natural Capital Balance Sheets, creating "stone paper" from sand and plastic waste, and new opportunities for municipal farming such as vertical farming, hydroponics, aeroponics, and community-supported agriculture (all well and good, but driven by stark necessity and enabled by a top-down non-democratic government);
- **Education for a Sustainable Civilization.** Creating conditions to enable futures literacy, active and collaborative education, pluralism in content, education based on connectivity, and value-based education focused on sustainability and an integrated way of thinking; three universities (McGill, York, and Vermont) are cited for fostering *Education for the Anthropocene* programs.

4. COMMENTS AND NEW FRONTIERS FOR CoR

This book is certainly provocative. And the Chapter 3 agenda is potentially exciting, as well as challenging and exhausting. As the Club of Rome celebrates its 50th anniversary in October, I hope that they will continue to look ahead at new frontiers for the next decade, suggested below as five questions that might stimulate new reports to CoR and/or the next edition of **Come On!**

4.1. *Who is Coming On?*

The report ends with a brief conclusion inviting readers to "Come On": academics, business people, the financial community, policymakers, and "critics to spell out what they find wrong in terms of the facts and intentions of this Report." (p.206) I have little quarrel with the facts, and I support the intentions. *My complaints are with the presentation, and overemphasis of some elements, along with under-emphasis or omission of other important elements.*

Moreover, I wonder who will *read* this book, skim it, or even know about it. Other than mandatory classroom reading, most if not all users of this book will be voluntary. How will they know about the book, and want to read or even skim it? The report is consciously inward **to** the Club of Rome, as are all other CoR reports, rather than outward **from** the CoR to a broader audience.

I doubt that publicity plans for **Come On!** amount to much. It is issued by a large natural science publisher (Springer), with hard-to-read footnotes in the gender-free hard science style, all citations in lower case, and journal titles abbreviated—hardly inviting to readers in social sciences, humanities, policy studies, journalism, and policy-making! Many of the charts are difficult to follow. And there are numerous typos.*

“Come On! is clearly a bold adventure in integration.”

The authors are quite right that “**Come On!** is hard stuff. It will not be easy to digest.” But it can and should be made more reader-friendly without compromising on the message, perhaps with a more popularized version.

4.2. What About Capitalism? An Alternative View

The Preface by the CoR Executive Committee repeats the **Limits to Growth** message that the suite of problems facing the world “could all be tied to the consequences of humankind’s desire for endless growth on a finite planet” (p.v) “The world is again in a critical situation” and it is especially important to look at the philosophical roots. “We must question the legitimacy of the ethos of materialist selfishness that is currently the most powerful force in the world” (p.vi) (Not all or perhaps even most of humankind seeks “endless growth” or holds an “ethos of materialist selfishness.” Greater specificity is needed, as well as considering other powerful drivers such as technology and real and fabricated human security needs.)

Even capitalism needs reconsidering. Late in the book, there is a too-brief discussion of businesses seeking the triple bottom line (people, planet, profit), corporate social responsibility (CSR), or—quite common at present—considering ESG factors (environmental, social, governmental). “Greening Capitalism, Quietly” (*Cadmus*, 3:2, May 2017), a preliminary report derived from **The Security & Sustainability Guide**, appeared after **Come On!** went to press, but deserves attention in the next edition. The report mentions some 150 organizations in seven categories: *Business-Led Groups* such as the World Business Council for Sustainable Development, *Ethics-Driven Groups* such as the UN Global Compact and the Global Initiative for Sustainability Ratings, *Broadened Accounting Groups* such as Ceres and Measure What Matters, *Certifying Organizations* such as Social Accountability International and the Extractive Industries Transparency Initiative, *Green Investing Groups* such as the Sustainable Stock Exchanges Initiative and Hazel Henderson’s Ethical Markets Media which produces an annual “Green Transition Scoreboard” of rising green investments, *Green Consultants* such as the Carbon Disclosure Project and Natural Capital Solutions headed by CoR Member Hunter Lovins, and *Green Business Publishers* such as the Cleantech Group and the GreenBiz Group which holds a large annual conference and publishes an annual *State of GreenBiz Report* on the circular economy, green infrastructure, etc.

Yes, there are still greedy capitalists who look only at the bottom line of profit, especially in the extractive industries (oil, gas, mining). And yes, some of the greening activity is

* The worst goof-up is at the end of Chapter 1, where, following “Zacharia F” (which should be Zakaria F), 19 additional and non-alphabetized items are added as a seeming afterthought (p.61). Equally strange is the lack of a publication date on the inside title page (I have never seen this in any book), and a poor summation of the book on the back cover that seems written by a first-day intern. (I am told that the German edition published by Bertelsmann does not have these distracting flaws.)

superficial “greenwash.” But “The Necessary Revolution” for business described by Peter Senge⁷ is clearly under way, and the only question is to what degree.

4.3. *What About Short-termism vs. Breadth?*

Put capitalism aside for the moment and consider an alternative view of why the world is in a critical situation: ever-growing infoglut, and the lack of any structure to deal with it, due to the slow pace of change in academia and failure to think about a necessary knowledge system for the 21st century.⁸ Most environmentalists are familiar with the simple I=PAT equation introduced by Paul Ehrlich and John Holdren in 1971, and briefly mentioned in **Come On!** (p.30). But change it slightly to I=POT (where I=impacts, P=population, O=organizations, and T=technology)⁹ to open a major window of understanding. There is no question that information has proliferated in many forms over recent decades, with more people (P) in more information-producing organizations (O), enabled by far better information technology (T), which drives us further into specialties and fierce competition for eyeballs. Moreover, in addition to burgeoning knowledge about the human, social, and natural world (albeit much of it trivial), there is an even greater flood of entertainment information in the form of readily available films and TV programs on an abundance of cable channels, televised sports, and ubiquitous photography and videos.

The need for integration and balance is greater than ever, as urged in **Scholarship Reconsidered** (1990) by the Carnegie Foundation for the Advancement of Teaching¹⁰, which described four kinds of scholarship: the scholarship of discovery (conventional inquiry), the scholarship of teaching, the scholarship of outreach, and the scholarship of integration. **Come On!** is clearly a bold adventure in integration, but needs to consider the scholarship of outreach to various publics. The ratio of conventional scholarship to integrative and outreach scholarship is perhaps more than 100 to 1, and that may be a huge understatement!

“Short-termism” is a problem, of course, although thinking about the next decade or so in uncertain times is more widespread than imagined. On the other hand, lack of breadth in thinking—failure to think of the broader system, to consider context and consequences (e.g. I=POT)—is an equal if not greater problem.

4.4. *What About Population?*

Treatment of this important concern is all too casual in **Come On!**, which reproduces two projections of world population: a “high education” scenario ending up with 8.5 billion people in 2050, and a “low education” scenario resulting in 10 billion people in 2050 (p.29). The former is unlikely, while the latter is most probable, although many analysts project out to less than that by using less than up-to-date data. Several years ago, I wrote to Carl Haub, head demographer at the Population Reference Bureau in Washington, noting what I saw as “projection creep” over the past decade. He responded “Spot on!” The current projection in the PRB’s excellent *World Population Data Sheet* is 9.846 billion in 2050, up from a base of 7.536 billion in 2017—a 30% increase. In the absence of any huge calamity, the 2050 projection is likely to creep up in the next few years to 10 billion or more.

Keep an eye on the San Francisco-based Calico project, begun in 2014, to stop aging, “cure” death, and extend lifespans. It is funded with \$250 million each by Google and pharmaceutical giant AbbVie, with the possibility of \$1 billion more invested in this potentially disruptive technology to reduce mortality. If new life-extending technologies are cheap and widely available, population will rise. If the remedies for aging are expensive, the rich will benefit and inequality will be further exacerbated. Even without success by Calico (which stands for California Life Company), many other life prolonging advances are being made in health care and drugs.

On the other hand, in these highly uncertain times, huge reductions in population are possible by a pandemic (we are far from prepared), or exchange of nuclear weapons. It might thus be wise to employ several projections: a most likely mid-projection, and two or more speculative projections on possible population loss or extraordinary gain.

Illustrative of the problems of “full world” population blindness is a recent book by conventional economists, **Demographic Change and Long-Run Development** (MIT Press, CESifo Seminar Series, Dec 2017, 354p), which assumes “the demographic transition” to stable population without any statement of current population and projected increase by 30% in the next two decades, and any current or future strain on any resources. This extreme version of a convex population growth curve is the polar opposite of the concave “exponential” growth curve cited by the 1972 **Limits to Growth** report and also suggested in the “Great Acceleration” dashboard by Steffen *et al.* (p.17). The recent growth curve is in fact somewhat convex due to falling birth rates, but not so pronounced as to preclude significant population growth, albeit at the declining rate of recent decades. But a declining death rate could possibly straighten the growth curve, and even return it to a concave pattern.

4.5. What About Destruction of the Planet?

I fully believe that planet Earth is being destroyed by humankind, and that much new thinking is needed to abate this destruction, which is why I am writing this review.

However, the case that the planet is now being destroyed—widely assumed by environmentalists but not by others—is not clearly made here. The burden of this important assertion is placed on the “planetary boundaries” concept introduced in 2009 by a group of 28 scientists led by Johan Rockström and Will Steffen. These nine “planetary life support systems” are an excellent way to move beyond obvious climate change to include biosphere integrity, land-system change, freshwater use, phosphorus and nitrogen in oceans, acidification of the oceans, ozone depletion, and more. But it does not easily communicate to non-scientists.

Similarly, on p.17, Will Steffen *et al.*’s compact dashboard of 24 socio-economic and earth-system trends depicts the Anthropocene, with nearly all 24 curves of “The Great Acceleration” sharply up. It is a valuable overview, but overly generalized to clearly make the case for ongoing destruction to the uninformed or skeptical. Moreover, this important chart is reproduced on a third of a page, instead of the full page that it deserves, and is scarcely readable—even with a magnifying glass!

Even blown-up and legible, the dashboard needs a supplement to clearly make the destruction argument—one or more full pages listing many of the specific elements of destruction, e.g. microplastic particles in the oceans, desertification and pollution of land, loss of topsoil, decline of honeybees and other insects, loss of tropical rainforests, depletion of aquifers, many types of unregulated toxic chemicals in food and water, algae blooms, ocean dead zones, accelerated melting of ice sheets, rising sea levels, fish farm disruption of coastal ecosystems, and increasingly erratic weather—unprecedented floods, storms, droughts, and drought-caused wildfires that in turn feed soot into the atmosphere.

“Come On! is an important initial attempt to describe a “world in disarray” and unsustainable trends in broader-than-usual terms, outdated thinking that underlies and exacerbates these trends, and the many elements of a “New Enlightenment” action platform for sustainability.”

But wait! In addition to listing specific forms of destruction, it is important to acknowledge remediation efforts that are underway to counter many of them, although perhaps not at all adequate to the task. For example, the Ocean Cleanup Project to push plastic into a network of floating barriers, depicted in **Come On!** (p.174), appears to be a nifty scheme. But what is its potential to make a dent in the growing plastics problem? This may be difficult to estimate, but some attempt should be made.

The many conservation and remediation efforts underway, as well as actions to reduce carbon emissions and make more efficient use of resources, should be applauded and may delay and diminish planet destruction. But, taken together, they may still be inadequate. This more sophisticated approach, however, is better than ignoring remediation and climate action, or assuming that it will be at all sufficient. And it may encourage us to try even harder.

Another more subtle approach is distinguishing between rapid and generalized “total system collapse,” implied in the **Limits to Growth** report and herein (p.101), and slow and localized or regional collapse. Yes, one can and should envision one or more tipping points in natural systems where everything goes to hell or thereabouts in a few years. But the model of earlier simple societies should not be equated with the global system, and some cities and regions will be far more resilient than others. Copenhagen (764,000 people) and Adelaide (1.3 million) are cited in **Come On!** as models for “regenerative transformation.” But Jakarta (10 million, and 40% below sea level) appears to be hopeless, sinking faster than any other big city in the world due to depletion of aquifers and the rising Java sea, exacerbated by runaway development, concrete and asphalt replacing open fields and mangroves, lack of planning, few if any sewers, waste and chemicals dumped into waterways, limited supplies of drinking water, polluted air, huge traffic jams, distrust of government and conflicts between Islamic extremists and secular Indonesians.¹¹

Finally, destruction of the planet, especially climate change, should be seen as a matter of national security and a “threat multiplier,” to use a military term. We cannot have sustainability without security, nor, increasingly, security without sustainability.

5. SUMMING UP

Come On! is an important initial attempt to describe a “world in disarray” and unsustainable trends in broader-than-usual terms, outdated thinking that underlies and exacerbates these trends, and the many elements of a “New Enlightenment” action platform for sustainability. It is an important frontier for the Club of Rome and a platform for its work in the decades ahead, to be informed by subsequent editions.

The report represents a great amount of work, and refinements will be no easy task. Much thought is needed as to what to include, what to emphasize (and perhaps prioritize), what to shorten or omit, and how to present and publicize so this complex message gets out to various audiences.

The 18 trends that begin the book could be expanded to include sea level rise, water supply, methane release from thawing Arctic ice and tundra,¹² chemical pollution, inequality, consumption, migration, land scarcity, cyber-security, terrorism, corruption and expensive upgrading of nuclear arsenals. The second chapter on outdated philosophies/ideologies in economics and politics could be expanded to consider the radically changing information environment that impedes serious rethinking. Chapter Three on numerous remedies begs consideration of even more. It could include systems thinking, foresight, improved governance capacity at all levels, international law, waste management, the greening of business, promoting human security, many other relevant sustainability groups, other overviews,¹³ etc.

The downside of considering these additions is trend and platform overload. To cope with this, both trends and remedies could be arranged in 5 or 6 groups, e.g. Environment, Population, Economy/Finance/Business, Politics/Security, and Technologies. And an introductory “top ten” key messages could sum up the report, as in **Big World, Small Planet**.¹⁴

The **Come On!** synthesis is a significant beginning. Any integrative project is like preparing a stew and adding proper quantities and varieties of vegetables, meat, and spices. There is no one way to do it, but some stews are far tastier and nutritious than others! Time is short and much work remains to be done in the next decade. C’mon, let’s get to it!

Author contact information

Email: mmarien@twcny.rr.com

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The Context and Values Inherent in Human Capital as Core Principles for New Economic Theory

Winston P. Nagan*

Chairman, Board of Trustees, World Academy of Art & Science;
Professor of Law, Emeritus, Levin College of Law, University of Florida, USA

Samantha R. Manausa

Junior Fellow, Institute of Human Rights, Peace and Development,
Levin College of Law, University of Florida, USA

Abstract

This paper has a specific focus on the core foundation of New Economic Theory. That is, the focus on human capital and its implications for the theory and method of the new form of political economy. The central issue that is underlined is the importance of scientific and technological innovation and its necessary interdependence on global values and value analysis. The paper discusses the issue of scientific consciousness as a generator of technological value, and places scientific process at the heart of human consciousness. It discusses the complex interdependence of human relational subjectivity, scientific consciousness, and modern science. The paper draws attention to the problems of observation and participation, and the influence of modern quantum physics in drawing attention to aspects of human consciousness that go beyond the points of conventional science, and open up concern for the principle of non-locality. It explores human subjectivity in terms of the way in which “emotionalized behaviors” have effects on scientific objectivity. It also briefly touches on consciousness and its observable scientific role in the possible reconstruction of some aspects of reality. Mention is made of the Copenhagen perspective, the Many Worlds perspective, and the Penrose interpretation. These insights challenge us to explore human consciousness and innovation in economic organization. The discussion also brings in the principle of relational inter-subjectivity, emotion, and consciousness as a potential driver of human capital and value. In short, positive emotions can influence economic decision-making, as can negative emotions. These challenges stress the problem of human relational subjectivity, values, and technology as the tools to better understand the conflicts and potentials of human capital for New Economic Theory. The issue of value-analysis has both a descriptive and normative dimension. Both of these aspects raise important challenges for human decision-making and its economic effects. The paper summarizes the main points here, then seeks to clarify the value institutional context viewed from a global and comprehensive perspective. It provides a map of these values and institutions to guide inquiry. It ties these values to the values

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reflected in the UN Charter and International Bill of Rights. This clarification is an important challenge for understanding the impact of technology, consciousness, and the fundamental values upon which international public order is based. The paper concludes with an outline of value frameworks that should guide New Economic Theory based on human capital, and which could serve as a basis for the evolving New Economic Theory to enhance the public order. Human capital is the central principle of both theory and method for the advancement of New Economic Theory, founded on the problems of contextual reality, the ubiquity of value analysis, and the responsible management of political economy at the global level.

“Economic theory must find space for the limitless potential of human capital.”

1. Technology, Relational Subjectivity, Sentiment, and Human Capital

1.1. Human Capital, Technological Innovations and Values

We live in a world of dramatic scientific, technological, and intellectual advances. These advances hold challenges for the future prosperity and well-being of humanity. These dramatic changes have impressed upon us the need for some rethinking of political economy from a global point of view. The central feature of the smart deployment of human capital recognizes the technological anticipated revolution as a major foundation of individual and community value. The individual in the midst of scientific and technological consciousness comes to these matters with the inherent energy that drives human beings to survive and achieve. The energy of the human being is complemented by creative capacity. These two qualities are the foundations of human and social capital. However, conventional economic theory seems to have a very narrow view of values, human energy, and creativity. The new economic theory seeks to find appropriate space for rethinking the issue of human and social capital which makes the individual and the human population the central emphasis of new economic theory.

Because we live in a world that is in the midst of an accelerating technological revolution, the consequences of dramatic technological innovation and change quite literally impose dramatic changes on the way social and economic processes work. The physicist Albert Einstein put the dilemma this way: “There are only two ways to live your life. One is as though nothing is a miracle. The other, as if everything is.” So dramatic have technological and scientific developments been that they challenge the traditional grounding of human identity, spiritual aspiration and consciousness itself. Today we live in a world that is radically transforming itself. Indeed, we already experience the radical transformations in communications and transportation technologies. Communication has been compressed between human beings so that information is instantly communicated across the planet and technological innovations in travel have radically compressed the distance of both time and space between human beings. Even more dramatic by the compression of time and space are the findings of modern quantum physics. Quantum physics has discovered the principle of

“nonlocality”.¹ In short, there is no measurement between subatomic particles as they influence their movements, even though they may be millions of miles apart. This notion may have dramatic consequences for the future of humanity and technology. In this quantum world the observation of molecules by humans results in the transformation from micro particles to waves.² When observation ceases, they revert to the physics of micro particles. This has incredible implications for human consciousness and its capacity to influence the world outside of the human observer.

“Human consciousness is the tool or lever for the development of spiritual conscious aspirations.”

In the context of major coercion and more, the development of modern armaments including thermonuclear weapons and delivery systems put in the reach of human decision the basic question of whether humanity will be sufficiently shortsighted to destroy itself. Most recently, North Korea has successfully launched a missile capable of delivering weapons of mass destruction. Indeed, right next to the Republic of China, it appears that the Korean mighty mouse has armed itself with dangerous weapons that threaten security.³

In the areas of industrialization in which the mass production of goods and services is tied to technological innovation, these processes are increasingly dependent on modern innovations and less dependent on human labor⁴. This is an area where change requires a radical rethinking of the role of labor and social stability in human relations. Even more remarkable are the developments in the areas of artificial intelligence. Scientists predict that shortly within the grasp of modern science will be instruments of artificial intelligence vastly superior to those of the humans that created it.⁵ This may raise the difficult question of whether such artificial forms of intelligence may resist control by human agency. The critical question may well be whether robotic rationality may be superior and less prone to error than human rationality. Will global security be more reliable in the hands of robotic rationality than the vulnerabilities and weaknesses of human psychological capacity? Other technological prospects include the radical new developments for the advancement of solar energy. Scientists have already determined that in the molecular structure of sand there are elements which, if isolated, could dramatically increase the collection, storage and distribution of solar energy.⁶ Since this is an inexhaustible supply of energy, it could have radical implications for political economy in the social process. These few introductory comments are simply used to raise the question of the role of values in the evolution of the technological capacity of the human family. It seems obvious that economic theory must find space for the limitless potential of human capital.

2. Technological Progress, Social Process, Values, and Human Capital in New Economic Theory

2.1. Technology, Scientific Progress and Human Capital

We would contend that values are implicated in virtually all levels of technological innovation. The problem with values in this context is that they are produced and understood

by the same intellectual processes that generate technological innovation and change. In short, technological progress and the importance of values in understanding and providing normative guidance for such processes emerge existentially from the development of human consciousness.⁷ The question is, what do we understand about human consciousness? For the scientists, human consciousness would simply be necessary for the development of scientific reason and scientific rationality. From the perspective of the culture of transcendental experience, human consciousness is the tool or lever for the development of spiritual conscious aspirations. In general, scientists tend to accept the idea that there does exist a form of consciousness which indirectly influences scientific reason and scientific achievements. However, scientists have had difficulty in understanding a possible connection between the study of the human brain and the study of human consciousness. The central problem is whether consciousness is a reality or an illusion. To some scientists the idea of consciousness is simply one of the great mysteries that confronts scientific inquiry. To other scientists it is really a non-problem. Following on this conclusion, many scientists believe that consciousness is insufficiently scientific to waste such time on it. At most, consciousness may simply be a byproduct of complex physical processes. Another problem is that in general, scientists tend to believe that consciousness is something that lies outside of the boundaries of normal science.⁸ An important contributing factor to the notion that consciousness is outside of science is the philosophy of science grounded in positivism. Positivism suggests that the concerns of science be completely objective and distinct from the contamination of human subjectivity and values. It insists on the principle that science has an exclusive preoccupation with the *is* and not with the *ought* implied in value analysis.⁹

Modern physics has raised important questions, which implicate the process of consciousness; this further implicates the problem of values. In the 1920s, Heisenberg, one of the founders of quantum physics, made a completely inexplicable discovery. He discovered that when observing subatomic phenomena, it was impossible to separate the observer from what was observed.¹⁰ The observer influenced the movement of subatomic particles. This means that the observer has a level of subjectivity that influences the object of observation. This is an uncomfortable conclusion for strict positivism. The economic observer would appear to be both the observer and the participant in the economic order.

2.2. Human Subjectivity, Consciousness and Modern Science (The Foundations of Human and Social Capital)

Human subjectivity* in the form of perspective has been largely a field monopolized by the psychological sciences. It has been in a very important way also, a field dominated by religion. Today this sharp division has been eroded as the field of quantum mechanics has

* Bringing human subjectivity to the center of an appropriate focus of inquiry for scientific consciousness raises the critical question of the absence of objective measurable indicators of shared human subjectivity and shared professional consciousness. This is an issue that has generated an important interest in the measurement of subjectivity. A founding presence in this initiative was William Stephenson. Stephenson was an Englishman. He obtained a PhD in both physics and psychology. He is credited with developing a credible scientific method for the measurement of shared human subjectivity. His method was called the Q Methodology. The Q methodology is described as "a methodology for dealing with intra-individual data. Its relations to other methods of multivariate data analysis are described and, in particular, the implications of factor analysis for it... the practical applications to different fields, e.g. type psychology, social psychology, projective tests, etc." See Stephenson, *The study of behavior; Q-technique and its methodology* (1953).

See also Brown, "Q Methodology and Qualitative Research" (1996)

Brown, "A Primer on Q Methodology" (1993), www.operantsubjectivity.org

disclosed properties and insights of micro-particles and waves. The experiments in quantum physics confirm results that are sometimes described as weird. The results do not make sense in the world of cause and effect as objectively observed. One of the insights of quantum physics is the role of the observer in shaping the behavior of the particles observed. This has raised the question that human consciousness when focused on the particles has an influence on how the particles behave. In short, observational consciousness appears to be a form of participatory interaction.¹¹ It has been shown experimentally the cells of the body and the DNA communicate through this subtle field of energy that is difficult to quantify or measure. More than that it has been shown that human emotion has a direct influence on living DNA. These effects eliminate the interposition of distance between these objects. According to the physicist Amit Goswami, “when we understand us, our consciousness, we also understand the universe and separation disappears.”

The scientific results from quantum physics experiments indicate that the human DNA has an effect on the particles that constitute the matter of the universe. Additionally, the connection between emotion and DNA has effects which transcend space and time. Scientists now believe that there is a matrix of energy that connects any one thing with everything in the universe. This connected field accounts for the unexpected results of experiments. It is further believed that the DNA of the human body gives us access to the energy that connects with the universe. Emotion is the key for tapping into this field.¹² According to the famous quantum physicist Max Planck, “As a man who has devoted his whole life to the most clear-headed science, to the study of matter, I can tell you as a result of my research about the atoms this much: There is no matter as such! All matter originates and exists only by virtue of a force which brings the particles of an atom to vibration and holds this most minute solar system of the atom together... We must assume behind this force the existence of a conscious and intelligent Mind. This Mind is the matrix of all matter.”¹³

The central insight of modern physics is that we live in a participatory universe. Human consciousness, it is believed, participates in this universe via human perspectives and emotions and represents a profound insight and even deeper challenge to the age-old question of the being and becoming of humanity. This participatory universe generates the future of multiple possibilities which gives strength and responsibility to the idea of creative orientation. Which of the possibilities may emerge as real would therefore appear to be influenced by emotional filter through consciousness and observation. In short, there is more to the idea of a focus of attention. A focus of attention generates the enemy of human consciousness which may create a possible future reality. Is this a matter relevant to New Economic Theory?

Scientists still dispute the precise meaning of the nature of possibilities and overlapping possibilities. Three of the most important of these interpretations is the Copenhagen Perspective. Theorists here focus on experiments which indicate that a person observing an electron moving through a slit in a barrier suggests that observation itself is what turns quantum possibilities into reality. Second, there is the Many Worlds interpretation. This interpretation is similar to the Copenhagen Perspective but suggests that the possibilities are infinite and all of them exist simultaneously. However, in the “many worlds” view each

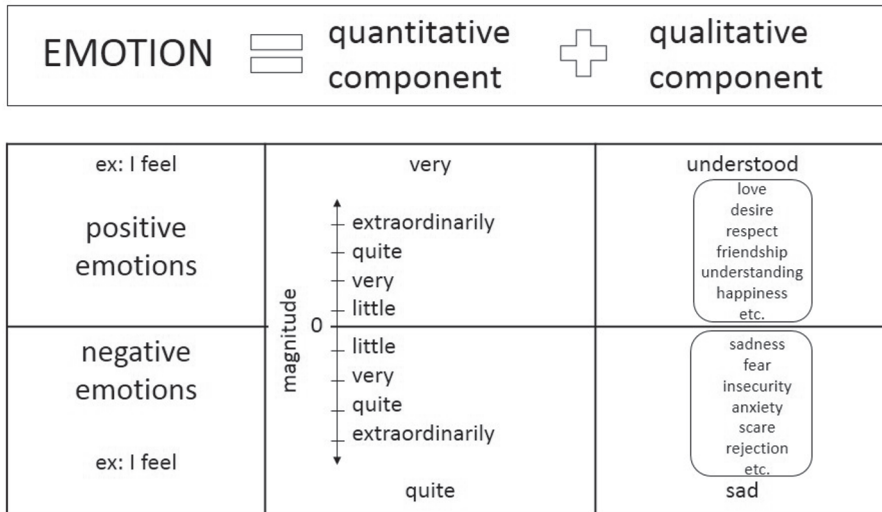
possibility happens in its own space and cannot be seen by others. These unique spaces are called alternate universes.

Finally, there is the Penrose interpretation. Here, Penrose maintains the belief of many possibilities existing at the quantum level. However, his theory is distinctive as to what it actually is that “locks” into a particular possibility that becomes our reality. Penrose recognizes that each possibility has its own gravitational field. It takes energy to maintain this field and the more energy a probability requires the more unstable it is. The consequence was that without enough energy to sustain all possibilities they collapse into a single state that represents our reality. The conclusions that are drawn from the insight of quantum possibilities are that emotion as a part of consciousness is the central factor in the choice of reality. In essence, the collapse of the world into a concrete reality in this sense means the success of technological possibilities in the human future. It is difficult to predict casually which kinds of technologies will represent the emergent reality of the future.

2.3. Human Relational Inter-Subjectivity: Emotion and Consciousness as Drivers of Human Capital and Value

It may also be that, in general, societies take for granted the importance of emotion and sentiment in the construction of future generations. Here, intellectually, the idea of affection or positive emotional sentiment may need to be more explicitly recognized as an important cultural and policy preference. In short, emotion and sentiment permeate all human behavior. They may be the driving force about what is right concerning the human prospect and what is required to avoid was wrong with it. Modern scholarship has drawn attention to the importance of the emotions encapsulated in positive and negative emotion.

Figure 1: Illustration of modern psychological science connecting emotion to the ideas of positive and negative sentiment



Indeed what we suggest is that genocide is impossible when culture, law, and politics give due deference to the principles of positive sentiment or affect and heighten the prospect of genocide and atrocity when the negative symbols of emotionalized hate are dominant. Perhaps the most important insight here is that positive sentiment is a critical foundation for the culture of human rights. Negative sentiment is critical for the denial of the culture of human rights.

Figure 1 is an illustration of modern psychological science connecting emotion to the ideas of positive and negative sentiment. The diagram does not quite explain that positive sentiment as affects is an identifiable social process. The central issue here is that emotion is a driver of human energy and a generator of creativity including the creativity of our technological future. The important point here is that the study of technology insists on strict scientific objectivity, but what triggers this objectivity is the power of inter-subjectivity.

The diagram also underlines the salience of inter-subjectivity for the generation of smart technology.

2.4. Technology, Scientific Consciousness, and Social Responsibilities

It is widely acknowledged today that science, technology and innovation are some of the most powerful forces directing the future of our global social process. It is also recognized that technology represents remarkable advances as well as existential threats to humanity. Some aspects of technology are, in fact, fairly strictly controlled politically. These areas include nuclear technology, pharmaceuticals, agricultural chemicals, and food additives. Other areas of technological development would appear to be somewhat more anarchic. These areas include the computerization of financial transactions, automation, biological research, and telecommunication systems. The speed of technological development and distribution appears now to be way ahead of the capacity of governance to adapt to the changes that technology generates. This results in social stress, uneven social development, social upheaval, displacement and mass-migration and vast disruptions of stability in social process globally. Leading thinkers in international governmental institutions and global scientific institutions continue to stress the critical importance of the issue of values in scientific research and education and that they are of great importance in the formulation of wise public policy.

2.5. Values, Technology, and New Economic Theory

The discussion of consciousness and values in scientific culture has always been an uneasy business. From a scientific point of view, the proper scientific culture is to be value-free. If the discourse of science is permeated with values, it is permeated with human subjectivity and not scientific objectivity. On the other hand, we know that in human society the important stakes about community organization, endurance, and promise seem to be tied up with values in some form or another. The traditional limit on the use of values from a scientific point of view remains a problem for the subjectivity of value-toned discourse. Say, values in the context of intellectual culture are used in two distinct ways. First, values

are used descriptively. In this sense, the scientific observer is merely observing the value-conditioned behavior of social or legal participants.

What does the observer see? He sees individual human beings acting in a community, energized to pursue the things that they desire or value. In this sense, viewed from an anthropological point of view, what we call things that are desired or valued might, in a basic sense, be the human needs that the individual seeks to secure in the social context of his or her life. This is simply a descriptive inquiry into what the individual wants, how the individual goes about getting what he wants, and what he does with the desired thing that he has gotten. This will give us a description of the system of community or public order as it is.

There is another sense in which the term values is used. In this sense, the term is vested with normative importance. In other words, the question is not how values are produced and distributed but how they ought to be produced and distributed. This, therefore, is not a descriptive exercise; it is an exercise of normative judgment. In the case of values used as a description of community order as it is, we are dealing with propositions that can be proved or disproved by observation, creating a hypothesis about what is observed. Further observation may prove or disprove the hypothesis. This is an empirical inquiry. When values are used in a normative sense, we are really evaluating the goodness or badness of their production and distribution. The determination of the normative priority or the preference given to a value statement reflecting the “ought” will have to be established by some other criterion of validation. That criterion, at least in the context of moral philosophy, is based on the idea that a statement about a normative preference or “ought” can be validated by reasons external to the statement-maker. In short, there are objective, justifiable reasons that may be formulated to determine the currency, or lack of it, of a moral or value proposition. We shall be using the term value in both a descriptive and a normative sense, but we will attempt to secure a sufficient clarity of exposition that while we discuss them as interrelated matters, we can keep them sufficiently distinct in order to establish different insights into the problems we are discussing about society.

3. The Role of Decision and Relational Subjectivity in Political Economy

3.1. Major Points of Focus for Science and Human Decision-Making

The impact of technology from a global point of view will have significant influence on several aspects of global society.

1. Global Population Dynamics
 - The World’s population will exceed nine billion by 2050. This will raise considerable complexity about food security, health security and cultural stability.
2. Global Health Dynamics
 - Humanity will confront new challenges from microorganisms as the world increasingly becomes interconnected. What predictions do we have about new pandemics, infectious diseases and aging?

3. The Global Position of Women
 - Women have not made significant advances in poorer countries. In wealthier countries, they have made exceptional strides. The position of women, technology and global equality is critical.
4. Interpersonal Collaboration
 - The revolution in social media intensifies communication, opens up opportunities for collective intelligence, and opportunities for anti-social terrorists. How this will evolve is a significant technological challenge.
5. The expanding horizons in a contracting world implicates the death of cultural distance
 - Cultural integration includes the cinema, the changing music industry, the art market, and the universalization of languages.
6. Spiritual Consciousness
 - Today, there exists a rising level of religious affiliations and a rising level of atheists and agnostics. How will technology impact on these matters?
7. Ecological Consciousness
 - This matter involves the real danger of climate change and whether agreements on paper will result in an operational code that ignores these warnings and continues to pollute the air with carbon dioxide.
8. The Global War System
 - How do we strengthen the framework for collaboration for global peace and security? How can technology help in this regard?
9. Democracy, Rule of Law, and Governance
 - It may be that those states that are democratic will become more democratic, while other states who aspire to democracy will see democracy shrink. How do we strengthen the global rule of law?
10. The Global Economic Sphere
 - By 2050, China's GDP will be eighty percent more than the United States' and other members of the G7 will be surpassed by India, Brazil, Indonesia and Mexico GDP-wise, though it is not the best indicator to measure economic welfare. How to balance global growth as a form of collaboration and not conflict?
11. Unemployment, Inequality and Technological Change
 - As robotics replaces human labor, what policies do we have for a better distribution of the benefits of technology?
12. Knowledge and Progress
 - It is said that chemistry has exhausted itself and that the future now belongs to the science of biology. This science links up with nanoscience, information science, and *et cetera*.

13. Exploring Outer Space

- Outer space represents a profound technological challenge for all mankind.

14. The Wave of Knowledge and the Internet

- Storage and retrieval of knowledge are now revolutionary.

15. Telecoms and the Death of Distance

- Mobile technology will bring us to a closer connectivity in all fields globally. How will this technology have an impact on the psychology of the human person?

16. The importance of technology and values to ensure that technology is a boon and not a curse to humankind.*

Anthropological literature has given us a key to understanding life in a very elementary community. Life revolves around human beings and is energized to satisfy human needs. Anthropologists also identify the structures that emerge from society which are specialized in whatever degree of efficacy to facilitate securing those needs. When we map needs onto institutions, we emerge with a social process that is based on the interaction of energies directed at securing needs through institutions.† These institutions direct human energies, in some degree, to the satisfaction of those needs. We can now begin to identify basic human needs as the goods, services, honors, and gratifications that people in society desire or need. Moreover, we can classify these desires/needs in terms of the basic values that the individual social participant acts to secure for himself and those dependent on him. Thus, we may emerge with a model of social process in which human beings pursue values through institutions based on resources. Now, this is a purely descriptive inquiry, but it is possible to observe that the needs/values and the institutions specialized to secure them are, generally speaking, identifiable. What are these values and what are the institutions specialized to secure them in any social process?

3.2. The Human Perspective, Technology and Consciousness in the Evolution and Interdetermination of Values in the Human Social Process

Values	Institutions	Situations	Outcomes
Power	Governance – Political Parties	Arena	Decision
Enlightenment	Universities – WAAS	Forum	Knowledge
Wealth	Corporations	Market	Transaction
Well-being	Hospitals, Clinics	Habitat	Vitality
Skill	Labor Unions, Professional Organization	Shop	Performance

* Winston Nagan et al., *Human Rights and Dynamic Humanism*. Brill, 2017.

† Winston Nagan, “Configurative Jurisprudence and Contemporary Theories of Justice.” *World Academy of Art and Science* www.worldacademy.org/files/iuc_sept2015/presentations/Contextual_Configurative_Jurisprudence_W.Nagan.pdf

Affection	Micro-social Units (Family) Macro-social Units (Loyalty)	Circle	Cordiality, Positive Sentiment, Patriotism
Respect	Social Class	Stage	Prestige
Rectitude	Churches, Temples	Court	Rightness
Aesthetics	Museums, Monuments, Culture	Creative Orientation	Symbols of Cultural Beauty and Aspiration*

In this representation, values and institutions are represented descriptively in order to describe the system of community order as it is. It should, however, be understood that the social process of the community is a dynamic process in which there is an energy flow between the participators, the values, the institutions, and the results. Some of the results are generative of conflict. Other results are generative of the success of institutions functioning optimally. What is important is that social process is a generator of problems, and these problems are about the acquisition and distribution of values. This means that the dynamism of society requires a decision process that is frequently challenged to produce a solution to the problems of value conflict, value deprivation, or value over-indulgence. Thus, the community response to the problems that values pose for community order invariably must implicate a normative dimension about the optimal allocation of values in society. Indeed, some political scientists describe political science as concerned with the authoritative allocation of values in society.

In reviewing this map of values and institutions of social process, it is important to keep in mind that it is the human perspective that gives meaning and life to the values and institutions in society. The human perspective comes with the perspective of identity, ego-demands, and the value ideals of expectation. These perspectives are driven by deep drivers for self-actualization, self-realization, and psycho-social fulfillment. In this sense, the private motives of personality, even when displaced on public objects and rationalized in the public interests, still represent an underlying force that moves the personality in all social relations. This underlying force may be the force of self-affirmation for self-determination and is the most foundational energizer of the demand for human rights and dignity. The relationship between personality and value achievement may itself generate a sense of inner-fulfillment, which, in turn, becomes the driver of still greater levels of value creation and achievement.

4. Clarification of Value-Institutional Systems for New Economic Theory

4.1. Consciousness and Technology in the Identification and Allocation of Values in Society

The problem of the allocation of values implicates the idea that there may be different standards which justify one form of allocation over another. Historically, at least in law, there has been an assumption that legal interventions are meant to discriminate between the

* Winston Nagan, "Configurative Jurisprudence and Contemporary Theories of Justice."

claims for values that are just and those that are unjust. It is this challenge that has given rise to the great traditions of jurisprudence and, most importantly, the jurisprudence of natural law. Natural law, however, could only generate procedures, not substantive rules, to facilitate the use of right reason in the resolution of value conflicts. Two of the most enduring of these natural law-based rules have survived and are essentially matters of procedural justice: *audi alteram partem* [the obligation to hear both sides] and *nemo iudex in causa sua* [no one should be a judge in his own case]. However, we had to await the aftermath of the tragedy of the Second World War before we got a kind of official code of natural law in the form of the Universal Declaration of Human Rights. Although couched in the form of rights, the Declaration may be reduced to nine fundamental value-needs categories.^{14,15}

The adoption of a code of moral priority, intended to bind all participants in the international system, limited the speculation about the role of values in the social process. Although most intellectual and scholastic speculation stresses the notion that values are somewhat opaque, difficult to distill, and even more difficult to clarify, the adoption of the United Nations Charter has served as a political impetus for the development and clarification of values. As a starting point, therefore, we may reduce the Charter [a legally binding instrument of global salience] into several comprehensible and clearly articulated keynote precepts. We list them as follows:

4.2. Global Values, the UN Charter: the Normative Value Guidance for Science, Technology and Society

1. The Charter's authority is rooted in the perspectives of all members of the global community, i.e. the people. This is indicated by the words, '[W]e, the peoples of the United Nations.' Thus, the authority for the international rule of law, and its power to review and supervise important global matters, is an authority not rooted in abstractions like 'sovereignty,' 'elite,' or 'ruling class' but in the actual perspectives of the people of the world community. This means that the peoples' goals, expressed through appropriate forum (including the United Nations, governments and public opinion), are critical indicators of the principle of international authority and the dictates of public conscience.
2. The Charter embraces the high purpose of saving succeeding generations from the scourge of war. When this precept is seen in the light of organized crime syndicates' involvement in the illicit shipment of arms, the possibility that they might have access to nuclear weapons technologies, and chemical and biological weapons, the reference to 'war' in this precept must be construed to enhance the principle of international security for all in the broadest sense.
3. The Charter references the 'dignity and worth of the human person'. The eradication of millions of human beings with a single nuclear weapon or policies or practices of ethnic cleansing, genocide and mass murder hardly value the dignity or worth of the human person. What is of cardinal legal, political, and moral import is the idea that international law based on the law of the charter be interpreted to enhance the dignity

and worth of all peoples and individuals, rather than be complicit in the destruction of the core values of human dignity.

4. The Preamble is emphatically anti-imperialist. It holds that the equal rights of all nations must be respected. Principles such as non-intervention, respect for sovereignty, including political-independence and territorial integrity, are also issues that remain under constant threat of penetration by alienated terrorists or organized crime cartels.
5. The Preamble refers to the obligation to respect international law (this effectually means the rule of law) based only on treaty commitments but also on 'other sources of international law'. These other sources of law include values, which complement efforts to promote ethical precepts built into expectations of the universal ideals of morality.
6. The Preamble contains a deeply rooted expectation of progress, improved standards of living, and enhanced domains of freedom and equality for all human beings on the planet.

Based on the keynote precepts in the UN Charter, the world community also adopted an International Bill of Rights. The central challenge to a scholastic understanding of the International Bill of Rights is the need to clarify and distill its basic, underlying values. It may now be with confidence stated that we can distill at least nine functional values that underlie the entire international bill of rights. In a general sense, these rights, when considered collectively, represent the integrated, supreme universal value of human dignity. The central challenge then, is that those charged with decision-making responsibility must prescribe and apply a multitude of values in concrete instances and hope that their choices contribute to the enhancement of human dignity and do not, in fact, disparage it. At an abstract philosophical level, distinguished philosophers such as Sir Isaiah Berlin have maintained that it is futile to attempt to integrate these values with the abstract principle of human dignity because fundamentally, these values are incommensurable.¹⁶ Not everyone agrees with this.

Specialists in decision and policy acknowledge that human dignity based on universal respect represents a cluster of complex values and value-processes. Therefore, the challenge requires that ostensibly conflicting values be subject to a deeper level of contextualized social insight and a complete sensitivity to interdisciplinary knowledge, procedures, and insights. Thus, decisions in these contexts are challenged with the task of broader methods of cognition and a better understanding of abstract formulations of value judgments. Disciplined intellectual procedures have been developed to provide better guidance in particular instances of choice to approximate the application and integration of values in terms of the human dignity postulate. Does the ethic of universal respect and human dignity demand absolute, universal compliance at the expense of other universally accepted values? Ensuring that the values of respect, democratic entitlement, and humanitarian law standards are honored requires fine-tuned analysis and great subtlety in the structure and process of decisional interventions. Rules of construction and 'interpretation' are painfully worked out, which hold, for example, that even if a peremptory principle (*jus cogens*) of international

law embodies an obligation *erga omnes* (towards all). It should be evaluated, appraised, and construed to enhance rather than disparage similar rights, which may also have to be accommodated. The currency behind the universal ethic of essential dignity and respect is that it provides practical decision-makers with goals, objectives, and working standards that permit the transformation of law and practice into a greater and more explicit approximation of the basic goals and standards built into the UN Charter system itself. This prescribes a public order committed to universal peace and dignity for the people of the entire earth-space community.

5. New Economic Theory and Global Governance

5.1. Global Values, Scientific Responsibility & the Perspective of Global Governance

5.1.1. Technological Consciousness, Values and Public Order

It is useful to approach the questions of value in terms of the nature of the public order that the rule of law system seeks to promote and defend. The system of public order secures the complex values that it is committed to defend by making an essential distinction between the minimum-order aspects and the optimum-order aspects of the system of public order.

5.1.2. Consciousness, Values and the Minimum Order

The problem of scientific responsibility, values and the prospect of at least realizing a system of minimum order in the global governance of humanity now represent a critical challenge for scientific consciousness. We may understand the relationship between community, minimum order and values by imagining a society without an expectation that agreements and exchanges made in good faith and according to law will be honored, that wrongs (delicts) inflicted upon innocent parties will be compensated, that basic interests and expectations of entitlement [as in fundamental norms of right and wrong] shall be sanctioned by a collective community response, or that basic structures of governance and administration will respect the rules of natural justice such as *nemo iudex in sua causa* or *audi alteram partem*, and will in general constrain the abuse of power and thus the prospect of caprice and arbitrariness in governance. The necessity of minimum order in a comparative, cross-cultural, historic reality is that human beings interact within and without community lines. In doing so, they commit wrongs intentionally or unintentionally, they require some security over their possessions and entitlements, and their systems of governance aspire invariably to constrain the impulse for abusing power. These are the minimum values of social coexistence. It is in this sense that law as minimum order confronts the idea of justice and potentiality.

It is commonly thought that minimum order is a critical, but not absolute condition of a more just, more decent, more optimistic human prospect. The rule of law precept is uncontroversial in the sense of minimum order and its 'boundaries'. Peace, security, and minimal standards of human rights are reflections of these values in international, constitutional, and municipal law. Fundamentally, the quest for the maintenance of a minimum order in society would appear to be an essential condition for the individual or aggregate of individuals to evolve toward a social process that maximizes value production and distribution. It is possible to see

in this an evolutionary idea of progressive change relating to the production and distribution, optimally for all social participants. It is imperative that in the education of scientists and technology innovators, their sense of social responsibility is at least minimally influenced by the global values of a minimum sustainable system of world order.

5.1.3. Technological Consciousness, Values and the Optimum Order

This challenge to the public order raises the question of the production and the distribution of values beyond the minimum for social coexistence. This is an insight that is more challenging to the question of scientific responsibility and the values that ought to guide it. Clearly, a great deal of science will have an imprint that goes beyond minimum order and will be let loose in the domain of optimal possibilities and prospects. Here, it is critically important that value clarification be a component of the definition of scientific social responsibility. This is the challenge of the unequal distribution of opportunities or results. Human beings exist not only spatially, but also in terms of the duration of time and events. There is hopefully a tomorrow, a next week, next month, next year, and next century. Human beings, such as scientists, are also transformative agents who make things happen, and in doing so, underline the question embedded in the nature of law and community that we can change things for better or worse, for the common good or the special interests, for the sense of expanding human dignity or the prospect of a negative utopia, the rule of human indignity. This is a critical challenge for scientific consciousness.

The central challenge for values posed by the optimum order precept is the problem of the procedures and methods for producing values as well as the procedures, methods and normative ideas about the fair distribution of the values that are produced in society. At the back of the concern for human values is the belief in human capacity for the essential, energized generation of value at every level of the social process and the human resource as a producer of ideas, insights, and values of exponential salience. At the back of the human dignity idea is the belief that widespread human dignity flourishes when the dignity of the individual flourishes and reproduces values of exponential importance for the common interest of all. Fellows of the Academy have suggested that the nine values embedded in the International Bill of Rights [power, wealth, respect, rectitude, enlightenment, skill, affection, health and well-being, and aesthetics] are the key to the notion of a public order of human dignity. They postulate that the maximal production and distribution of these values on a universal basis is the key to improving the human prospect and approximating a public order of human dignity. This means that the prescription, application, and enforcement of the fundamental values behind human rights remain a major professional challenge for the global processes of governance charged with the defense of global public order.

We may conclude that value needs are a condition and a consequence of focusing and directing the energy of the human perspective into concrete operations that establish institutions concentrated and specialized to value realization. In this sense, values and needs are incentives that generate a self-directed force, which ultimately evolves into institutions of effective power crucial to the allocation of values. It is possible to see these generalizations in the evolution of the sovereign authority of the nation-state and its own evolution from

state absolutism to sovereignty rooted in people's expectations. Another insight of this model is found in the notion that the power process itself is energized by human expectations, especially expectations of demand. Without demanding or claiming an aspect of social power, society would be static. Thus, we see in the power process, the social activist.

In the United States, Rosa Parks resented segregation in public transportation, so she staked a claim to repudiate racial discrimination in public transportation. Gandhi was thrown off a train in South Africa because he was not white. He initiated a claim to challenge the power of the state to impose unjust discriminatory laws. His challenges to the power process brought him to India as a leader of the Indian Independence Movement. Nelson Mandela challenged apartheid and indicated in open court that he was committed to human dignity and democracy and that these ideals were ones that he was prepared to die for. Therefore, it is important that we have a clear understanding of the process of effective power, and what the limits and strategies are of mobilizing bases of power, to effect meaningful social change. It is quite obvious that scientific consciousness, driven by a commitment to scientific social responsibility, will have to carry a significant level of commitment in utilizing social power so that the results of technology serve human purposes that are constructive and avoid those that are destructive. As Einstein suggested, the development of science and technology should be a blessing and not a curse on humankind.

From the perspective of science, consciousness and value the following framework is provided as value-conditioned guidance for the technological innovators of our time and the immediate future.

6. Conclusion: Value Frameworks to Guide Scientific Consciousness, Social Responsibility and New Economic Theory

1. *The value of life*: This is centrally valued human subjectivity. It is referred to not in the "pro-life" sense (that a pregnant woman must bear a child), but in the Bill of Rights sense (that a person has the right to personhood and autonomy). The value of life, therefore, includes the respect and deference given to the individual in the global community.
2. *The status of the value of power and security*: Should it be narrowly or widely shared? Is the common interest of all honored in a system that seeks to secure the widest possible participation in all key areas the power process? One of the central values identified in the Atlantic Charter was the freedom from fear. This concern for freedom has evolved so that today no one denies that there is a critical interdependence between the concept of peace as a human right and all the other values in the UDHR. Peace and security might well be included under the functional category of power. However, peace is recognized as a complex preemptory component of the human rights value system. It is of value to again recognize that there are complex ways in which all human rights values have an influence on peace and security, recognizing as well that peace and security at all levels are critical conditions for the effective mobilization of human rights values.

A central aspect of the values of peace and security relates to the connection between the mobilizing force of strategy for the realization of human rights goals and the realization of these goals themselves. For example, is it appropriate to deploy violent strategies of action to achieve human rights objectives? Is it appropriate to disengage the value discourse involving strategy and struggle on the one hand and idealistic value objectives on the other hand? Gandhi, for one, insisted that the morality of struggle was even more important than the morality of distant idealistic objectives. Indeed, he also insisted that a disconnection between struggle, strategy, and goals was morally indefensible.

3. *The status and value of economic and wealth processes:* Is the common interest of all better secured by optimizing the capacity to produce and distribute wealth or the opposite?
4. *The status and value of respect and equalitarian values:* Should invidious discrimination be fully prohibited (covering all areas of race, gender, alienage, etc.)? Can equality be meaningful if it is only a formal, juridical idea without regard to the legacy of exploitation, repression, and discrimination?
5. *The status and value of educational and enlightened values:* Should these values be widely produced and distributed or narrowly experienced? In the context of science, the critical value that secures scientific innovation and the liberation of scientific consciousness is the freedom of inquiry. The challenge posed by dramatic technological innovation is that further scientific consciousness will generate an internal process focused on scientific responsibility and a deeper sense of the value implications and consequences of technological innovation. The problem with regulating science is the problem that it will be regulated by a politically ignorant constituency, who may seek to appropriate technology with selfish special interests.
6. *The status and value of skill and labor values:* The centrality of labor and skills values to the human condition indicates that these are central and fundamental values implicated in the rights and expectations of those who seek to create and sustain these rights and labor values. Should these rights and expectations be widely shaped or narrowly shared?
7. *The status and value of health and well-being values:* The delivery of reasonably formulated and accessible healthcare and social services to all is now widely regarded as a crucial entitlement, if the most basic standards of decency in politics and society are valued. Today, unemployment aid, social security, Medicare, and other social services are considered crucial to a society that cares for its people.
8. *The status and value of the family and other affective values:* Because the family is the basis of collective existence and is central to the human rights of children, the public policies of a society that destroys family (and other affective ties) pose a problem for the wide generation of affective values including the loyalty values of patriotic deference.

9. *The status and value of moral experience and rectitude:* A system that endorses the centrality of moral experience to the legal and political culture and seeks to maximize the spiritual freedom of all is yet another of the central themes of the human rights.

How do we translate expectations of care or fundamental moral experience into the practical prescription of law and policy?

10. *The status and value of cultural and aesthetic experience:* The term “cultural” includes the concept of the aesthetic. In fact, the word “cultural” could encompass all the value preferences that we might extract from the UDHR. There is, however, a narrower meaning that the term culture might carry. That meaning ties in with the notion of human rights as also emblematic of the diversity of human experience, experience that reflects the cultural richness of humanity as a global community. There is great controversy about the issue of culture and tradition, culture and creativity of the present, culture and the elaboration of the aesthetic, which may capture and nurture the cultural narrative of creativity and beauty and may in fact be the critical psychological view of how the glue of social solidarity promotes creativity. The boundaries of this discourse are controversial.

Sensitive matters of sexual regulation which may differ widely may be justified by culture and yet here the culture of tradition may not be compatible with the culture and creativity of the present or the future in human rights terms. For example, female genital mutilation justified by cultural tradition is not justified by either religion or by the science of human sexuality. Human rights thus provide a process by which these boundaries may be appropriately protected and expanded according to the normative challenges of human dignity. The current discourse often suggests that universality trumps cultural relativity or vice versa. This is not necessarily helpful unless one sees these ideas as only the starting point for value clarification and application from a human rights perspective.

11. *The status and value of the eco-system:* Today, we recognize a complex right to a viable eco-system on what theorists have seen as Spaceship Earth. The values embedded in the protection and promotion of a healthy eco-system, are, like many other values, issues of complex interdependence and interdetermination. However, implicit at least, in the concern for the integrity of the eco-system is clearly the notion that there are no human rights if there is no environment in which human beings can survive and possibly even improve the human prospect. But this insight suggests an even higher level of moral consciousness in the sense that the eco-system (with its plant life and animals, wild and domesticated) is part of a complex cycle, in which human beings are both custodians and also utterly dependent as individuals and as society. This means that we now see in nature not something irresponsibly exploited and destroyed but central to our identity as a sentient species.

For all the vaunted technology of human progress and human egotism, no one has seen a dog, a cat or a rat or indeed the most elemental of recognizable life forms outside of this

lonely and unremarkable planet called Earth. Thus, as humanity, we now look at life even in its most humble forms as not only indispensable to the interconnected chain of life on this planet but we see in it something new and utterly connected to the very consciousness of being human and being alive. In short, we know that our dogs identify with us. We may now know those ordinary pets in terms of how they and all other living forms have shaped our identity both psychologically and physiologically.

“Scientific leadership must be more articulate in the defense of the values that sustain a creative, dynamic and responsible scientific culture as an indispensable foundation for an improved world order based on human rights and human dignity.”

This paper has sought to clarify the salience of the difficult concept of technological and scientific consciousness, the importance of cultivating that consciousness not only in creative ways but in ways that are morally and ethically compelling. This means that consciousness should be alert to the dynamics of positive and negative sentiment in the shaping of the technological paradigm of the future. Even more importantly, it is crucial for scientific consciousness to self-regulate itself by being better informed about the values it seeks to promote and defend. Successful self-regulation of science avoids the danger of control and regulation by forces completely ignorant of the implications of science and technology. This means that scientific leadership must be more articulate in the defense of the values that sustain a creative, dynamic and responsible scientific culture as an indispensable foundation for an improved world order based on human rights and human dignity.*

Authors Contact Information

Winston P. Nagan – Email: nagan@law.ufl.edu

Samantha R. Manausa – Email: smanausa13@ufl.edu

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* The following essays explore important dimensions of New Economic Theory based on the salience of human and social capital: *Social Democratic Constitutionalism, New Economic Theory, and the Dangers of Neoliberalism’s Attacks on Rational Government Regulation* by Winston P. Nagan and Craig Hammer; *Economy and Society: Strategies for a More Equal Distribution of Societal Power* by Erich Hoedl; *Transforming Education for a Transition into Human-centered Economy and Post-normal Times* by Elif Cepni. See www.cadmjournal.org

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On the Monetarized and Non-monetarized Contributions to National Wealth

Marta Nešković

Doctoral Student of Ethnology & Anthropology, University of Belgrade, Serbia;
Junior Fellow, World Academy of Art & Science

Nebojša Nešković

Secretary General, World Academy of Art & Science

Abstract

We consider here the necessity of redefining the concept of economic value and the system of measuring the contributions to national wealth, to be included in a new paradigm in economics, whose application should guarantee constant improvement of human well-being. Such a paradigm should be based on an adequate cultural value system. We begin with a brief description of the traditional concept of value, in which the price of a good is determined by the equilibrium between its supply and demand resulting from an unimpeded exchange. Then, the concept of value that should be the basis for the future system necessary for measuring contributions to wealth is introduced. In this concept, the value of a commodity should comprise all the costs that appear during its entire lifetime as well as a margin of profit, and the resulting value ought to be compared with the value corresponding to the utility coming out of its consumption. The corresponding prices are called the total production price and the utilization price, respectively. This comparison should lead to the proper price of the commodity, to be determined using the tools of economic anthropology. This concept of value is nondeterministic. We further discuss the various forms of capital, which are physical, biological, human, social, manufactured and financial. We assume that capital as a whole cannot behave as a simple sum of its forms, and propose that the evolution of capital is modeled as the evolution of a complex system. Application of this approach may show that capital exhibits novel properties, which cannot be explained via the properties of its forms. The central part of the paper is devoted to clarifying the wrong assumption that each monetarized activity positively contributes to human welfare and security. It is explained that there are many such activities whose contributions to wealth are negative. Besides, there are numerous non-monetarized activities that substantially contribute to improving human well-being. We emphasize and illustrate the fact that the non-monetarized sector is a rich source and breeding ground for future progress. In the final part of the paper, we outline that the future system of measuring contributions to wealth should consist of three components—measuring the flow of all monetarized activities, the flow of all non-monetarized activities, and the resulting stocks of all forms of capital. Each component should include a set of indicators. The first component is well-known, but the comprised calculation should include

the proper prices of commodities. The second and third components ought to be developed. The results obtained in measuring the value of the whole stock of capital would indicate whether the society is on the path toward sustainable development or not.

1. Introduction

This study is based on the conviction that a new economic theory, to be developed with the objective of increasing welfare and security for all, should be a crucial element of the new paradigm of human development [1, 2]. Such a theory should include a redefinition of the concept of value in economics, and the way of measuring contributions to economic growth.

In part 2 of the paper, we shall briefly introduce the notions of personal and cultural values. These notions are important for understanding the necessity of establishing a cultural value system as a solid foundation for constant generation of welfare and provision of security for all members of society. Part 3 is devoted to the traditional concept of economic value, in which the price of a good is determined by the equilibrium between its supply and demand in an open and competitive market, and to the concept of value that should be the basis for the future system necessary for measuring contributions to national wealth. The latter concept includes valuing the utility of a commodity coming out of its consumption.

The subject of part 4 is capital in the widest sense and its forms. We shall classify capital in six forms, these being physical, biological, human, social, manufactured and financial capitals, and propose to analyze its evolution as the evolution of a complex system. In part 5, we shall describe the essence of a contemporary economy, which has emerged instead of an industrial economy. This is the service economy, in which service activities are fully integrated with production activities.

Part 6 of the paper concentrates on the wrong assumption that each economic growth positively contributes to human well-being. Namely, there are numerous economic activities that deplete or destroy rather than increase human welfare and security. The monetarized values of such activities should be treated as negative. In part 7, we shall focus on non-monetarized activities, in which no economic exchange occurs, but whose contributions are of substantial importance for improving human well-being. We shall illustrate the great potential of the non-monetarized sector with two concrete examples. Part 8 is devoted to measurements of all contributions to national wealth. We shall present a proposal of the structure of this system, enabling one to measure the flow of all monetarized and non-monetarized activities, and the resulting stocks of all forms of capital.

2. Cultural Values

Personal values are principles accepted by a person regarding his or her survival, accomplishments and fulfillments [3]. They provide an internal reference for what is good, useful, beautiful, desirable and important. Values have a major influence on attitudes and behavior of people, and serve as broad guidelines in solving problems they encounter. They determine our relationships with the social and natural environments. There are ethical, aesthetic, religious, ideological, political, economic and social and personal values [3]. They

are studied in philosophy, psychology, anthropology, theology, political science, economics and sociology. Some values are physiologically determined, and are considered objective, such as a desire to avoid physical pain. Other values are connected to beliefs, and are taken as subjective. A personal value system is a set of consistent personal values [3].

A cultural group is a social entity having common personal values, which are designated as cultural values [4]. They are established in a process of communication of various personal values within the group. A cultural value system represents the foundation of customs and norms of behavior, which lead to laws and other rules of conduct for all members of the group [4]. It permits collective understanding of right, good, beauty and harmony, and, thus, enables the establishment of common goals and expectations of the group.

Personal values can converge with cultural values or diverge from them [4]. Therefore, cultural values represent an external reference against which personal values are measured. That reference ensures integrity of the cultural group.

3. Economic Value

In classical economics according to David Ricardo, the value of a good equals the amount of labor needed to produce it [5]. However, according to Karl Marx, the notion of value is meaningless without an act of exchange, *i.e.*, without a market. In that tradition, Keen [6] wrote that value was the innate worth of the good, determining the ratio at which it is exchanged. That corresponded to the classical concept of cost-determined price, called the production price by Marx. Adam Smith based his concept of economic value on the prices of goods determined by the equilibrium between their supply and demand resulting from an unimpeded exchange [7]. For him, that was the best way of showing producers where to invest and what to produce, and of ensuring the lowest possible prices of goods for consumers.

In today's mainstream economics, Smith's concept of value is unquestioned [7]. Generally, the value of a commodity, *i.e.*, a good or service that is exchanged, is expressed in units of currency. Therefore, it is usually interpreted as the amount of money a buyer is willing to pay for the commodity, *i.e.*, as the price of the commodity. This is a deterministic view, in which the existing uncertainty in valuing a commodity is explained by the insufficiently accurate determination of the price, a deficiency that can be minimized and even eliminated [7-9].

However, during the past century, a non-deterministic view in economics has been founded [9, 10]. It has been realized that the certainty in valuation occurs very rarely. The value of a commodity should comprise all the costs that appear during its entire lifetime, *i.e.*, prior to, during and after manufacturing. The resulting value should be compared with the value that is a measure of the utility coming out of the commodity's consumption, *i.e.*, the return on investment. The corresponding prices can be called the total production price and the utilization price, respectively. The former price should also include a margin of profit. This comparison should lead to the price of the commodity to be referred to as its proper price, which remains to be determined. The time prior to the manufacturing process is necessary for research and development, the costs of which often represent a major part of

the price. On the other hand, during the time after the sale, the costs of commodity liabilities, maintenance and disposal occur and may significantly contribute to the price. The facts that the measurement is performed over an extended period of time, including the utilization time, that the utilization value is also measured, and that the results of the two measurements are compared with each other imply that a certain degree of uncertainty exists [9, 10]. This makes the valuation process probabilistic, *i.e.*, non-deterministic. However, one should look at this uncertainty as a very large area of opportunity for demonstrating imagination and creativity in order to improve human quality of life [10].

“In measuring economic activities, one should also try to address the questions of ethics and social justice.”

According to Appadurai [11], in determining the value of a commodity, one must take into account all the corresponding historical, cultural and political facts. The historical facts should help one understand the whole process of creation of the commodity. The cultural meanings and expressions associated with the commodity in the social context in question and possibly beyond it should be explained by the corresponding cultural framework. The political facts should enable one to fully comprehend the political background established by the interests of different stakeholders involved in the commodity’s supply and demand, resulting in its exchange, and the instabilities that can emerge from this background.

Kopytoff [12, 13] wrote that a commodity is a culturally constructed good exchangeable through certain structured terms. In order to illustrate different cultural constructions, he gave the example of human blood that is exchangeable in Europe as a gift while sold at a certain price in the US.

In measuring economic activities, one should also try to address the questions of ethics and social justice. Related to that, it is worth mentioning Ruskin’s ethical approach to the concept of value in economics [14]. His central point in the book *Unto This Last* was: “It is impossible to conclude of any given mass of acquired wealth, merely by the fact of its existence, whether it signifies good or evil to the nation in the midst of which it exists. Its real value depends on the moral sign attached to it, just as strictly as that of a mathematical quantity depends on the algebraic sign attached to it. Any given accumulation of commercial wealth may be indicative, on the one hand, of faithful industries, progressive energies, and productive ingenuities; or, on the other, it may be indicative of mortal luxury, merciless tyranny, and ruinous chicanery”. Let us note that Gandhi was very much impressed with this book. He said: “I determined to change my life in accordance with the ideals of the book” [15].

Our opinion is that the future way of measuring economic growth should be based on the above described non-deterministic concept of value combined with the concept of value accepted in economic anthropology [16, 17]. The latter concept ought to be used to determine the proper prices of commodities. In economic anthropology, the ways of production,

distribution and consumption of various objects in different social settings as well as their cultural meanings and expressions are studied. The objects include material things, non-material things such as ideas, and things that people do for each other, such as services. The social settings range from small units, like households, through intermediate ones, like companies and villages, to large ones, like regional markets and global advertising systems. Economic anthropologists approach these processes in two main ways [16]. The former approach is social. The questions are: which people make, give, take and consume which objects, and in which situations do they do this? The latter approach is cultural. The questions are: how do different people understand these activities, the objects included, and the people involved? In this holistic approach to understanding all manners of socio-cultural exchange, both monetary and non-monetary aspects of production, distribution and consumption are taken into account. Some economic anthropologists have emphasized individual and collective moralities that should pervade all the relations involved in these activities [17].

“A shift from dependence on manufactured capital as the principal source of economic growth to dependence on human and social capital, capable of unlimited renewal and augmentation, has taken place.”

4. Forms of Capital

The Earth is endowed with physical capital (air, water, soil and minerals) and biological capital (plants and animals), which can be jointly called natural capital [7, 10, 18]. In order to enhance their well-being, people have added to these forms of capital human capital (health, talents, motivation, knowledge, skills, experience, competence *etc.*), social capital (trust, cooperation, communities, schools, enterprises, citizens' groups, governments *etc.*), manufactured capital (technologies, tools, machinery, buildings, vehicles *etc.*), and financial capital (all forms of money) [7, 10, 19-21]. Human, social and manufactured capitals can be jointly called cultural capital. The different forms of capital continuously interact with each other. In these interactions, some forms of capital are enhanced while others are depleted. This process must be taken into account in analyzing the ways of change of the value of all forms of capital, *i.e.*, the level of human welfare and security.

The interactions of the forms of capital are complex, and, consequently, one cannot expect capital as a whole to behave as a simple sum of its forms. Therefore, our opinion is that the evolution of capital should be analyzed as the evolution of a complex system [22]. This means that the process can be conceived as the evolution of a network in which the nodes represent different forms of capital and the links, their interactions. Applications of this approach, in which the focus is on the collective behavior rather than on the individual behavior, have shown that a system can exhibit non-linear properties. In this case, this means that a change in one form of capital may produce a non-proportional change of capital as a whole, *i.e.*, the resulting change in the whole capital can be significantly greater or smaller

than the proportional change. Moreover, a very small change of one form of capital might induce a dramatically large change of capital as a whole. For example, a very small investment in research, in order to enlarge human capital, may result in a very large increase in the whole capital. Such a behavior is referred to as chaotic. Capital as a whole, as a complex system, might exhibit other novel properties, which cannot be explained via the properties of the particular forms of capital [22].

The environmental movement that became increasingly active after the publication of *The Limits to Growth* [23], a report to the Club of Rome, reminded us of the obvious fact that our economy is founded on the existing natural capital. Accumulation of monetary capital alone cannot ensure sustained economic growth and inclusive development [7-10]. On the other hand, this form of capital can cause serious problems like depletion and destruction of resources if growth does not occur in a way that preserves and enhances natural capital. In fact, the report announced the limits of the industrial model of growth, and showed that a significant change in structuring and valuing economic activities is needed [7-10, 13]. Over the past half century, the industrial model has progressively changed to the knowledge-based model of growth, *i.e.*, the economy has evolved from industry to service. This means that a shift from dependence on manufactured capital as the principal source of economic growth to dependence on human and social capital, capable of unlimited renewal and augmentation, has taken place [7-10, 13].

5. Service Economy

The greatest challenge of the XIX century was increasing supply through more efficient production [7]. However, the greatest challenge of the XX century was developing markets capable of consuming the results of increased production.

As the production process increased in complexity and sophistication, the knowledge and expertise required for its components, *i.e.*, for research, development, designing, manufacturing, testing, maintenance and disposal as well as for organization and management, increased enormously [7-10]. Few of these activities were directly connected to manufacturing, but all of them became essential services without which manufacturing could not be undertaken and sustained. Thus, today, a large majority of employees in industrial enterprises are engaged in performing services. In parallel and connected to that, a huge infrastructure of service-related organizations have emerged, specialized in numerous areas of expertise to support expanding industry. What we have today is the service economy, an economy in which service activities are integrated into production activities rather than emerging as a tertiary sector that is divorced from agriculture and manufacturing. Services now account for more than 60% of the global output [7-10].

Before and during the industrial revolution, only food, shelter and clothing were considered essential human needs [7]. Today, that is not the case—services related to healthcare, education, communication, recreation, entertainment, tourism *etc.* have become standard human needs [7-10, 24].

6. Positive and Negative Monetized Values

Money of various types has existed for thousands of years. However, until the beginning of the industrial revolution, only a small part of economic activities involved monetary transactions [7]. Monetization of the economy was an essential characteristic of that revolution. Money has been acting as a catalytic medium to facilitate economic exchange. Today, money appears in the forms of coins, bank notes, checks, deposit receipts *etc.* Its value is based on the public acceptance of the whole social organization created to issue, accept, store and regulate it [10]. The value of money is standardized to enable one to measure the values of all commodities on a common scale.

Until the end of the XVIII century, banks had been mainly engaged in providing commercial loans for trading activities [7]. Little recognition had been given to money as a means of stimulating production. But the high costs of tools and machinery required for industrialization transformed banking into a highly effective social organization for collecting public savings and using them for investment in industry. As industry became an increasingly important source of national wealth and military power, the power of aristocracy and church gave way to the power of money [7]. The monetization of economy led to the monetization of society.

As has been said in part 3 of the paper, for contemporary mainstream economists, the price of a commodity, as its monetized value, is a clear and easily quantifiable measure of the economic activity involved [7-10]. This is a positive monetized value, meaning that the activity involved positively contributes to national wealth. However, there are numerous activities that decrease rather than increase human welfare and security. The monetized value of such an activity is negative, *i.e.*, the activity negatively contributes to wealth creation. It is well known that depletion of non-renewable natural resources and pollution of the environment may significantly negate the beneficial effects of some activities. For instance, the rising costs of mining for oil from deeper layers below the earth's surface increase the price of oil, resulting in a greater contribution to wealth [10]. However, because of the excessive exploitation of this natural resource, resulting in a reduction in the stock of the resource, a negative value is added to wealth for future consumption. Connected to this, one should recognize the activities that are undertaken to compensate the previous negative contributions to wealth.

It should be mentioned that the concept of negative value added was introduced in the context of measuring production changes [25, 26]. The concept can be briefly described as follows. If in an industry within a small open economy established under the protection of a tariff system both final products and intermediary inputs are evaluated at their respective world prices, a negative value added may appear. In such a case, the value of the intermediate inputs at their world prices exceeds the value of the final products at their world prices. This difference is attributed to the inefficiency of domestic production. It is clear that this concept of negative value added differs from the one used in this paper.

As a result of acknowledging the possibility of depletion and destruction of natural capital, the concept of sustainable development was introduced. It was based on the requirement

of best use and preservation of both natural and cultural capital. In September 2015, the UN General Assembly approved a resolution in which 17 Sustainable Development Goals, including 169 targets, to be reached by 2030, were defined [27]. The Goals are: no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reduced inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life and land, peace, justice and strong institutions, and partnerships for the goals. However, there are opinions that by attempting to cover all that is good and desirable in society, the chosen targets have ended up becoming vague and hardly reachable [28].

“The monetary way of measuring economic growth fails to reflect enormous improvements in human quality of life because it ignores activities that are carried out without monetary transactions.”

It has been a serious mistake to assume that every form of economic growth positively contributes to human welfare and security [7-10]. The monetary way of measuring economic growth, based on the yearly gross domestic product (GDP) per capita, often fails to recognize the increasing inequalities between various sections of the population and the decreasing living standards of a large number of them. This has been a consequence of a disproportional contribution of the financial sector to fast growth. In his book *Capital in the Twenty-First Century* [29], Piketty shows that, over time, financial capital has grown faster than economy, and that income from this form of capital has been much less evenly distributed than income from labor [30]. This has led to a strong rise in income inequality. He shows that rising income inequality is not a necessary byproduct of prosperity, and that financial capital does not deserve protected status because it brings economic growth.

On the other hand, the monetary way of measuring economic growth fails to reflect enormous improvements in human quality of life because it ignores activities that are carried out without monetary transactions [7-10].

7. Non-monetarized Activities

A substantial part of activities in a society are performed outside the monetarized sector [7-10]. Non-monetarized activities are those in which no economic exchange occurs, *i.e.*, to which no economic value can be assigned, such as self-production, unpaid housework, self-education, recreation, leisure activities and citizen’s group activities. Most classical economists devoted considerable portions of their studies to the general concepts of activity and value, which encompassed non-monetarized activities and values as well [7-10]. But the concept of value Smith defined led in practice to neglecting the non-monetarized contributions to national wealth. Since then, economists have continued to ignore these contributions.

While a focus on monetarized activities has proven to be very useful for understanding production and exchange of commodities, it cannot help one obtain a clear and comprehensive

picture of all the contributions to national wealth [7-10]. In order to obtain such a picture, a broader concept of activity is needed, which will take into account the complex interactions of the monetized and non-monetized sectors. This means that the concept of value should be expanded to enable one to measure the contributions of non-monetized activities to wealth. For instance, let us imagine the impact of stopping all individual assistance provided within families in order to understand how important these activities are for our quality of life [10]. If these activities were performed by somebody else as paid services, the contributions of monetized activities would increase enormously, giving the impression of a huge addition to wealth.

“The non-monetized sector is a rich source and breeding ground for new opportunities.”

As a rule, new social potential first appears in the non-monetized sector, and then in the monetized sector [10]. In this sense, the non-monetized sector is a rich source and breeding ground for new opportunities, *i.e.*, for future progress. Education is an example [10]. From an informal arrangement of transferring knowledge and skills from one person to another many millennia ago, via institutional public teaching and learning in the XIX century, education has become a global industry, comprising all types and levels of acquiring knowledge and skills.

Another example of the great potential of the non-monetized sector is the explosive growth of the microfinance industry in recent decades, serving a large number of people, predominantly women [10, 31]. This industry has shown positive results in reducing poverty in developing countries. The initial idea was to provide microloans to low-income households, which did not qualify for regular borrowing and insurance services. These loans provide the poor the opportunity for self-employment and investment in small sustainable business. The interest rates are determined so, to cover the operational costs and are most often at the market level. The return rates are reportedly very high, coming up to more than 90%. In 2006, Muhammad Yunus and the Grameen Bank shared the Nobel Peace Prize for their contribution to developing the industry.

Let us also mention the work of Elinor Ostrom [32, 33], for which she was awarded the Nobel Prize in Economic Sciences in 2009. Collecting data from a number of different fieldworks and synthesizing the academic work that had been undertaken in the area of common-pool resources, she worked on the relationship between a self-organization of individuals investing in such resources and an institutional government of the resources. Typical common-pool resources are forests, grazing lands, underwater basins, irrigation systems and fisheries. Her aim was to identify the principles that led to success or failure in using those common goods. The research showed that self-organization of individuals could produce successful protection of the common goods and sustainable development solutions over long periods. She analyzed in detail the problem of preservation of common goods with the example of water industry, and developed a successful approach to dealing with the combined non-monetized and monetized activities related to consumption of common goods.

8. Measuring All Contributions to National Wealth

The basic deficiencies of the monetary way of measuring economic growth are the assumptions that each monetarized activity adds to national wealth and that these additions solely determine wealth [7-10]. The value added to wealth is taken to be equivalent to the sum of prices of all commodities, *i.e.*, to the flow of all monetarized activities, which is commonly represented by GDP. The problem arises from the fact that these activities include recovering from natural disasters, remediation for pollution *etc.*, which are undertaken to make up for the contributions that should be deducted from wealth. Furthermore, in this system, the contributions of non-monetarized activities to wealth, which may be greater than the contributions of monetarized activities, are neglected.

The monetary way of measuring economic growth is the same as checking the performance of a business without considering its assets and liabilities [10]. In order to obtain a clear picture of this performance, one must analyze the flow of activity appearing in the profit and loss statement, and changes in the assets and liabilities shown in the balance sheet. The true contributions to national wealth over a longer time can be determined only if changes in the resulting stocks of all forms of capital are analyzed.

The future system of measuring contributions to national wealth should include three components. The first component ought to provide measurement of the flow of all monetarized activities, which has been well-defined [10]. It includes a set of economic indicators [34, 35]. However, the calculation should include the proper prices of the commodities, which are determined through the comparison of their total production prices and utilization prices. The second component should enable one to measure the flow of all non-monetarized activities, which ought to be developed [10]. The quantification of the contributions of these activities to wealth ought to be achieved by a set of non-economic indicators [36, 37]. Finally, the third component should provide measurement of the resulting stocks of all forms of capital, which should be developed too [10]. It should include a set of capital indicators [38-40]. The value of the whole capital should constantly increase, *i.e.*, human quality of life should constantly improve. This quest is based on the experience and belief that human capacity to generate wealth and provide security can constantly increase—but only if an adequate cultural value system is established, in which economic development is focused on people rather than things [10]. Thus, the results obtained in measuring the value of the whole stock of capital would indicate whether the economic growth is truly positive, *i.e.*, whether the society is on the path toward sustainable development. These results should be correlated with the results of measurements of all monetarized activities, whose contributions to wealth can be positive and negative, and of all non-monetarized activities.

Economic indicators enable one to analyze current monetarized activities and predict future activities. There are three types of these indicators—the leading, coincident and lagging indicators [34, 35]. The leading indicators usually change before the economy as a whole changes. Therefore, they are useful in making short-term (six to nine months) economic predictions. The coincident indicators change at approximately the same time as the whole economy changes. Hence, they provide information about the current state of the economy. GDP is one of these indicators. The lagging indicators usually change after the economy as a whole changes. Typically, the lag is a few quarters of a year.

Non-economic indicators should be defined to enable us to identify non-monetized activities, such as self-production, unpaid housework, unpaid daycare, self-education, recreation, visiting theatres, attending art exhibitions, citizens' group activities *etc.*, and measure their contributions to improving our well-being [36, 37].

“The way of measuring economic growth should take into account both the positive and negative contributions to wealth.”

Natural capital indicators ought to be defined to provide relevant information about fresh air, clean water, fertile soil, the available minerals *etc.* as well as about the state of the existing plants and animals [38]. Human capital indicators should tell us in a concise way about human health, existing talents and motivation, developed skills, acquired knowledge, experience and competence *etc.* [39, 40]. Social capital indicators should provide concise information about the state of trust, cooperation, communities, schools, enterprises, citizens' groups, governments *etc.* within the society [40]. Manufactured capital indicators should provide summarized information about developed technologies, manufactured tools, machinery and vehicles, erected buildings *etc.* Finally, financial capital indicators should tell us in short about the state of all forms of money.

The transition to the future way of measuring economic growth requires the acceptance of certain goals and expectations, which will change with time. These goals and expectations are determined by the cultural values, *i.e.*, the common personal values, of the society. In this system, every person should be able to satisfy not only his or her necessity of survival but also the modern necessities of welfare and security.

In the end, we would like to mention and illustrate very briefly the idea of measuring the value of the world's ecological system services, which are critical for functioning of life on the Earth, *i.e.*, for ensuring human well-being, in addition to the above discussed measurement of monetized and non-monetized activities. This kind of measurement is important for understanding the whole picture of sustainable development of mankind. Costanza *et al.* [41] estimated that the average value of 17 services of the entire biosphere was USD 33 trillion per year. This amount should be compared with the global gross national product per year, which was USD 18 trillion the previous year.

9. Conclusions

We have considered here the concept of economic value that should be part of the new economic theory, to be developed with the aim to guarantee constant improvement of human well-being, as well as the corresponding future system of measuring contributions to national wealth.

The first conclusion of the study is that the value of a commodity should comprise all the costs that appear prior to, during and after its manufacturing as well as a margin of profit [9, 10]. The resulting value should be compared with the value as a measure of the utility coming

out of the commodity's consumption. The corresponding prices are called the total production price and the utilization price, respectively. The result of this comparison should lead to the proper price of the commodity, which ought to be determined using the tools of economic anthropology. The facts that the former measurement is performed over time, including the utilization time, that in the latter measurement the utilization value is determined, and that the two results obtained are compared with each other using an anthropological approach, make the valuation non-deterministic.

As has been said in part 8 of the paper, the basic flaws of the monetary way of measuring economic growth are the assumptions that each monetarized activity adds positively to national wealth and that only these contributions determine wealth. However, these activities include the ones whose contributions to wealth are negative as well as the activities undertaken to compensate for the previous negative contributions to wealth. Also, the contributions of non-monetarized activities to wealth are neglected. Thus, the second conclusion is that the indicator for measuring economic growth should take into account both the positive and negative contributions to wealth [7-10].

The third conclusion is that the future system of measuring contributions to national wealth should be made of three components—for measuring the flow of all monetarized activities, the flow of all non-monetarized activities, and the resulting stocks of all forms of capital. Each component should include a set of indicators. The first component has been well-defined. However, the corresponding calculation should include the proper prices of the commodities. The second and third components should be developed. A special research task would be to properly quantify the contributions of non-monetarized activities to wealth and determine the resulting stocks of all forms of capital, *i.e.*, to define non-monetary and capital indicators. We think that the evolution of capital should be analyzed as the evolution of a complex system. However, understanding the interactions of different forms of capital and the behavior of capital as a whole requires a meticulous research effort. We think that successful results along this line would definitely be a valuable contribution to a new economic theory, and, thus, to defining the path toward sustainable development of mankind [1, 2].

Authors Contact Information

Marta Nešković – Email: martaneskovic@gmail.com

Nebojša Nešković – Email: nneskovic49@gmail.com

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Unorthodox Thoughts on the Economic Crisis and the Dictum of Protagoras*

Gerald Gutenschwager

Emeritus Professor, School of Architecture, Washington University, St. Louis, USA;
Emeritus Fellow, World Academy of Art & Science

Abstract

The current economic crisis can be explained but we must remember that the crisis is the product of human behavior, both theoretical and practical, and not the product of some force of nature or mathematical law. An economic system is based upon production and consumption. A crisis arises whenever there is an imbalance between these two activities. Until the industrial revolution there was not sufficient production to meet the consumption needs of the world's population. After years of science and technology there is now a surplus of goods and services in advanced countries related to the ability of consumers to purchase them. Therefore, a huge effort has been made since the end of the 19th century to increase consumption, not by distributing wealth more evenly but by extending credit through various means, while also "teaching" people that unless they consume more they are "inadequate" human beings. The uneven distribution of wealth has meant that there are fewer opportunities for investment in production for the excessive wealth of the few, so that it is then directed to speculation of every kind. There is disagreement among economists about whether and how democratically elected governments should intervene to redress this imbalance between production and consumption. Thus, capital sits idly in banks while a lack of income plagues a growing percentage of the population, leading to a social crisis and loss of belief in the ability of the economic system to work properly. All this because we have forgotten Protagoras' dictum that the human being should be the measure of all things.

1. Production and Consumption in Economic Systems

An economic system is founded upon two basic activities: **production** and **consumption**. Between those two activities lies a system of distribution of goods and services that are produced for the consumers who require them. In the marketplace, goods and services are exchanged and information is collected on the desires of consumers in relation to those goods and services that are produced. A true democracy would be an ideal system for collecting such information, but nothing like that has been experienced for the past 2,500 years, and certainly not in our current mass society. In any case, there cannot be consumption without production, nor production without consumption; the two sides of the system are utterly dependent upon each other. Thus, most economic crises are directly related to some kind of **imbalance** between these essential activities, notwithstanding any problems in the

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intermediate activities supporting this system, such as those in trade, transportation, supply and demand, the financial sector, etc.

During most of the history of humankind, at least up until the 19th century in Europe and North America, the imbalance resulted from a shortfall in production, that is, from **underproduction**. Basic needs for food, clothing and shelter were unfulfilled for most people (to say nothing of their higher order needs for security, love and affiliation, esteem, etc.). It is for this reason that increased production is an obsession for most of the scientists and professionals who are concerned about the economy, irrespective of any other ideological proclivities they might have. Hence the emphasis on the idea of ‘development’, despite the obvious inability of nature to support the endless pollution that such development entails, without ultimately threatening the very existence of humans on planet earth.

Based on the outstanding ability of capitalism to accumulate, and ultimately **over-accumulate** wealth, and with that wealth to continuously increase production, we can observe that, by the end of the 19th century and throughout the 20th century and beyond, **overproduction** became a chronic systemic problem in the developed countries. It is in the nature of capital as it increases and accumulates, to be reinvested in those very activities that were profitable in the first place, irrespective of whether the market can absorb this increased production. Thus, the system has been trapped in this structural dilemma for a very long time now. However, and in part because of the nature of profit-making via investment, the problem of overproduction has usually been interpreted as a problem of **underconsumption**, and endless efforts have been taken to increase consumption since the early 20th century in America and later in Europe and taking place now throughout the world. These efforts to increase consumption have ranged from the obvious use of advertising and marketing (and even architecture) from the early 20th century on, to the more recent emphasis on installment buying, credit cards and consumer loans, all in an effort to redress the imbalance between production and consumption. Consumption, however, requires money in the hands of the consumers, that is, an adequate income to allow purchase of the goods that are being produced. Thus, overall market demand is a product of population plus income, or rather, times income, and thus the effort over the past century to increase the ability and/or especially the desire to consume.

2. Gambling as Investment

Another response to the problem of overproduction-underconsumption is to direct over-accumulated capital away from the productive sector or ‘real economy’ (i.e., the production of goods and services for consumption), into the financial sector, that is, into the stock market, banks, speculative real estate investments, and other high-risk investments during periods of overproduction (and over-accumulation). This flow was especially noticeable in the 1920s, leading up to the great crash of 1929, and as a more or less chronic tendency since 1980 in the advanced capitalist countries, as well as in rapidly developing economies of the lesser developed world.

The stock market is a giant casino where surplus capital is gambled, that is, where players invest in paper (and only indirectly in production, if and when that happens) with the hope

that, as in all casinos, the dice will land on their number—something which some players help to insure with ‘inside information’. Of course, economic theory claims that the stock market is a place where business can borrow money for investment, which is in part true, although it is also possible that large corporations may invest money from their own surpluses rather than, or in addition to capital raised in the stock market. In any case this does not alter the casino-like character of the stock market or the wide-ranging fluctuation of its prices as indications of overproduction (and over-accumulated capital) in the productive sector.

One would suppose that investments in banks would be less risky than those in the stock market because bank investments (i.e., in borrowers) are more closely examined. Experience with Savings and Loans Banks, with Hedge Funds, and more recently with subprime mortgages in the U.S.A. indicates that *when the over-accumulation of capital is great enough, the financial sector will support ever greater risks in order to find an outlet for surplus capital*. It can hardly be over-emphasized that such investments are not in any way productive; they contribute very little if anything to the massive human problems of hunger and inequality in the world, irrespective of the obvious progress in the satisfaction of material needs that has been experienced by the world’s minority who live in industrial countries.

3. There are no Autonomous Mechanisms in Society

Neoclassical economists believe that the production-consumption system is an autonomous mechanism that will automatically self-correct any imbalance that arises. They believe that, according to some version or other of ‘Say’s Law’, the income generated by workers in the production of goods and services will be sufficient for them to purchase those goods and services. Keynesian economists do not agree with this and believe that the government, through borrowing money when necessary, must play an active role in the economic system by employing un- and under-employed workers. These workers, with their enhanced income, would then be able to purchase goods and services, thus bringing the production-consumption system back into equilibrium. In other words, all of the efforts with advertising, marketing, credit systems, etc., have never been enough to increase consumption up to the point where it could redress the imbalance between production and consumption.

It was within this framework that Franklin D. Roosevelt implemented a Keynesian program with a good deal of success in the 1930s in the USA. This was true at least until the corporations began to voice a strong protest against government ‘intrusion’ into the private sector with its ‘unfair competition’. In addition, without the prospect of unemployment they found that workers would tend to lose their sense of insecurity and fear and begin to make further demands on their corporate employers. Thus, unemployment had fallen from 25% in 1932 when Roosevelt began his “New Deal” programs, to 12% in 1936, when a new congress elected with the ‘help’ of the corporations began to cut back on those welfare programs. The result was that by 1938 unemployment had once again risen to 18%. This is a clear indication that the accumulation of capital is also an accumulation of political power, which gives great importance to the term *political* economy, thereby emphasizing the political dimension of economic problems.

In the meantime, Hitler provided a solution to the economic problems in the USA, and in all the other crisis-ridden industrial countries in the West at that time, with an age-old, yet gruesome solution: WAR. Equally obscene, unfortunately, was the conclusion reached at the end of the war by the economic elite in US and to a greater or lesser extent in the other industrial countries. These elites used their political power to turn the Keynesian social welfare solution into a military (industrial) Keynesianism. Here governments seek to stimulate the economy by infusing capital into the system through subsidies to the production of **military armaments, military bases and other military related requirements**. One result of this is that such expenditures have absorbed a huge proportion of Western government budgets since that time. A further result is that military armaments, according to UN statistics, constitute the leading commodity traded in the world today. That these expenditures were also consciously used to oblige the former socialist countries to waste enormous amounts of their (more limited) resources on military expenditures in order to defend themselves simply provided an added incentive for these policies.

4. Neoliberalism and Keynesianism

Thus, the evolution of economic crises and the efforts to confront them have divided economists and made them embrace two approaches. The neoliberal approach (i.e., conservative), following the original neoclassical school, believes that the government should leave the free market to work through economic crises by itself and to face these crises with the least amount of governmental intervention (except for those companies “too big to fail”, of course). At most, the government might manipulate the cost of money by printing more or less of it or by adjusting interest rates, thus hopefully affecting the rate of investment in the private sector. This is the well-known monetarist approach. The Keynesians, on the other hand, believe that the government should involve itself actively in the economy through its fiscal policies, that is, by manipulating the tax rates and the government budget in order to reduce unemployment and increase the purchasing power of the population. However, government investments of the military Keynesian type, in spite of their being very profitable for private industry, cannot solve the problem of underconsumption (overproduction) in this way, simply because, among other things, the ‘high tech’ nature of this industry results in the replacement of workers (and their incomes) with technology.

Meanwhile, the over-accumulation of capital, a problem that could not be resolved internally in the developed countries, has encouraged capital to move to underdeveloped countries, following the earlier imperialist tradition of seeking cheaper food supplies and raw materials to lower the cost of production at home, and later to seek markets for the (over) produced goods that cannot be sold there. This movement of capital has contributed very little to the solution for the chronic problems of poverty and hunger in the Third World because, in order to maximize its profits, capital originating in the industrial countries is interested only in exploiting the cheap labor force and the environment, irrespective of any other restricted statistical indicators of development in these countries. Not that there is no economic growth in the Third World, but it comes very slowly in most of these countries, and with great cost to the environment and to the people. This is similar to the case in Europe and

North America in the 19th and early 20th centuries when capital was accumulated there in the same spirit, though with less evolved and therefore less destructive technologies.

“Now there are thousands of students and faculty members all over the world who are participating in the movement for a pluralistic, ‘post-autistic’ economic science.”

5. The Need for a New Approach

The inability of neoclassical economics, either with monetarism, Keynesianism or, ultimately through imperialism, to solve the internal crisis of overproduction and over-accumulation in the First World, and the adverse, if not tragic effects of this inability on the Third World, poses a serious ethical and theoretical dilemma. This provides yet another reason for Marxist economists to believe that none of these conventional approaches can save the capitalist system. They believe, indeed, that the indiscriminate application of positivist (i.e., natural science) epistemologies to society, as if it were the same as nature, would inevitably obstruct the understanding of the true nature of the capitalist system. With a structural analysis of the economy that follows the circuits of investment and profit-making of capital along with the unresolved problems that it faces at each turn, Marxist economists believe that capitalism has offered whatever it can to humanity and that it should now probably be eclipsed. But it is not only Marxists who are unsatisfied with neoclassical economic theory. There is now a substantial movement for a new heterodox approach to economic theory, a movement which began with graduate students at the universities in France. Now there are thousands of students *and faculty members* all over the world who are participating in the movement for a pluralistic, ‘post-autistic’ economic science. The purpose of the movement is to bring economists closer to reality and to the real problems of society and of human beings, problems which cannot be addressed with the sterile orthodox and mathematical approach of neoclassical economics.

6. Social Crisis

Further support for this new perspective can also be found in the fact that there is also a **social crisis**, which, of course, does not even appear in the cognitive paradigm of neoclassical economics, and which derives precisely from its theoretical-ideological emphasis on greed and fear as the only (implied) human values. This, along with the efforts to increase consumption, especially through advertising, has resulted in profound changes in the social psychology of human beings throughout the world. The main goal of the emphasis on greed and fear as moral values, and on advertising as the means to increase consumption, is to cause people to feel *inadequate* (since they are not wealthy enough and are unable to purchase and own the advertised goods and services). Thus, people in the developed countries *are not happy*. This can be seen not only in the statistics on social pathology, i.e., on crime, on the abuse, even murder of women, on divorce, alcoholism, drug abuse, depression, etc., but also from research that studies (un) happiness directly.

Here, of course, we are looking at a profound and far reaching philosophical problem, a problem that has preoccupied thinkers for many years. One thing we can observe in this respect is that when the ancient Greeks were rediscovered during the Renaissance, there was not much interest in the *philosophical* framework of science. That framework had made use of the theater, public discussion, education, etc., to emphasize the importance of ethics and emotions as an important aspect of human existence. ***Science was, for the Greeks, a part of philosophy.*** In the Middle Ages, religion had replaced ancient philosophy (and science), and from the moment that science replaced religion as knowledge (mainly about nature, but not restricted to it), the only remaining source of moral principles was severely restricted. Neither the positive sciences (natural and social), nor capitalism contain(s) any moral principles (except as mentioned above).

“The environmental crisis is in reality a social crisis.”

“The theoretical framework and vocabulary of neoclassical economics are inadequate for the task of understanding the scale of the global socioeconomic crisis.”

7. A Moral Vacuum

Thus, today we find ourselves living in a moral vacuum. For economists, human beings are egocentric, amoral, rational mechanisms with unlimited time and information to maximize their satisfaction (utility), a satisfaction that is defined in terms of money, i.e., greed, as referred to above. Thus, in the developed countries we are experiencing not only a chronic economic crisis (of over-production and over-accumulation), but also a moral and emotional crisis that derives from the entire socio-philosophical framework that has been imposed upon us by the positivist philosophy, especially neoclassical economics.

8. Closed and Open Systems

Another aspect of the social crisis is the abuse of nature. Nature, of course, does not recognize the idea of ‘abuse’. Whatever humans do, nature (with its laws) will always find a new equilibrium. The changes, the abuse that humans are forcing upon nature, will only bring harm to fellow human beings. Thus, the environmental crisis is in reality a social crisis, and it is probably better to name it as such in order to avoid deceiving ourselves with an impersonal term. For neoclassical economics (and the corporations that are inspired and legitimated by this science), nature is an exogenous factor. Only when it appears as a direct monetary cost for the corporation will it appear as an economic calculation. Environmentalists often say that for many economists and most companies, the environment is but a ‘faucet and a toilet’: they simply open the faucet and take out the raw materials, and then throw the waste materials down the ‘toilet’. Where these materials come from and where the waste goes they neither know nor care.

Here neoclassical economists make two axiomatic errors: on the one hand, they presuppose that society is a *closed* system, i.e., that the deterministic relations among the parts will hold for ages (so that they can apply their mathematical tools), when, in fact, society is an *open* system where any relations or regularities which appear today can change tomorrow, in part because of the applications of social science knowledge, itself. On the other hand, they presuppose that nature is an open system (so as to serve their other presuppositions), when in fact, nature is a closed system (and only thus could the mathematics of the natural sciences be applied).

“Only when all science is incorporated into a philosophical framework with all the emotional and moral dimensions that are implied by the arts and the humanities, will knowledge be able to serve humankind once again.”

The problem is that by the time the environmental crisis appears on the horizon of neoclassical economics and the balance sheets of most corporations, the changes in the environment may be so serious that the human costs of addressing the problems will surpass the economic capabilities of most national systems, with all of the gruesome results that are forecasted by the natural scientists who have concerned themselves with these problems in recent years.

9. The Essence of Being Human

We must conclude that the theoretical framework and vocabulary of neoclassical economics are inadequate for the task of understanding the scale of the global socioeconomic crisis. The movement for a broader heterodox and pluralistic (post-autistic) economic science will contribute greatly to improving that framework. Also, popular movements for a more equitable distribution of wealth will help, especially as they result in a reduction in the over-accumulation of capital and a reinforcement in the purchasing power of the masses. Ultimately, only when all science is incorporated into a philosophical framework with all the emotional and moral dimensions that are implied by the arts and the humanities, will knowledge be able to serve humankind once again in the sense that was apparent with the ancient Greeks, where humans were material but at the same time emotional and spiritual beings, and where, as Protagoras wrote, “Man (*anthropos*) is the measure of all things”.

Author contact information

Email: g.gutenschwager@gmail.com

Cryptocurrencies & the Challenge of Global Governance*

Garry Jacobs

Chief Executive Officer, World Academy of Art & Science;
Vice President, The Mother's Service Society, India

Abstract

The recent explosive development of new forms of digital currency opens up unprecedented opportunities and poses significant regulatory challenges. This new form of digital currency lowers the costs and other barriers to the global movement of money, international trade, foreign investment and speculation, while simultaneously enhancing the anonymity on which tax evasion, money-laundering and other illegal activities thrive. It also liberates the creation of money and regulation of economic activities from the political control of national governments and central banks. Since the value of a currency is related to the size of the population, strength of the economy and value of transactions that utilize it, a basket of cryptocurrencies could emerge as the first prototype of a world currency whose value is backed by the total productive capacity of the entire human community. Moreover, the triad of Internet, distributed ledger technologies and cryptocurrencies could serve as the basis for the development of new global economic potentials in a manner similar and a degree far exceeding the economic impact of the World Wide Web over the past two decades. At the same time, the rapid deployment of cryptocurrencies could have profound impact on the capacity of governments to tax transactions, income and wealth, one of the main pillars of the modern nation state. The development of autonomous global cryptocurrencies could dramatically reduce the control and effectiveness of existing regulatory mechanisms at the national level and generate considerable pressure for the evolution of more effective institutions for global governance. They could provide compelling incentives for national governments to enhance international cooperation and strengthen the functioning of international institutions to fill the regulatory void. International organizations will play an important role in harnessing the potentials and minimizing the risks arising from the growing usage of cryptocurrencies. Most of the research conducted by central banks on cryptocurrencies over the past four years has focused on risks and benefits as viewed from the perspective of national economies and national monetary systems. This paper explores the global prospects and potential implications of the widespread adoption of cryptocurrencies for cross-border transactions and the role of international institutions in their regulation and global fiscal governance.

1. Globalization of Economy and Global Governance

Over the past few millennia, humanity has evolved from an organization of villages, tribes, city-states and petty kingdoms into an international system of nation-states. It is now in the process of moving beyond nation-states to form a more closely integrated global

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community with effective institutions for global governance. The evolution of the global economy and international financial markets constitutes an important component of this wider social movement. Since the end of the Cold War, the process of integration has dramatically accelerated, with momentous positive and negative consequences. The dissolution of the Berlin Wall, the Iron Curtain, the Soviet Union, Warsaw Pact and the division of Germany led to a drastic reduction in nuclear stockpiles, the rapid spread of democracy, a rising tide of international travel and immigration, the explosive growth of global communications, the globalization of media, a vast expansion of international civil society institutions and the emergence of the first truly global social institution—the World Wide Web. In the absence of effective structures for regulation and governance, these developments also resulted in the proliferation of nuclear weapon states, civil war and the breakup of Yugoslavia, rising intercultural tensions and terrorism.

Economically, the end of the Cold War led to the establishment of the WTO, a dramatic expansion of global trade, rapid development of the EU and the Eurozone, deregulation and expansion of global banking, rapid growth of international financial markets and foreign investment, an increasing financialization of economies, the globalization of markets, the globalization of production and supply chains, vigorous competition between nation-states to provide attractive conditions for business investment and jobs, greater autonomy for multinational corporations no longer dependent on any one nation for their base and gave global prominence to neoliberal economic theory and policies. These developments were accompanied by a four-fold growth of world trade in merchandise and services between 1990 and 2008, a sevenfold expansion of foreign direct investment, a 3.5 fold rise in international financial assets and a 2.5 fold growth in the share of foreign investors in global equities markets.*†

2. The Wild West of Finance

The process of globalization dates back centuries. But during the past 75 years, the speed and magnitude of the movement have reached a critical stage where the existing social organization is increasingly inadequate to manage the energies released by the process. Money is a form of social energy, which grows by movement. The more rapidly it moves, the faster it grows. Organization transforms raw energy into productive power, the way a dam and hydroelectric power plant convert the kinetic movement of a raging river into useful electricity. When the organization is insufficient to contain the power generated, it can generate a short circuit, a breakdown or an explosion. Like other forms of energy, money requires an appropriate structure to harness and apply its power constructively. When the power released is greater than the carrying capacity of the organization designed to contain it—in this case, the financial organization, it can result in devastating damage to the wider social fabric.

In the absence of effective structures for economic regulation and governance of an increasingly integrated global market, the opening up of global markets has generated

* Based on WTO: 2008 Press Releases. (2008) *WTO: developing, transition economies cushion trade slowdown* http://www.wto.org/english/news_e/pres08_e/pr520_e.htm

† See <https://www.statista.com/statistics/376613/global-financial-assets-value/>

a ‘Wild West’ of finance, a global casino for financial speculation, the rapid growth of international tax havens, the accelerated decline of organized labor, the reduced share of labor in corporate earnings, and rising levels of income inequality not witnessed since the 1920s. The transformation of the 2008 Subprime Mortgage Crisis into a global financial crisis was a direct consequence of the gap between national level financial management and the globalization of finance. There are striking parallels between the instability of US financial markets in the early part of the 20th century and in global financial markets today. Now, as then, the market is dominated by highly leveraged funds in search of highly speculative returns, rather than productive investment. In 1973 the value of global foreign exchange transactions was twice the value of world trade. By 2008 annual international financial flows were equivalent to 114 times the value of goods and services traded globally and roughly 1300 times annual foreign direct investment.*

In response to the economic consequences of globalization, unprecedented efforts have been made to increase international cooperation and strengthen international institutions to establish more effective guidelines, policies and regulatory mechanisms to manage the global economic space. Coordinated action to enhance financial and securities regulation is among the most visible and significant of these efforts. But significant progress has also been made in evolving more uniform standards for economic measures and indicators, accounting and quality standards, uniform commercial law, trade policies, economic intelligence and measures to reduce money-laundering and tax evasion.

It is in this context that we need to examine the sudden and dramatic development of cyber currencies over the past few years in order to assess both their potential benefits and threats to the global economic system, the regulatory challenges they pose and the determinative role that international institutions can play in the management and regulation of this new form of money. This paper explores the prospects and potential implications of the global adoption of digital currencies and the role of international institutions in their regulation and governance.

3. Cryptocurrencies

The term cryptocurrency (CC) refers to a subclass of digital or virtual currencies which utilize blockchain or distributed ledger technology (DLT) as a consensus mechanism for recording transactions.¹ The observations in this paper are made with reference to cryptocurrencies such as Bitcoin, Ethereum and Ripple, with the following characteristics. Based on DLT, they are designed to work as a medium of exchange over the internet. They are not issued by central banks, credit institutions or e-money institutions. They are based on cryptographic algorithms, including those that determine, under what circumstances and how, new units of currency can be created. They are not subject to centralized control. They are denominated in their own currency. Their ownership can be determined and modified cryptographically.[†] The safety, integrity and balancing of ledgers used to record and validate

* UNCTAD Press Release. (2008) *Foreign Direct Investment Reached New Record in 2007*, United Nations. <http://unctad.org/en/Pages/PressReleaseArchive.aspx?ReferenceDocId=9439>

† The blockchain is a public ledger that can be used to record cryptocurrency and other types of transactions. A novel solution accomplishes this without any trusted central authority: the maintenance of the blockchain is performed by a network of communicating nodes.

CC transactions are maintained by members of the general public using their computers, with a particular timestamping scheme instead of relying on a trusted third party for validation. The recording of transactions in CCs does not specify the identity of the parties involved. Today there are more than 1000 different types of CCs with these characteristics in circulation with a total market capitalization of approx. 350 billion USD. Of these, more than 40 reached a market cap of more than \$1 billion in early 2018.

CC is an electronic form of money similar in some respects to the money deposited in bank accounts and in electronic wallets. The central innovation distinguishing CCs is the capacity for peer-to-peer exchange much like cash without requiring the mediation of financial institutions. Unlike banknotes and coins, CCs are intangible and can be instantly transferred and exchanged electronically around the world. Conventional electronic transfer systems such as Visa, SWIFT, PayPal and those employed in securities trading require proprietary transactional record-keeping by a chain of intermediating institutions, which involves significant costs and delays in the processing of transactions. In contrast, transactions involving CCs are recorded by DLT systems on the Internet and can be carried out and confirmed instantaneously at very low cost and with total anonymity. Conventional international financial transactions are usually carried out in two or more national currencies whose rates of exchange are subject to fluctuation over time, whereas CC transactions take place in a borderless global environment in which transactions between parties in different countries can be conducted in the same currency without conversion.*

4. Regulatory Concerns

The rapid development of cryptocurrencies has raised a host of regulatory concerns at the national and global level which nation states and international organizations are just beginning to understand and grapple with, including the lack of a proper legal structure for stewardship. Premature legislation or regulation could stifle the blockchain revolution. Business development may outpace scientific research and policy formulation. Powerful incumbents might usurp domains.²

The legal status of CCs varies from country to country and is subject to frequent changes as governments and central banks study and revise their views and approach. The anonymity and lack of regulations associated with CCs have raised serious concerns that they facilitate money laundering, tax evasion, drug traffic and other forms of criminal activity. So currently, CCs are not recognized as legal tender and CC transactions by consumers and investors are not protected by government regulations or oversight. Recent instances of large scale theft from cryptocurrency exchanges have increased security concerns.

But the most serious concerns about CCs relate to their impact on the ability of national governments to generate revenue and the ability of central banks to conduct monetary policy in case the use of CCs becomes significantly large in comparison with the use of national currencies.³ A substitution of sovereign money by private digital currencies would also lower a government's seigniorage income.⁴ The borderless character of CCs has profound implications for national governments. CCs are not subject to creation, control and

* A major exception to this rule is dollar denominated international transactions which also involve a single currency.

management by the conventional monetary policy instruments utilized by central banks with regard to their own national currencies. National governments have no control over either the creation of CCs or the interest rates at which they are borrowed and lent. Instead, control is governed by fixed computer algorithms defined at the time the CC is created and not subject to alteration by government. The decentralized nature of CCs prevents any nation from shutting down the network or altering its technical rules. However, the exchanges used for purchase and sale of CCs within any given country can be banned and blocked. Furthermore, the anonymity presently associated with CCs could severely aggravate the problems national governments face in taxing incomes and transactions. A largescale shift to global CCs as a store of value could effectively place a vast proportion of transactions and wealth beyond the reach of national governments to monitor tax.

Since the emphasis of this paper is on the implications of cryptocurrencies for global systems, it is not appropriate to dwell on their possible use by national governments. But it should be noted that considerable attention is being given by national central banks to the pros and cons of introducing Central Bank Digital Currencies (CBDC) which could be directly issued to the public without the intermediation of banks. The creation of Central Bank Digital Currencies could be used to provide a direct channel for central banks to conduct monetary policy without the intermediation of banks. A CBDC would very probably increase the role of a national currency on foreign exchange markets, as an international reserve medium, and as an alternative currency for countries in macroeconomic turmoil. If CBDCs were to replace physical currency, they would also reduce the zero lower bound restriction on negative interest rates as a monetary stimulus.⁵ This could even make it possible to replace the fractional reserve banking system with one that dramatically reduces the concentration of economic, political and social power held by private financial institutions.

5. The Value of CCs

The emergence of digital and cyber currencies represents a marriage of three all-powerful human inventions—with momentous implications for the future of humanity. Language, money and the Internet rank among the greatest human inventions of all time. All three are powerful networking tools, instruments and catalysts to promote effective, mutually beneficial human relations. Without language, communication between individuals, human settlements, social organization, economic cooperation, spread of knowledge, education, science, and all the higher achievements of civilization would be unthinkable. **Money permits the exchange of value generated by one party in one place and point of time with any other party in any other time or place in which the same currency is accepted or can be exchanged for another accepted currency.** Without money, the physical exchange of products and specialization of economic functions would be reduced to rudimentary levels. Modern civilization would be unthinkable. Money is the language of economic relations. And like other languages, it both facilitates and retards effective communication, depending on the geographic area and size of the population which shares a common medium of exchange or effective systems for interconversion. Internet is a standardized language and system for global communications and relations which links, relates and integrates human activities

around the world. In combination they open up unparalleled and unimaginable opportunities for social innovation.

“The value and utility of any national currency depend on the perceived level of public confidence and trust which motivates users to accept the currency in exchange for property, goods and services.”

Money also has much in common with a wider array of creative social organizations such as law, government, democracy, industrialization, science, education, religion, international institutions, and, most recently, networking technologies, artificial intelligence and robotics. All these remarkable human inventions have contributed immensely to the progress of civilization and culture. Yet in each case human beings have exhibited a marked tendency to subordinate themselves to the powers of their own creation as unthinking, dependent, helpless slaves. Money has become a victim of this syndrome and currently exerts a ruthless domination over the global society it is intended to serve. The emergence of cryptocurrencies has the potential to break that domination and liberate the immense untapped creative potential of money or to generate new forms of domination and subordination that further limit social progress.

Critics take the view that CCs are forms of Ponzi and pyramid schemes, which lack the backing of any real asset. The soaring value of CCs during 2017 led many to conclude that they are a purely speculative vehicle with no inherent value. Last year the value of Bitcoin rose from \$900 in January 2017 to almost \$20,000 in late December before the bubble burst and the price fell precipitously back to \$8000 in early 2018. This rampant speculation and the fact that CCs are not backed by precious metals, real property or by governments with established revenue streams does not necessarily mean that CCs are without any real inherent value. But an assessment of the potential value and utility of CCs needs to take into account the characteristics of other types of fiat currency prevalent today.

National currencies today are backed by limited gold reserves, tax revenue streams, and the value of all government-owned assets. Indirectly, they are also backed by the total productive assets and productive capabilities of the nation, which lend support to the public confidence and trustworthiness of a national currency. But, in final analysis the value and utility of any national currency depend on the perceived level of public confidence and trust which motivates users to accept the currency in exchange for property, goods and services. Where that confidence is lacking, as during periods of hyperinflation, depression, political instability or imminent threats such as war, the value and acceptability of a national currency can plunge dramatically.

The total value of all cryptocurrencies today is estimated at around 350 billion USD. These currencies are not backed by gold, tax revenue streams, other physical assets, or national

productive potential. On what then, if anything, is this valuation of \$350 billion based? A significant portion of it is, no doubt, currently based on purely speculative expectation that investors will continue to buy large quantities of the currency, thereby driving up its price in future. If that and that alone is the underlying source of value, then it could be said that CCs have no intrinsic value or utility. But it is not. Apart from their speculative value during this still formative period of their development, CCs derive real economic value from several important sources:

“While CCs are still in a nascent stage of development, their enormous potential for technological and organizational innovations opens up untold possibilities at the national and global level.”

5.1. Low Cost, High Speed Medium of Foreign Exchange

CCs are presently the only universal currencies that can be utilized throughout the world and transferred rapidly at low cost without incurring the normal foreign exchange transaction fees incurred on exchange of national currencies through the mediation of banks.⁶ These costs include the cost of conversion between national currencies, the risks associated with fluctuating exchange rates, and the service fees charged by financial institutions for conversion and transfer. For example, international credit card transactions typically involve a 3% service charge. In 2016, the total volume of international currency transfers exceeded \$150 trillion, of which \$3 trillion were transfers by individuals and the rest by institutions.⁷ The total commission paid on individual transfers was estimated at \$165 billion. Goldman Sachs estimates the average total transmission costs through traditional remitters of 8-9%, compared to 0.1% and 3% for CCs.⁸

The efficiency of current economic and financial systems at the global level is far lower than at the national level where uniform policies can be imposed over vast areas, effective systems for regulation and enforcement are in place, efficient systems for monitoring and control are already established, and cross-border barriers are non-existent. Judged from this perspective, global markets for both trade and investment are still in a relatively early stage of evolution. CCs have the potential for enhancing the global availability of money for productive economic activity by overcoming some of the limitations of national currencies and credit systems with far greater speed, reach and efficiency than barter, complementary currencies and other supplementary exchange systems.

5.2. Financial Inclusion and Utilization of Untapped Global Economic Capacity

The second source of value arises from the capacity of CCs to enhance trust, which is the basis for economic networking. The total value of any currency increases in proportion to the size of population and the productivity of the economic area in which it is accepted. The

rationale for creation of the Eurozone was to eliminate the high transaction costs involved in trade between countries using different national currencies. As CCs spread globally, their value is likely to rise continuously, since increasing acceptance would increase demand for a limited supply. While CCs are still in a nascent stage of development, their enormous potential for technological and organizational innovations opens up untold possibilities at the national and global level. Christine Lagarde, Managing Director of IMF, stated that “the technology behind these assets—including blockchain—is an exciting advancement that could help revolutionize fields beyond finance. It could, for example, power financial inclusion by providing new, low-cost payment methods to those who lack bank accounts and in the process empower millions in low-income countries.”⁹ CCs have the capacity to also promote financial inclusion of the 2.5 billion people who do not currently operate bank accounts due to the high cost of bank charges or the paucity of banks in remote areas.¹⁰

No monetary system fully taps the economic potential of the society it serves. That is one of the reasons why barter trade continues to exist on a significant scale in the 21st century. According to the International Reciprocal Trade Association (IRTA), the value of barter trade is currently between \$12 and 14 billion annually.* It has been estimated that approximately two-thirds of America’s Fortune 500 companies engage in barter trade. The incapacity of national monetary systems to serve as an effective catalyst for all potential economic activity is also the principal reason for the development of alternative forms of money to supplement national currencies, such as the more than 300 complementary and local currencies being utilized worldwide to enhance purchasing power and facilitate additional financial transactions. The principal rationale for the creation of local currencies is that the national currency system and existing monetary markets are not efficient in facilitating all potential transactions between those with the capacity and intention to exchange goods and services. This underutilized potential includes the unemployed, underemployed and other persons with marketable knowledge, skills and underutilized productive capacities which are in demand.

The availability of workers with surplus productive capacity and unmet needs is the most obvious example. ILO estimates total global unemployment exceeded 200 million persons in 2017.¹¹ Global underemployment is much more difficult to measure. It includes underutilization of available full-time and part-time manpower willing and able to work, underutilization of the knowledge and skills of the global workforce and those outside the workforce who are willing to provide useful goods and services, and underutilization of global productive capacities due to insufficiency of purchasing power in conventional currencies. To cite only one crude indicator of underemployment, the global average of full-time workers per adult population is only 26%, compared to 30-52% in developed countries and 5-20% in most of Africa.¹² The overall global underemployment could well exceed two billion person years annually or even more. Complementary and local currencies, most of which are circulated within the confines of small regions within countries, seek to tap this underutilized potential for transactions, but are difficult to establish and costly to operate due to the small area and volume of transactions they perform.

* <https://www.irta.com/>

5.3. Creation of New Social Potential

CCs also have the capacity in conjunction with the Internet and the other technologies on which they are based to create new and additional potential. They are a creative form of money, creative of new economic potential. Lagarde has also observed that CCs “have the potential to displace central banks, conventional banking and national monies in the long term.”¹³

Organization has a remarkable power to spur social advances, yet in the process every organization also carries with it self-imposed limitations and barriers to further social development. Every monetary system imposes restrictions on the creation and circulation of money which limit its capacity to promote economic activity and wealth creation. For example, policies regarding issuance of bank loans impose limits on credit to prospective borrowers with real economic potential who lack assets to offer as security. Monetary systems are always seeking novel ways to extend the issuance of credit without undue risk to lenders. The introduction of co-signer provisions on educational loans in the USA has spurred the growth of student loans to nearly \$1.5 trillion, compared to only \$620 billion total US credit card loans. The issuance of these educational loans is based on the premise and supporting data that shows higher levels of education will result in higher levels of future employment and earnings. Even when these loans involve co-signers, the underlying asset which makes the loans viable is the future earning capacity of those who acquire higher levels of education. The ‘security’ for the loans is primarily in the form of trust in the future earning capacity of the borrowers. Note that US educational loans are extended almost exclusively to students studying in America or to American students studying overseas, rather than to all human beings globally seeking higher education to enhance their employability and earning capacity. The effective functioning of a monetary system to promote economic activity within one currency zone does not mean that overall economic potential is being tapped globally. This points to one of the principal limitations of national currency systems. Their effectiveness as catalysts for economic activity is maximum within countries and common currency zones and far less effective outside those zones.

New business models such as Uber and Airbnb increase the utilization of existing social potential by providing ways to more fully and efficiently commercialize the value of existing assets, e.g. underutilized vehicles and drivers, available residential space for rent, whereas educational loans actually create new social capacity by promoting investment in human capital to make people more productive. Like education loans, innovative applications of CCs also have the potential to promote investment in new types of technologies, activities and organizations that create and develop new forms of social potential, similar in potential to the innovations introduced by Amazon, Google AdWords, iTunes and Facebook.

6. Pros and Cons of Global Currency

The benefit of reducing the financial risks and transaction costs was a principal rationale for the creation of the Euro and the Eurozone as well as other regional currencies. The recent Euro Crisis has highlighted the problems arising when nations relinquish sovereign national

currencies in the absence of centralized political and economic institutions empowered to conduct fiscal and monetary policy for the entire monetary zone. The political difficulty in building support for centralized control at the level of the Eurozone was a major contributing factor for the recent Euro Crisis. But it seems unlikely that such centralized control will be granted by the participating nations in the near future, given the recent political backlash against the Euro and the EU among some member nations.

The potential benefits of establishing a single global currency union based on establishment of a World Central Bank and a World Currency have been considered for decades. Both Britain and the USA came to the Bretton Woods conference in 1944 with proposals for establishment of a global currency. The British supported a plan developed by Keynes for a world reserve currency called the ‘bancor’ administered by a central bank vested with the power to create money. US President Franklin D. Roosevelt directed his Secretary of the Treasury, Henry Morgenthau Jr., to also develop plans for a global currency, though the US subsequently withdrew support for domestic political reasons.¹⁴

The final plan for establishment of the International Monetary Fund, which focused on maintaining international price stability, created a fixed pool of national currencies as opposed to a world central bank capable of creating money. The system served adequately until the late 1960s, when it was overtaxed by the vast expansion of international financial transactions, increasing levels of monetary interdependence, the emergence of international banking consortia, and—with the rise of Europe and Japan—a more widespread distribution of global economic power. In recent years a number of eminent economists have argued strongly in favor of a radical revamping of the international financial system, including proposals for establishment of a global financial authority with powers far exceeding those of the IMF and Bank for International Settlements (BIS) and a global currency to be utilized either in parallel with or in place of the present cumbersome and costly system of national currencies.

In the early 1980s, the American economist Richard N. Cooper, a Yale Professor and US Undersecretary of State for Economic Affairs under President Carter, proposed a ‘radical scheme’ for the 21st century—“creation of a common currency for all the industrial democracies with a common monetary policy and a joint Bank of Issue to determine that monetary policy.” With foresight, he observed that when communication, transport, technology dissemination, trade in both goods and services, corporate strategy, banking and investment become global and expansive catalysts of world development, a national level monetary system is out of sync and no longer a viable option. Arguing that national level regulation cannot be fully effective in a global market, Cooper proposed five central banking requirements needed to convert the IMF into a world central bank empowered to issue a common world currency.¹⁵ In 2006, Nobel laureate Joseph Stiglitz proposed that the adoption of Special Drawing Rights (SDRs) as a reserve currency by the national central banks could pave the way for the eventual creation of a single world currency.¹⁶ In 1999 another Nobel laureate, Robert Mundell, strongly advocated introduction of a common world currency. “The benefits from a world currency would be enormous. Prices all over the world would be denominated in the same unit and would be kept equal in different parts of the world to the

extent that the law of one price was allowed to work itself out. Apart from tariffs and controls, trade between countries would be as easy as it is between states of the United States. It would lead to an enormous increase in the gains from trade and real incomes of all countries including the United States.”¹⁷ Mundell suggested that a Global Central Bank could issue a global currency backed by reserves of dollars, yen, euros, and gold.¹⁸ In spite of serious economic backing, proposals such as these still encounter the skepticism which precedes every new stage of the world’s evolutionary social progress.

“Speculation is not a crime, but it is a major source of the increasing financial instability witnessed over the past three decades and the diversion of potential investment from the real economy.”

Conservative central bankers and politicians—intent on preserving national sovereignty over management of the domestic economy at a time when international market forces are challenging the very notion of national markets—no doubt scuff at the proposal of a world currency, but it may not take much to turn the tide of opinion in the other direction. As Mundell observed, “It looks as if we are a long way from that position [a Global Currency] now. Yet it is surprising how quickly moods can change and producers of statecraft can escape the old modes of thought.”¹⁹ Eatwell and Taylor sounded a similar note in calling for establishment of a World Financial Authority and fully empowering the IMF as a true lender of last resort to the international community.* “What is utopian one day is conventional wisdom the next.”²⁰

7. Cryptocurrencies and the Role of International Organizations in their Regulation

Given the controversy and significant difficulties in establishing a world currency with centralized authority to conduct fiscal and monetary policy, the question remains as to whether cryptocurrencies have the potential to play a constructive role in the global financial system and what type of regulatory agency would be required to provide effective control over their misuse, including misuse of CCs for speculation, tax evasion and other types of criminal activity.

Interest in CCs has been fueled by the euphoria often associated with new types of speculative investment. Speculation is not a crime, but it is a major source of the increasing financial instability witnessed over the past three decades and the diversion of potential investment from the real economy, which in turn has contributed significantly to rising levels of unemployment and of rising economic inequality. Controlling all forms of speculation is

* The IMF has assumed some powers as a lender of last resort after the Mexican bond crisis in 1994 and the East Asian Crisis in 1998. However, it is hampered by several limitations; notably, the limits on how much it can lend and the slow and cumbersome process by which members must collectively approve such action. Thus, it lacks the ability to inject liquidity as and when required unconditionally and without limit as national central banks do now.

extremely difficult, given the immense political power and influence of the wealthy and the financial institutions that profit by their activities. But controlling or eliminating speculation in CCs as a condition for their legal recognition could be feasible at the nascent stage in their development by imposing a tax on high frequency, short term trading in exchange for national currencies, gold and similar assets. This would make CCs almost unique as an asset that does not lend itself to the unpredictable price fluctuations and instability associated with other forms of speculative investment.

“Effective management of a global CC or a system of CCs could best be achieved by authorization of an international organization missioned to promote the optimal and equitable development of the entire global economy rather than one representing the competing interests of sovereign nation-states vying with one another for advantage.”

Control of the use of CCs for tax evasion and criminal activity could be severely constrained by removing the anonymity associated with CC transactions or simply banning those that are not linked to bank accounts in countries enforcing international cooperation to prevent tax evasion and criminal behavior. Thus a two-pronged strategy could be put into force supporting the legal use of CCs that meet these conditions and prohibiting currency exchanges trading in those that do not.

In order to be fully effective, either or both of these forms of regulation would need to be formulated, managed and uniformly enforced at the global level. Otherwise, activity would only shift from cryptocurrencies which impose these restrictions to those that do not. Management and enforcement of this regulatory regime could be carried out under the authority of the IMF, Bank of International Settlements, Basel Committee on Banking Supervision, the Financial Stability Board, and Financial Action Task Force on Money Laundering, or an entirely new agency established specifically for that purpose.

This approach could lead to the development of global currencies freed from prominent limitations of national currencies. It would permit demonstration and experimentation with a new species of global money while limiting the risks involved in a wholesale shift to a single world currency. It might also serve as an effective means to develop and test political and economic systems for global financial governance on a limited scale for a specific purpose.

Effective management of a global CC or a system of CCs could best be achieved by authorization of an international organization missioned to promote the optimal and equitable development of the entire global economy rather than one representing the competing interests of sovereign nation-states vying with one another for advantage. One or more such systems could initially be established by a relatively small group of nations and opened to all those who accept the underlying principles on which they are based.

8. Global Prospects and Opportunities

The current polyculture of national currencies represents a stage in the long evolution of human society and economic systems from the local to the global level. National currency systems have existed for many centuries but the global system of interconvertible currencies only reached maturity in the 20th century. In spite of its enormous contribution to facilitating growth and development of the global economy, it remains fraught with such cumbersome and costly limitations that the quest for a more effective global system is essential and inevitable. CCs in their present form may not offer a clear overall solution, but they do open up new possibilities worthy of serious examination and exploration as an intermediate stage or possible route to a more effective global monetary system or monetary union in the future.

Early advocates of CCs such as Don and Alex Tapscott remind us that governance need not be synonymous with centralized governmental control. The Internet is the best example of a complex global social organization that has evolved and transformed itself largely by means of decentralized multi-stakeholder networks operating as governance structures. They argue that a variety of similar networks should be fostered to evolve effective standards, policies and regulations appropriate to support socially-beneficial innovation of CCs and other blockchain applications. Government surely has an essential role to play, but that role will be most effective when it is conducted in collaboration with the wide range of stakeholders designing, developing, launching, investing and using CCs, including technical experts, entrepreneurs, investors, civil society organizations, end users and the general public.²¹

The advent of digital currencies is too recent and their potentials too vast to be fully recognized at this early stage, but some general conclusions can be set forth and some of their most significant possibilities can be identified for future research and experimentation.

1. CCs are a relatively simple and low cost method of extending the range of monetary financial transactions without radically altering the existing national currency system. The global nature of CCs makes them a natural and attractive means for reducing and eventually eliminating the high costs and cumbersome procedures associated with transactions between parties in different nation-states using different national currencies.
2. A basket or polyculture of CCs with easy, low cost interconvertibility could moderate the risks of depending on a single monopolistic cryptocurrency. Competition between a polyculture of CCs would provide opportunities for rapid experimentation in order to test a wide range of new models in much the same way the internet makes possible rapid innovation.
3. The blockchain or distributed ledger technology which serves as the backbone for CCs opens up the possibility of programming new currencies to automatically and transparently address some of the problems confronting national currencies.
4. Experiments with different forms of CC might include some with algorithms designed to increase the supply of currency in proportion to the growth in usage of the CC. Algorithms could be designed to automatically modulate the rate of creation of a CC to synchronize with the number and volume of transactions made to ensure sufficient

liquidity to support an expanding community of users and a widening economic zone, without resulting in sharp variations in the conversion rate of the CC to other benchmark currencies.

5. Developing CCs with inbuilt safeguards to reduce and discourage high frequency currency speculation could vastly reduce dependence on huge total global foreign exchange reserves held by governments to reduce the risks, uncertainty, insecurity and destabilizing impact of foreign currency speculation and its deleterious impact on the global economy. Those reserves exceeded \$9.5 trillion in 2017. This might be achievable by the introduction of a stable globally accepted CC based on algorithms that impose high fees on large, short term purchase and sale. The income from the fees could be invested in further development of the system or distributed to other currency holders as a reward for use of the system.
6. Algorithms could also be designed to impose negative or positive interest rates to encourage usage rather than saving of CCs under circumstances when economic indicators point to the need to stimulate or moderate the volume of economic activity.
7. Blockchain technology combined with other technologies has the potential to significantly reduce the obstacles and costs of complying with know-your-customer regulations and validation of digital identities.²² While current CCs offer near complete anonymity to their users, it is feasible to introduce CCs in which transparency of ownership is equal to or greater than that of today's bank accounts. This would act as a serious deterrent to the use of CCs for illegal purposes and provide access for law enforcement agencies to monitor use of funds in an easier, more effective means than is presently possible.
8. Specialized types of CCs could also be created to serve specific purposes. For example, a transparent monetary system could mitigate the role of money in politics by making it possible to trace the source of all funds flowing to electoral candidates. It might be possible for governments to stipulate that all contributions to election campaigns by individuals, corporations and other organizations and that all electoral expenditures on advertising and public communication campaigns only be made in a specially designed CC subject to complete and automatic public transparency.

These and similar innovations underline the fact that we are still in the earliest stage of the development of CCs, akin to the time when the Internet was primarily used for email and file transfers. It would be unfortunate if out of fear of possible loss of control, national governments were to prematurely stifle experimentation and experience with this new financial networking tool. At the same time, the risks are too great to permit their unbridled development without close monitoring and regulatory powers to mitigate misuse. Under these conditions, management by international institutions is the most effective strategy for fostering positive innovations conducive to the fullest and most equitable development of the contribution of CCs to global human welfare and well-being.

Author contact information

Email: garryj29@gmail.com

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Is Falsehood Becoming Untenable?

Robert van Harten

President & Founder, De Moeder's Geuren Foundation, The Netherlands;
Member, WAAS Standing Committee on Peace & Development

Abstract

We are entering a phase in the evolution of life and society where falsehood is not tenable anymore. It shows in the acute emergence of concealed and hidden systems and organisations of falsehood into the open. The world is readying itself to embrace harmony and unity as the real truth and basis of life on earth. The destruction of life and our world has reached untenable levels and only falsehood is the barrier that holds us back from real solutions that must be implemented to save our climate, our health and nature itself.

1. Introduction

The days that one, with the help of the courts, can delay justice indefinitely are coming to an end. The days are passed that one can say one is innocent till proven otherwise. This has far-reaching consequences for the future of our lives. Organised falsehood is losing its strength, its protection and support by which it becomes increasingly vulnerable to exposure and time.

2. Tipping Point

In the operation of justice we seem to have crossed the tipping point. It virtually means the end of justice as we know it.

For, the other side of the tipping point is overwhelming and frightening to the powers that control our world. The strongholds of the power of government, the power of money, the power of size, the power of lobbying, and the power of economic threat are crumbling before our eyes. The power of justice is changing hands too. The nature of justice anchored in rigid law cannot keep pace with the changes in the organisation of society. The immense overhaul that is necessary to keep ourselves connected to the changing needs of the society (which used to be the responsibility of politics), can only be accomplished with the help of (groups of) individuals.

3. Rational Explanation

But first we have to answer the question whether there is a rational explanation and basis for this paradigm shift.

At all points in our society the monopolistic and centralised powers of government, institutes and companies are shifting to the group (of individuals) and the individual. It is

an evolutionary movement. The collective consciousness withdraws its powers of domination and organisation from centres of power and releases its transformed powers in favour of the individual, as the individual is mentally, emotionally and psychologically ready to fulfil his task to harmonize life on earth.

4. Time Loses its Protection

Examples of the shift in power and justice. Through the shift of power into the hands of NGOs we see their success to force governments and cities to take far-reaching measures to protect the health of their citizens from air pollution. Electrification of vehicles is becoming a race in time. We see cities and individuals suing the oil companies and the same is expected in many other fields of manufacturing and services, like pharmaceuticals, biotechnical corporations and the internet.

“Has the time come when one cannot hide the falsehood of the past anymore?”

“For truth to replace falsehood, it is necessary that falsehood that is buried, falsehood that is covered, falsehood that is posed as truth, must be revealed first, brought into the open: we must face falsehood in all its intricacies first.”

The shift of power into the hands of individuals is most strikingly seen in the #MeToo movement. It is the best example for insight into the future of justice. The protecting effect of ‘one is innocent till proven otherwise in court’ is negligent here and has lost all power of protection when it concerns this type of abuse. It can be expected that this movement is exemplary in regard to all justice of the future. The static old past we used to know is turning dynamic as if projected in the now and becoming as effective as the now. Time loses its protection and exposure is enough for the new force of justice to work. The consequences are enormous.

It is not enough to say I did not know. It is not enough to say we cannot stop producing products and services that contribute to bad health or an earlier death of consumers as it is economically detrimental to do so (your jobs, your economy, your future is at risk). For example, pension and other funds cannot be invested in weapons, in tobacco, in oil and gas, in pesticides for economic reasons, but the future of our planet is at risk as a result of our investments in them.

5. Shift of Key Values from the Economy to the Individual

Economy was for long the magic word. Economy was king. Everything and all had to serve the economy as everything—our welfare and well-being—depended on the state of our economy. The value of the individual came second and was subservient to the economy. But a change of power basics is in the making. Universal Basic Income (UBI) is gaining

support in the wake of massive robotisation and rising disgust for the 1%. Rational support for the dealings of the super-rich is severely dented; the right of patent protection is rightly questioned. Protecting the economy is often not in line with protecting the consumer and worker. In short, the question of what is detrimental to the economy is shifting to the question of what is detrimental to the individual. All that does not maximise their welfare and well-being is by definition detrimental to life on earth.

“The most beautiful choice is, every individual using his or her free will can choose to follow and implement truth in all the decisions in their life.”

6. Operational Solution

But how can this shift from power centres to the individual take place? Power centres are necessary for the operational functionality of society, one will say. It is practically not possible to transfer centralised power and decision making to uncentralised venues, *i.e.* the individual. This is not correct though, as present technologies like blockchain can support this shift very effectively. Blockchain technology makes it practically possible to receive an informed standpoint from every citizen involved in a certain issue.

7. The End of Falsehood

When we expand our view and observe the consequences of this shift of power and justice, we are pointed to an unknown phenomenon. Falsehood, as a force, is embedded in our society at all times. Its power has been unrelenting and nearly unchallenged for ages. But we can ask ourselves: have we reached the point, the tipping point, where falsehood can be effectively and successfully challenged? Has the time come when one cannot hide the falsehood of the past anymore? Is all falsehood destined to come into the limelight as support for the actions to keep it in the dark unknown, dwindling fast? Is falsehood, by its lost power, becoming effectively untenable?

8. But is the World Not Showing us the Opposite?

A rightful question can be posed: does the state of the world not show us the opposite? Falsehood is presented as alternative truth, popular vote disrupts our society and climate change is threatening our future!

But when we view the world from this wider perspective, it becomes clear that for truth to replace falsehood, it is necessary that falsehood that is buried, falsehood that is covered, falsehood that masquerades as truth, must be revealed first, brought into the open: we must face falsehood in all its intricacies first. Everything in the world seems to be collaborating to do so and opens to us the choice. Actually the most beautiful choice is, every individual using his or her free will can choose to follow and implement truth in all the decisions in their life.

The shift of power to the individual makes it evident that every single individual has a free choice and can act to add to the strength of the tipping point and bring a life of beauty and truth into their reach.

“Can WAAS organise itself to become an effective instrument to promote truth in a world that is moving towards harmony and truth?”

9. WAAS can Promote Truth in Art and Science

If we take the view that falsehood is becoming untenable, we can ask what role our WAAS can play. Can WAAS organise itself to become an effective instrument to promote truth in a world that is moving towards harmony and truth?

Author Contact Information

Email: robertvanharten@gmail.com

Western and Eastern Values are Complementary

Ashok Natarajan

Secretary & Senior Research Fellow, The Mother's Service Society, India;
Fellow, World Academy of Art & Science

Abstract

All values are spiritual in their essence, even those that appear to be physical. For all values seek perfection of the whole. The widest and highest perfection is based on the totality and oneness of reality. Such a perfection is comprehensive and inclusive. It is founded on truths that complete other truths rather than compete with them. Despite their vast cultural differences, Eastern and Western values reflect complementary aspects of a unified whole. But the process of developing values in any society depends on its underlying cultural perspective. The nature of mind is such that it divides and analyzes reality, and concentrates on one thing at a time, whereas spirituality is founded on the perception of the whole. This vast difference in underlying cultural orientation helps explain the immense gulf in understanding that has long distinguished and separated the cultures of Asia and Europe.

When they first heard tales from travelers of enormous wealth and sophistication of the far older civilizations of the East, Europeans were filled with wonder and admiration. Those tales fueled their urge for exploration and the quest for adventure. They discovered societies of unimagined prosperity and inventiveness. When the age of explorers began, China and India were the most prosperous nations on earth. They represented about 40% of the world's population, roughly the same as they do today. During the many centuries when European society rejected the mental heritage of Hellenic Greece and ancient Rome, China developed an advanced mental culture while India's achievements were spiritual. China developed a class of intelligentsia to govern the country long before any Western nation developed paper currency and invented gun powder. Like the Japanese, they found little to admire in other nations and turned inward and insular. They responded to the incessant onslaught of Western men of fortune, zealous missionaries and infectious diseases by retreating into isolationism and erection of barriers to protect civilization from the onslaught of barbarians.

Long before the seafaring conquests of Europe, the Silk Route extended all the way from China to Central Europe. It was a common sight to see Indian traders in the Roman market and Roman ships frequenting Indian harbors. Apart from military and trade, India was well developed in cultural affairs. It had cultivated advanced *shastras* or scriptures covering 64 different branches of knowledge. Religious hatred was generally unknown in India with some aberrant exceptions in South India. Though royal Kshatriya families ruled in North India, down south the Vaisya agricultural community took the lead in leadership forming royal dynasties. Such South Indian royalties were also men of notable character. The extraordinary spiritual insights of India's Bhagavad Gita predate Ancient Greece's philosophical wisdom.

The great Mahabharatha war was fought for the ideal of ridding the world of evil. At one point in the epic, the Gita says that the war was won not so much on the battlefield as in the subtle plane. More than 2000 years ago, King Ashoka renounced the principle of war after conquering all opponents on the battlefield.

Gradually the balance between East and West changed, as it always does when more advanced and less advanced civilizations meet. The younger, more aggressive with less to offer and more to gain gradually acquires advantage over the older, more stable and sedentary civilization that seeks to preserve the order and stability of what it already possesses. Thus over the past five centuries, the West developed quickly, thriving on its trade with the East and stimulated by its obvious inferiority to explore, invent, innovate and seize that which it lacked. The triumphant rise of the West through commerce, military conquest, science, industry, the spread of education and democracy shifted the balance. The newly rich and powerful acquired a sense of their own value and developed a world view based on the relative superiority of Western culture. This view came to dominate the perspective of Western scholars to the point that they mistook their temporary ascendancy for a sign of ultimate preeminence.

Indeed, the same viewpoint colored their understanding of everything outside Europe. America too was disparaged as a nascent unformed society. The noted historian Paul Johnson observed that while he was at Oxford he never heard America taken seriously by any scholar. Even Encyclopedia Britannica devoted most of its space to Europe, its accomplishments and its personalities, while great Asian achievements and personalities were given far less attention. This prejudice reflected Europe's deep preoccupation with itself. It is only in the past three decades that the European historians have awakened to the realization that the entire history of the world during the past five centuries was skewed and colored by their own limited perspective and cultural values. Given its very rapid advances and remarkable achievements in recent centuries, Europe's self-preoccupation during this period is understandable.

But the difficulties the East and the West encountered in understanding, appreciating and respecting one another have still deeper roots. We should focus not merely on differences in their periods of ascendancy and relative speed of advancement at different times. Indeed, the recent speed of change in Asia far exceeds the most rapid progress ever witnessed in the Western world in the past. The lack of comprehension arises from more fundamental differences in the cultures of the East and the West.

We can now see more clearly the highest achievements of both sides of the world. They reveal distinct but complementary approaches to reality—one mental, the other vital-social; one emphasizing the ultimate value of the individual, the other the sacred value of the social collective; one founded on individual uniqueness, the other on social unity. In the Western World, mind was liberated from the dominance of social culture and the past and came to place increasing emphasis on fullest freedom for the maximum development of the individual. In the Eastern World, mind was subordinated to the wider social goal of collective harmony, integration and continuity with the past. The West made freedom the ultimate value and perceived the society as the context and field for individual development

and achievement. The East based itself on the value of social harmony and continuity based on a consciousness of the immense contribution of the collective to individual achievement.

“When any truth or power is followed in the extreme, it inevitably turns into its very opposite.”

From the onset of the Renaissance, Reformation and Enlightenment in the West, the individual progressively emerged from subordination to the collective in politics, religion, economy and society. A culture of individualism gradually came to replace the culture of individuality affirmed by the ancient Greeks. The pursuit of self-interest replaced the loftier pursuit of Self-realization. In India, the ultimate freedom of the individual to pursue a unique spiritual quest was preserved in the spiritual institution of *sannyasa*, in which a mature man after fulfilling his obligations to family and society was entitled to abandon all social responsibility to pursue the ultimate freedom of the spirit. But as most of the Westerners tried to exercise their freedom within a narrow field of egoistic self-interest, all but the most extraordinary Asians adhered to the underlying spiritual values of society through subconscious subordination of the individual ego to the social collective.

Even today the adherence to spiritual values can be observed in the conscious subordination of youth to the guidance and direction of elders. In India, the ideal behind this attitude is the acceptance of the father as the spiritual guru, even if the elder is illiterate and uninformed. The scriptures call on Indian women to relate to their husbands as the representative of the Spirit in their lives. The word for husband in India is *Purusha*, which means the Self. In situations where the husband deserts his wife and runs away, the wife has the right to distance herself from him both emotionally and physically. It is very rare in such situations for a wife to maintain a deeper spiritual allegiance to her spouse. But there are known instances in which the ideal is still followed. Such subordination of the individual is frowned upon in the West. Even in modern educated India today it is rejected by most as old-fashioned superstition. Nevertheless, it is based on a knowledge that progress comes by accepting external challenges and changing one's own inner attitudes and surrendering egoistic preferences.

The attitude in the West appears to be quite the opposite, but it is based on a complementary principle. In Jane Austen's novel *Pride and Prejudice*, Mr. Bennet is portrayed as a typical English country gentleman. After his marriage, he finds that his wife is not amenable to reason. He seeks the peace and quiet of reading literature in the seclusion of his library. The family life goes on for another 25 years without any major incident. Then tragedy strikes and his youngest daughter elopes with a penniless adventurer named Wickham. This shocks Mr. Bennet and the scandal threatens to prevent the marriages of his four other daughters. Even then he does not turn to God or religion for solace. He relies solely on himself. He does not blame anyone else in the family for the tragedy, not even Wickham. He recognizes his own negligence in the way he had run the family and accepts full responsibility for the consequences. As a reward for his personal sincerity, the run-away girl is located and safely

married off to her lover. It is a reward for his self-reliance. Such self-reliance helped create a mental culture of individuality in the West. His good fortune does not stop there. His two eldest daughters are both married to wealthy men of a higher class. It is noteworthy that no one in the family takes recourse to prayer at the time of crisis. In a spiritual culture like India, most would instantly resort to prayer. But in both cases, the result is attained by a subordination of egoistic personality to a higher value, either individual or collective. In this sense, Western and Eastern cultures adopt complementary paths to perfection.

“The process of organization has a tendency to limit and transfix that which it attempts to express.”

A mental culture prides itself on its intellectuality. That capacity helps to liberate mind from the limitations of superficial sense impressions. The achievements of the last few centuries have been primarily those of the intellect. But when any truth or power is followed in the extreme, it inevitably turns into its very opposite. Intellectual knowledge is always based on a set of explicit or implicit assumptions. There are always issues that fall outside the pale of assumptions. Often the limitation of initial premises is forgotten and a partial truth is applied outside its field of validity. The extreme doctrines of state communism and neoliberalism are examples of the excessive application of partial truths as if they were universally valid.

Rupert Sheldrake is a well-known English biologist who applied the scientific method to study phenomena outside the normal pale of biological research. The thousands of experimental results he studied led him to develop a controversial theory about the transmission of information based on a subtle knowledge about life known for millennia in Eastern culture. When *Nature* published an article challenging his theory and research findings, Sheldrake wrote to the editor presenting a detailed rebuttal of the objections. The editor dismissed his rebuttal without even reviewing the evidence because Sheldrake’s research and conclusions lay outside the established boundaries of current scientific thinking. The editor’s attitude is a typical consequence of intellectuality which mistakes a partial view for the whole reality. Intellectuality takes any issue and reduces it to abstract generalizations which omit vast amounts of relevant information in the quest for a unifying principle. But the process of accomplishment and the actions of great men such as Napoleon, Churchill and Caesar cannot be reduced simply to abstractions.

Traditional Eastern cultures exhibit a different type of limitation, by blindly subordinating ideas and experience to established wisdom and thereby reducing knowledge to superstitious beliefs. Ancient Greece laid the foundations for all the Knowledge the Western World has today. It was purely mental and did not extend to life or the higher realms above mind. It lacked the intuitive perception of ancient India and the pragmatism of modern Europe. As a result, the Golden Age of Greece survived for only a century. Greece’s mental culture gave birth to the more pragmatic mentality of ancient Rome. Whereas the Greeks had applied mind to the realm of pure mental ideas—philosophy, mathematics and ethics—the Romans applied

mental principles to the field of social life. Discarding the social traditions of the past, they developed a civic and military culture based on law and mental principles of organization, laying the foundations for the rise of the Roman Empire, which lasted several centuries before its inevitable decline. Mind has the power to clarify the insights of spiritual intuition that inevitably manifest in social superstition. But, we see from this case that without the continuous inspiration of spiritual knowledge, mental knowledge inevitably degenerates into narrow rigid principles that suppress the vitality and complexity of life. Without that spiritual influence, mind cannot continue to grow.

“The future evolution of humanity requires the integration and unification of multiple complementary perspectives to arrive at a whole which transcends the narrow boundaries of competing partial truths. Contradictions are complements.”

The Roman Empire declined as its physical expansion overstretched its financial resources and it lacked the subtle knowledge of the foundations of social existence. Rome ran out of money because it did not understand the principle of public debt. It did not realize that it could monetarize future tax revenues as England discovered 10 centuries later and employed as a resource to finance its expanding empire. The foundation of money is people, human relations and confidence in the social institutions. But at that time Money had not yet acquired its full symbolic power as representative of the financial power of the government and the nation. Without that support, the Roman Empire came to an end.

Spirituality in India rose high enough to empower individuals to attain spiritual liberation. Hundreds of spiritual seekers have successfully trod this path. Many more millions have adopted this as an ideal. Having this as the goal, the country tries to implement these spiritual values in the vital life of the nation, endowing the ancient society with enormous powers in every walk of life. Consciousness evolves by organization and organization evolves by giving constant expression to new and greater sources of inspiration. But by its very nature, the process of organization has a tendency to limit and transfix that which it attempts to express, so eventually the inspiration that gave rise to the organizational structure either dies out or has to seek new avenues for expression. The whole history of the world testifies to the need for perpetual renewal of decadent, ossified organizations. In India, the very vitality of its ancient social institutions became an obstacle to future progress. As elsewhere, intuitive wisdom became enshrined in doctrine. Living institutions ossified into rigidly fixed social structures such as the caste system in India, the feudal system of Europe and religious institutions in all countries. In the process, India lost her native vitality and creativity and became enslaved first to conventional tradition and later to foreign occupation. Any hope of regaining her past spiritual culture only became conceivable after India attained her independence.

There is a proper sequential order to the process of development. It appears that both the East and the West have strayed from that natural evolutionary sequence. The West was

preoccupied with the quest for spiritual salvation during the Middle Ages. The economic revolution that gave rise to the Renaissance soon subordinated this quest for the pursuit of material prosperity. Spirituality became ossified in the form of organized religion. Until the end of World War II, church attendance in the West was very high. The arrival of prosperity, democracy, education and free thinking diminished the influence of the church. In recent times a scarcity of priests in the West has led to large scale import of clergymen from India and other Asian countries.

As the Age of Imperialism thrived before its brief period of ascendancy and rapid decline, the age of scientific materialism is now reaching the limitations of a purely physical understanding of reality. The global challenges confronting humanity today—political, economic, social, cultural and ecological—are all a direct consequence of that limiting premise. They compel us to challenge the validity of a dominant world view reaching the end of its utility. Ultimately, knowledge is not the sole possession of any country or culture. It is both wider and deeper than any one perspective can fully realize. The future evolution of humanity requires the integration and unification of multiple complementary perspectives to arrive at a whole which transcends the narrow boundaries of competing partial truths. Contradictions are complements.

In Europe, the development of mental culture was spearheaded by the aristocracy. The English parliament was for long populated solely by members of the aristocracy. Many were men of notable character and capable of selfless service. In those days, members of the Parliament, other than cabinet ministers, were not paid. Only those with property could afford to serve. The upper classes enjoyed the incomes from vast landed properties inherited over time. These properties were taken care of by tenants who also doubled as soldiers during times of war. This arrangement effectively meant that real power remained with aristocracy. The English who came to India were surprised beyond measure by the profusion of castes in the country. They valued aristocratic blood as much as the Indians valued caste purity. Aristocrats retained their relevance so long as they retained their character supported by extensive income. Even impoverished aristocrats usually retained something of that nobility of character.

But the decline in the status and wealth of aristocracy eventually brought with it a decline in the values on which it had earlier risen and been sustained. Even where wealth was retained, character gradually declined with the intermixture of the classes and the lure of new sources of wealth. Like organization, character and culture need to be continuously replenished by springs of deeper energies in order to sustain high values. Anthony Trollope's novel *Dr. Thorne* depicts the immense power of high values amidst the declining culture of 19th century England. Dr. Thorne is the descendant of one line of an 800-year-old family which gradually loses its property and wealth. Impoverished after the death of their clergyman father, Dr. Thorne still retains the high character of his aristocratic class. His younger brother, Henry, however, displays all the weaknesses in character of a people and class in decline. Henry is killed by a stonemason named Roger after he seduces Roger's beautiful and virtuous sister Mary, offering false promises of love and marriage. Henry's older brother Thomas learns the

truth and pleads with the court to save Roger from lifelong imprisonment. During Roger's six months in prison, Thomas helps Mary marry and move to the colonies, by agreeing to adopt the baby girl, also named Mary, who is born out of wedlock. After his release from prison, Roger rises to the heights of commercial success as a contractor and acquires massive wealth equal to that of many aristocrats. Meanwhile Thomas then becomes physician to the family of the wealthy Squire Gresham, whose wealth is quickly vanishing as the result of his marriage to an Earl's daughter and costly failures in Parliamentary elections. Raised in close proximity, the Squire's son Frank falls in love with Mary, the doctor's illegitimate niece, and insists on marrying her. Frank's parents protest both because of Mary's low birth, and also because they desperately need Frank to marry into a wealthy family in order to avoid the bankruptcy of the Gresham estate. After years of delay, Frank insists on his love for Mary, but Mary declines marriage to avoid becoming the source of misfortune to his family. Through it all Dr. Thorne has faithfully served as the trusted adviser to both the wealthy Roger and impoverished Squire. At last Roger dies and bequeaths his immense wealth to Mary. As his executor, Thorne presides over the transfer of wealth to his niece and her marriage to Frank. Thorne's ancient family of high values is restored to prominence. The illegitimate but now wealthy Mary is elevated by marriage to Frank into high society. The Greshams are saved from bankruptcy by Frank's marriage to Mary. The situation Dr. Thorne faces is so daunting that few men could retain their sanity under such circumstances. He lives by his aristocratic values without thoughts of personal gain. His entire conduct is guided by the highest values.

The values of the East and the West are thus complementary and mutually reinforcing.

Author contact information

Email: ashokmirra@gmail.com

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