



PROMOTING LEADERSHIP IN THOUGHT
THAT LEADS TO ACTION

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Inside this Issue

The World Academy of Art & Science was founded in 1960 by eminent scientists confronting the profound policy implications and social consequences of science and technology. The threat of nuclear weapons to human security, which was uppermost at that time, still persists more than a half century later. But today fundamental questions are being asked in virtually every field of social life regarding the role and social responsibility of science and scientists in promoting human security. Never before has science possessed such immense power for promoting human welfare. Yet never before has it posed such immense threats to human security and social welfare. These contradictory trends are the result of the growing gap between the speed and reach of technological innovation and the slower development of public policy, global governance and cultural evolution. Reviving the deep concerns of the Academy's founders, Part 1 of this issue of *Cadmus* examines issues discussed at an international conference hosted by WAAS, CERN and the United Nations Office in Geneva last November.

Never before has the need for democratic governance been so great or its weaknesses and limitations so apparent. No other social system has been so effective in generating and releasing the vast social potential of ideas, knowledge, values, aspirations, energies, tools, technologies and organizational capacities. At the same time, corruption, plutocracy, mismanagement, abuse of power, oligarchy, vulgar populism and aggressive sectarianism are widely prevalent in democratic states. This issue also includes two papers reflecting conclusions of a high level international conference conducted at the Library of Alexandria on "Democracy for the 21st Century" last December focusing on both sides of the equation. Democracy succeeds only when the institutional structures of self-governance are supported by a culture of liberalism and respect for individual human rights. A true understanding of the problems and potentials of democracy requires that we view it as a complex social system that encompasses political, legal, economic, social and cultural dimensions.

Effective policy and institutions are essential conditions for addressing today's global social challenges, but they are not sufficient. Effective action is also severely constrained by prevailing social theories. We are prisoners of our thoughts. The radical changes required in economic policy and institutions to promote inclusive, sustainable welfare and well-being are obstructed by outdated competitive models of global security, narrow nationalistic political theory, mechanistic Newtonian economic concepts and fragmented social theory. This issue of *Cadmus* also includes several papers on the need for new theory to be presented at the XIII International Colloquium at the University of Lisbon in May 2016. They examine prevailing myths regarding the market, money, financial systems, public investment, employment and social power, which obstruct concrete steps to promote equitable economic opportunity and security for all.

We hope you enjoy this part.

The Editors

Onwards!

Reinforcing Democracy for the 21st Century*

Ismail Serageldin

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Abstract

Universal suffrage has been the primary goal of democratic evolution. Despite elections and other measures taken to ensure democratic rights, some desired outcomes such as equality and transparency are not being met. The current mode of our democratic systems is archaic in addressing the world's multifaceted global crises. So, there's a dire need to incorporate new elements of democratic governance to address the issue. Humanity now lives in a transition period, so the path may not be easy. But the scientific and technological revolution underway is rapidly changing the mindsets of people and helping them exercise their rights. The article thus focuses on how democracy serves as the best system to ensure human rights and provide for a better society and also, how current models of democratic governance which matured in the last century can be improved in the 21st century, which is instrumental for meeting the challenges humanity confronts today. – Editor

1. Understanding what Democracy Means...

Humanity has ranged far and wide on a journey of exploration and discovery on the complex issue of what democracy is all about.

Many have looked at the evolution of systems of governance in the West and in the East.

Major milestones of that evolution have been identified thus far by historians.

The key stages of democracy in terms of content, as far as I can document, are the following:

- Limiting absolute rights of the monarch
- Guaranteeing some fundamental rights to subjects
- Creating a social contract between the government and the governed
- Limiting the power of government—separation of powers
- Legitimacy of the government comes from the consent of the governed
- The voice of the sovereign people is represented by an elected government
- The right to participate in electing that government was the privilege of the few
- Universal suffrage for all

* This article is based on the closing remarks delivered by the author at the international conference on Democracy for the 21st Century in Alexandria, Egypt on 11th December, 2015.

In general, democracy is seen as the best means to protect individual freedom and to prevent the emergence of dictatorship by holding the legitimacy of the government hostage to the consent of the governed. Elections are deemed the key tool for that, and thus the search for achieving universal suffrage has been the primary goal of democratic evolution.

But democracy as a system of government—so eloquently and succinctly described by Lincoln as “Government of the people, for the people, by the people”—is intended to achieve certain desired outcomes, including:

- Freedom
- Justice
- Equality
- Social choice
- Participation
- Due process
- Rule of Law
- Protection of minorities
- Transparency
- Accountability

And it has become apparent that in many countries, despite regular elections and other trappings of the modern democratic state, these desiderata are not being fulfilled, or at least not sufficiently, to meet the expectations of the public.

Some argue that we have in the last century focused on expanding the base of those who have the right to vote, automatically accepting the elected governments that became the representative of the people. But experience towards the end of the century shows that despite broadening the base of participation to universal suffrage, corruption, special interest groups and lobbies, perpetuation in office due to the advantages of incumbency, and other problems have emerged. The presence of a vigorous free press and an active civil society are a few of the bulwarks beyond elections that seem to be required for a healthy democratic system which has better chances of responding to the needs and wishes of the people.

Since we are conscious of the fact that many of the ideas that govern our democratic systems are almost 200 years old, could we not improve and add to them in the light of the changing world in which we live? Given the amazing transformations taking place in the world, driven by globalization and an unprecedented revolution in science and technology, especially in ICT and the enormous penetration of connectivity through the internet, mobile telephony and such media as Facebook, our world is different from that of Montesquieu, Jefferson and Madison.

“Whatever the shortcomings of democracy are, the treatment is to provide more democracy.”

Three important questions need to be answered:

- Are the current modes of operation of democratic systems delivering to the desired outcomes? No, or at least not enough!
- Are we confusing means (elections) with results (desired outcomes)? Too frequently observers make this mistake...
- Are there new instruments that we could incorporate into our democratic models that would bring us closer to these desired outcomes?

First I would like to record that I am not in any way a pessimist, that I remain profoundly optimistic about democracy and its promise for the 21st century, and that whatever the shortcomings of democracy are, the treatment is to provide more democracy...

Let us just look back at the last century: the 20th century. We could rightly call it “the century of democratic expansion”. Indeed, despite the turbulences and wars, democracy surged forward during the last century, both in terms of reaching more countries, and in terms of expanding suffrage in the countries where it was already accepted as a form of government.

The world was transformed in the 20th century. At the start of the 20th century the Western World was dominant and its values were far from benign. Colonization, racism, gender discrimination were the order of the day. European empires ruled or dominated the earth, with the US emerging as a major power. Women, youth and many European men did not get to vote. Then came World War I, the Great Depression, and the rise of totalitarian systems: communism, fascism, Nazism, with all the horrors that they would commit... Finally came the bloodbath of WWII and the civil war that accompanied the Chinese Communist Revolution.

Then the second half of the century saw the foundation of the UN, the Universal Declaration of Human Rights and the world saw the emergence of the Cold War and the conflicts in Vietnam, Cambodia and other places, but murders and mayhems were permanently left behind after WWII. Nazism and Fascism were largely defeated, and Communism’s turn was to come. Decolonization was spreading everywhere by the 1960s, the democratic transformation of most of Latin America took place in the 1980s, and upon the collapse of the Soviet Union, and of Eastern Europe in the 1990s, the march of democracy seemed unstoppable. In Europe the EU emerged as the greatest democratic transformation of all, and with it came peace. In one generation the youth of Germany and France could no longer envisage that their countries would ever go to war, an unimaginable dream for their parents and grandparents. Internationally, we built on the legacy of the Universal Declaration of Human Rights, and we had CEDAW (Convention to Eliminate Discrimination Against Women), and by the end of the century we even had the Convention on the Rights of the Child.

And so, on the journey of exploration that has seen the surge of democracy, and with the emergence of so many examples and models, with criticism and response, with scandals, crises and revivals, we need to acquire a much more realistic appreciation of the complexities of democratic governance in this increasingly complex world.

In the words of T.S. Eliot,

*“We shall not cease from exploration,
And the end of all our exploring,
Will be to arrive where we started,
And know the place for the first time.”*

But if we see the destination with renewed clarity, we recognize that transitions from dictatorship to democracy are particularly arduous and challenging.

2. Transition from Dictatorship to Democracy

At the end of the 20th century and the beginning of the 21st century, the world of the 20th century is no more, thanks to the advent of the internet, globalization, local identities...

A new scientific revolution has been underway, from ICT to biology. Profound economic transformations appeared with the rise of China and the emerging markets, and the widespread penetration of new technologies, especially the internet and mobile telephony with more lines than the planet’s human population. Social connectivity touches almost everyone on the planet, and all that is new is instantly shared across the world.

Such transitions are difficult. Our region is awash with broken dreams and human blood. In many of our countries, corruption runs from the lowest bureaucrats to some of the custodians of the highest offices. Oligarchs are emerging between the cracks of the breaking old system, as the new system is still not fully formed... There is anxiety among those who know that the old system is vanishing, while the youth drift between uncertainty and aimlessness... With violence in the streets, and rampant profiteering and black markets, with a virtual despair among the many who seek a life of dignity amidst the ruins of bygone systems and the incompleteness of the successor systems, the general outlook for a system rooted in revolutionary change can indeed be bleak...

The economic underpinning for transition democracies is essential—people expect improving living conditions—but transitions provide a very poor climate for economic development.

In addition, periods of transition witness an explosion of many local identities asserting themselves and many hitherto suppressed tensions and conflicts coming to the fore. Indeed, authoritarian regimes do not resolve society’s profound problems, they keep them suppressed, “under the lid” so to speak, and therefore when democracy arrives all these old issues come out again and provide fodder for demagogues and allow the emergence of oligarchies....

So the role of leaders in transitional times is important. Who can underestimate the contributions of leaders such as Mandela and Tutu in South Africa? And as we saw in the

“Are there new instruments that we can incorporate into our democratic models that would bring us closer to these desired outcomes?”

case studies of Latin America and Eastern Europe, how to prevent the emergence of oligarchies is very important in crucial times when new institutions of governance are taking root in the fragile periods of transition from dictatorship to democracy.

3. Today: New Instruments, Innovations

But beyond the issues in transitions towards democracy, even in mature democracies, as in Europe and the US, there are a number of danger signals of trends that could undermine the good functioning of these democracies, such as declining party membership, declining participation and generally low opinion of elected representatives and lack of trust in the institutions of government, that sometimes go as far as making people consider the government incompetent at best, an enemy at worst. But instead of just criticizing, we will move to look at possible improvements that we can make, new instruments that we can use... Thus we will explore possible answers to the third question I posed at the outset:

Are there new instruments that we can incorporate into our democratic models that would bring us closer to the desired outcomes?

Institutional developments must also encourage the emergence of the civil society which has a crucial role to play in any democratic society. It is only by practicing democracy that people will learn to establish trust in the government system.

4. So, Where Are We Now in the Arab World?

We are in a transition period, and we cannot expect smooth sailing...

But as Shakespeare said,

*“There is tide in the affairs of men
Which taken at the flood leads on to fortune
Omitted all the voyage of their lives is bound in shallows and in miseries
On such a full sea are we now afloat
And we must take the current when it serves
Or lose our ventures...”*

We shall not lose our ventures!

Our young people will create the future which past generations have not been able to achieve...

But what about those of us who are not so young anymore?

I believe that we are young at heart...

For indeed, the years may wrinkle the skin, but to give up our ideals wrinkles the soul. The years may mark our face, diminish our physical vigor, whiten our hair and limit our eyesight, but we can remain young at heart... for You are:

“The years may wrinkle the skin, but to give up our ideals wrinkles the soul.”

*“As young as your faith, as old as your doubt;
As young as your dreams, as old as your cynicism;
As young as your self-confidence, as old as your fear;
As young as your hope, as old as your despair.”**

*“If not now,
when? If not
us, who?”*

You will remain young as long as you believe in the beauty of your dreams, as long as you believe in hope, cheerfulness and courage...

Only if you give in to pessimism, and lose your heart to cynicism, then, and then only, are you growing old.

And then, indeed it is as Douglas MacArthur said: “you just fade away”.

But the dreams will not fade away... The dreams are there for they inspire us all to new levels of effort...

To look at democracy as Amartya Sen was quoted saying:

“Democracy is equal authorship of collective life”.

To look at our legislative tasks and think of them as:

Fashioning the wise constraints that make people free.

To look at the dawn of a new era and live by the immortal words:

There are those who look at things as they are and ask why.

But we are among those who look at the world as it could be and ask why not...

To confront these turbulent times in our world and take up the challenge of the future... for...

If not now, when?

If not us, who?

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* From a poem by Samuel Ullman (1840-1924) which was a favorite of General Douglas MacArthur (1880-1964) who quoted it frequently and kept a copy of it on his desk.

Debugging Democracy

Alexander Likhotal

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Abstract

Democracy was the most successful political idea of the 20th century. However since the beginning of the new century democracy has been clearly suffering from serious structural problems, rather than a few isolated ailments. Why has it run into trouble, can it be revived? In the consumption driven world people have started to be driven by the belief in economic prosperity as the guarantee of human freedom. As a result, human development and personal status have become hostages of economic performance, deforming basic civilisation's ethical matrix. However in 10-15 years, the world may be completely different. We are looking at communications and technology revolutions occurring in very abbreviated time frames. Soon, billions of people will interact via a fast data-transferring Metaweb, and it will change social standards as well as human behaviour patterns. Integrated global economies functioning as holistic entities will spur a deep reframing of global governance, shaping a new configuration of political, economic and military power. One can hardly expect that these changes will leave democratic mechanisms intact. It's a pivotal moment for all of us because we are facing paradigm changes in our way of life. We clearly need a new political vision that is deliverable quickly. Democracy can be reset if it can provide a platform for collective judgement and individual development—in a value-driven process, when values manifest themselves in concrete and socially meaningful issues, and are not reduced to the economic optimization and politics of the wallet. In other words, the only remedy to resolve the crisis of democracy is more democracy.

Democracy was the most successful political idea of the 20th century. Just a few years ago it looked as though democracy would dominate the world. Upbeat articles and euphoria flourished. By 2000 *Freedom House* classified 120 countries, or 63% of the world total, as democracies.

Between 1980 and 2000 democracy experienced a few setbacks, but since 2000 there have been too many to be listed as exceptions. Even in its heartland, democracy is clearly suffering from serious structural problems, rather than a few isolated ailments. Political systems have been undergoing dramatic changes in the past decades driven by globalization and neoliberalism. Vital democratic institutions have been tarnished and manipulated.

Why has democracy run into trouble, can it be revived?

According to the usual explanations of the Western writers, democracy as a model has been attractive, because democracies are on average richer than non-democracies, are less

likely to go to war and have a better record of fighting corruption. More fundamentally, democracy lets people speak their minds and shape their own future and their children's.

Why then the crisis? All is still there—democratic countries are richer, more stable, less corrupt and more liveable. Why the crisis?

The answer is that democracy is not only about how people live. It's also about what they live for—it's about human dignity, self-esteem, meaningfulness, sense of fulfilment. It's about values!

"In the absence of basic human rights, economic life as we know it today is inconceivable."

The first time I thought about this was in August 1968 after the Prague Spring was crushed by the Soviet Union and its allies, feeling the shame, total helplessness and hopelessness.

Today I feel the same just looking around.

Terror in Paris. Crimea annexation, Russian plane shot down by Turkey, refugee tragedy, wave of nationalism sweeping over Europe... One thing is clear.

World governance has gone impotent. G7, G20, UN, World Bank, EEC, BRICS, UNESCO, World Economic Forum and the likes are ineffective.

Dozens of important organizations, dozens of important presidents, thousands of important ministers, millions of spies, analysts, the CIA, the Russian Federal Security Service, MI-6 and so on. An incredible financial, industrial, intellectual capacity is getting wasted.

They run the world. But they run it really badly.

What went wrong?

There are existential, political and operational reasons.

First is the degeneration of liberal values.

The modern market economy was a natural outgrowth of the rise of liberalism and political democracy in the West. The extension of freedom and democratic rights to every citizen has gradually led to the emergence of economic democracy as well, in which each individual casts monetary votes according to his individual needs and capacity. In the absence of basic human rights, economic life as we know it today is inconceivable.

But the further evolution of this value has played a trick on civilization. In this consumption driven world, people have started to be driven by the belief in economic prosperity as the guarantee of human freedom. Material prosperity has become implicitly related to the extent of individual freedom. Personal wellbeing gradually has turned from a tool of liberal values into a competing goal, gradually devaluing and marginalizing these values. That is why the

threat to prosperity standards (leading to unbridled economic growth) is being seen as the erosion of freedom.

“Instead of lamenting about the crisis of democracy, we need to debug and upgrade the democratic mechanisms reflective of the new drivers, uncertainties and systemic challenges, rescue democracy from being a hostage of traditional geopolitical considerations and banal economic growth concerns.”

As a result, human development and personal status have become hostages of economic performance, deforming basic civilisation’s ethical matrix. Democracy, with economic issues dominating parliamentary agendas, has gradually been reduced to an instrument of economic optimisation. In the political sphere, the end of the Cold War has paradoxically accelerated this process. After World War 2 many people of the world were attracted by the Western model, by its “soft power”. Its high economic efficiency, rule of law, human rights turned the democratic system into a shining city on a hill for many especially when compared to the repressive and economically less efficient models.

The socialist system implosion has devalued and erased the stark comparative advantages of the Western political system. Not being able to use anymore the repressive models of the East block as a reference point, the West was challenged to start “sweeping in front of its door”, to confirm and prove the democratic model’s moral advantages in its own daily reality. But instead it has ceded the temptation to “establish” its gains in the Cold War victory, thereby quickly converting moral principles into geopolitical instruments.

The degree of euphoria that swept the ruling elite in the West after the collapse of the USSR was explicit in Condoleezza Rice’s article “Rethinking the National Interest” in *Foreign Affairs*: “it is America’s job to change the world...Democratic state-building is now an urgent component of our national interest”. Well, as they say, “we wanted the best, you know the rest...”, in many places the world (including where we are now) is still facing the consequences of the “democratic state building” program. And indeed, after Abu Ghraib, WikiLeaks and Snowden revelations it was difficult to expect that people would continue to see a “torch” of the future in the Western model. However, instead of lamenting about the crisis of democracy, we need to debug and upgrade the democratic mechanisms reflective of the new drivers, uncertainties and systemic challenges, rescue democracy from being a hostage of traditional geopolitical considerations and banal economic growth concerns.

Already in 10-15 years, the world may be completely different. We are looking at communications and technology revolutions occurring in very abbreviated time frames. Soon, billions of people will interact via a fast data-transferring Metaweb, and it will change social standards as well as human behaviour patterns. Integrated global economies functioning as holistic entities will spur a deep reframing of global governance, shaping a new configuration

of political, economic and military power. One can hardly expect that these changes will leave democratic mechanisms intact.

1. *What are the implications of an integrated global economy for democracy? How can we sync democracy with globalization? How can we enable the democratic decision-making mechanisms at the global level?*

Since the dawn of the modern democratic era in the late 19th century, democracy has expressed itself through nation-states and national parliaments. But globalisation has changed national politics profoundly. People today engage in social issues mainly through civil society and the use of social media as their primary tool. This holds fascinating prospects for de facto global citizenship and action, but it does something to the old type of representative democracy.

2. *What are the probable outcomes of the evolving new balance of political, economic, and military power, shifting the “centres of gravity” from West to East, from North to South, and from nation-states to private actors? Will it recreate a new “multi/uni/bi- polarity” of the world or give birth to a lateral self-adaptable and heterogeneous international network instead of a traditional states based system?*

The present-day social reality reveals new growing and influential actors. Alongside the notorious process of globalization, there is another process that receives much less attention. This is the process of “lateralisation”—the establishment of vigorous, polyphonic groups that benefit from the broad access to the IT and communications, financial, organisational, and technological means of the post-industrial world.

These “asteroids” of the social universe include various “ambitious” corporations (Apple, Uber), global diasporas, influential NGOs, various think tanks (such as Library of Alexandria), criminal consortia, etc.; all of them make up a new flexible Hybrid Universe, without any ‘formalized’ sociological “cartography” as yet but leaving ever-growing footprint on the political mechanisms.

3. *How can the IT and communications revolution change social standards and human behaviour patterns, and thus the world order? What will happen to the traditional democracy content elements (political parties, elections, representative mechanisms)?*

We never anticipated a technological revolution so extreme in its productivity that it could actually reduce marginal cost to near zero for a whole array of goods and services, making them essentially priceless, abundant and beyond the market.

In the last 20 years, we’ve seen the zero marginal cost phenomenon invade entire sectors of the world media, knowledge and information industry.

It’s a pivotal moment, not only for the global economy, but now for all of us because we are facing paradigm changes in our way of life. We clearly need a new political vision that is deliverable quickly.

From internet of information, to internet of energy, internet of things and what’s next?

Sensors are being connected to everything—every device and every human being—in one neural network. We have 14 billion sensors now. By 2020, there'll be about 50 billion sensors and by 2030, 100 trillion sensors. The first reaction is wow, we're going to connect the human race. The second reaction is, this is scary! Because all these sensors will change not only our life, but us as well!

“Democracy isn't dying, it's evolving.”

Internet of politics? The internet makes it easier to organise and agitate; in a world where people can participate in reality TV votes every week, or support a petition with the click of a mouse, the machinery and institutions of parliamentary democracy, where elections happen only every few years, where one supports a political party, look increasingly anachronistic (already today no political party has youth organisations). Internet of Politics will inevitably archive party politics. Douglas Carswell, a British member of parliament, likens traditional politics to HMV, a chain of British record shops that went bankrupt, in a world where people are used to choosing whatever music they want whenever they want via Spotify, a popular digital music-streaming service.

“Democracy can be reset if it can provide a platform for collective judgement and individual development—in a value-driven process, when values manifest themselves in concrete and socially meaningful issues, and are not reduced to economic optimization and politics of the wallet.”

There are big questions about who's going to control the networks, information flows, data security, privacy, information transparency. But there is even a bigger and more fundamental question: what are the long-term goals? what is the meaning of world development in the twenty-first century, the answer to which will define the future of democracy?

To conclude, democracy isn't dying, it's evolving.

As Alexis de Tocqueville pointed out in the 19th century, democracies always look weaker than they really are: they look confusing on the surface but have lots of hidden strengths. Being able to install alternative leaders offering alternative policies makes democracies better than autocracies at finding creative solutions to problems and rising to existential challenges, though they often take a while to zigzag to the right policies. But to succeed, both fledgling and established democracies must ensure they are built on firm foundations.

Complacency in these matters could easily lead us towards whatever we associate with the opposite of democracy in the years to come.

My point is that the people are not estranged from democracy. They are concerned about the eroding environment, poverty, corruption, unhealthy food, ineffective crime

policies, unfair educational system, the erosion of care for the sick and elderly. They feel that “traditional democracy” does not do well in addressing these concerns, let alone solving them. People haven’t abandoned politics, but politics, they feel, has abandoned them. So, democracy can be reset if it can provide a platform for collective judgement and individual development—in a value-driven process, when values manifest themselves in concrete and socially meaningful issues, and are not reduced to economic optimization and politics of the wallet.

In other words, the only remedy to resolve the crisis of democracy is more democracy.

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Social Responsibility and Self-governance by the Scientific Community

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Abstract

Over the past century there have been many profound scientific, technological, economic and social transformations. In the near future, the most dramatic breakthroughs will probably be achieved through combinations of various scientific disciplines, such as work cutting across physics, molecular biology, neurosciences, biotechnology, nanotechnology and microelectronics, chemical genetics, energy technologies, etc. There are many who, facing the next century, wonder if it will be possible and/or desirable to continue along the path of such prodigious changes. Technological advancement in new products and new ways of organizing human work is one of the most important concerns of our future. These changes in technology are not followed by change in human spirituality. In fact, looking at the time scale spirituality changes linearly in contrast to technological advancement which changes exponentially. On top of that, technologies pose threats, either by accident or through malevolence, to the natural and human environment. Thus, in time scale there is a bigger and bigger difference between what we do and who we are. Preservation versus dynamism is one of the many important unknowns in the coming future. Therefore, understanding the full potential of tomorrow's technologies to contribute to human well-being calls for a better understanding of the ways in which technological changes interact with the human capacity to accept them.

There is in Plato's *Phaedrus* a story about Thamus, the king of a great city of Upper Egypt. For people such as ourselves, who are inclined (in Thoreau's phrase) "to be tools of our tools", few legends are more instructive than his. The story, as Socrates tells it to his friend Phaedrus, goes this way: "Thamus once entertained the god Theuth, who was the inventor of many things, including number, calculation, geometry, astronomy, and writing. Theuth exhibited his inventions to King Thamus, claiming that they should be made widely known and available to Egyptians. Socrates continues: Thamus inquired into the use of each of them, as Theuth went through them expressing approval or disapproval, and judged Theuth's claims to be well or ill founded. "It would take too long to go through all that," Thamus is reported to have said for and against each of Theuth's inventions. But when it came to writing, Theuth declared, "Here is an accomplishment, my lord the King, which will improve both the wisdom and the memory of the Egyptians. I have discovered a sure receipt for memory and wisdom." To this, Thamus replied, "Theuth, my paragon of inventors, the discoverer of an art is not the best judge of the good or harm which will accrue to those who practice it. Those who acquire it will cease to exercise their memory and become forgetful;

they will rely on writing to bring things to their remembrance by external signs instead of by their own internal resources. What you have discovered is a receipt for recollection, not for memory. And as for wisdom, your pupils will have the reputation for it without the reality: they will receive a quantity of information without proper instruction, and in consequence be thought very knowledgeable when they are for the most part quite ignorant. And because they are filled with the conceit of wisdom instead of real wisdom they will be a burden to society.”

Over the past century there have been many profound scientific, technological, economic and social transformations. There are many who, facing the XXI century, wonder if it would be possible and/or desirable to continue along the path of such prodigious change. No reasonable person could deny that science and especially technology have been a major force in making the world we live in a better place, but it is always important to keep in mind that in this process they have not operated independently of the society in which they are imbedded. In this process we are facing risks of ignoring the potential that they offer for improving the condition of humankind and the state of nations by over- or underregulation, and over- or undercapitalisation of new developments. On top of that, we keep accepting

“An increased opportunity for human agency is thus offered by social constructivism rather than technological determinism.”

uncritically the enthusiasm about new developments while neglecting the social, economic, political constraints, and have practiced to overlook secondary effects which are often more significant than the basic problems. An increased opportunity for human agency is thus offered by social constructivism rather than technological determinism. It is not likely that the ability to influence the course of technological change will be evenly distributed among the population as a whole. To the contrary, social constructivist analyses have often shown how differences in power and access to resources have shaped technological change. Often particular technologies may be devised, selected, and disseminated because they serve the interests of a particular group, possibly in opposition to the interests of other groups. No doubt, technology confers power, as C. S. Lewis has reminded us, “Man’s power over nature is really the power of some men over others with nature as their instrument.”

“An analysis of the governance of scientific knowledge in the contemporary world shows the practical incompleteness, fragility, obsolescence and often failure of attempts to govern science.”

The full potential and governance of science and tomorrow’s technologies and innovations as contribution to human well-being, seem to be depending heavily on the capacity and risks for a better understanding of the ways in which performance trends interact with societies’ readiness to embrace economic, social and technological changes. The emergence of these

risks is shaped by forces other than pure scientific feasibility, and will depend not only on the extent of the actual and comprehended dangers of new scientific discoveries and in particular technologies but also, and crucially, on social and political choices. An analysis of the governance of scientific knowledge in the contemporary world shows the practical incompleteness, fragility, obsolescence and often failure of attempts to govern science.

“Scientific advances are most likely to arise, or are most easily promoted, when scientists from different disciplines are brought together and encouraged to free themselves from disciplinary constraints.”

Scientific progress can be of various types/discoveries of phenomena, theoretical explanations or syntheses, tests of theories or hypotheses, acceptance or rejection of hypotheses or theories by the relevant scientific communities, development of new measurement or analytic techniques, application of general theory to specific theoretical or practical problems, development of technologies or useful interventions to improve human health and well-being from scientific efforts, and so forth. Consequently, many different developments might be taken as indicators, or measures, of progress in science, but very few as controlling it.

One of the best known modern theories of scientific progress is that of Thomas Kuhn. Science, in Kuhn’s view, is usually a problem-solving activity within clear and accepted frameworks of theory and practice, or “paradigms”. A quite different account is that of John Desmond Bernal* who was inspired by Marxist social science and ideals of planned social progress. Whereas in Kuhn’s view science progresses according to its inner logic, Bernal asserted that intellectual and practical advances could be engineered and managed. Derek Price’s vision of a quantitative “science of science” has focused less on how innovations arise than on how they spread and how their full potential is exploited by small armies of scientists. There are also evolutionary models of scientific development, such as that of the philosopher David Hull. Extending Darwin’s view of evolution by variation and selection, Hull argues that science continually produces new ideas, which, like genetic mutations, are essentially unpredictable.

Autonomy has traditionally been seen as a major characteristic and crucial precondition for scientific progress. Even when science and technology have manifested problems of considerable magnitude it is often more difficult to terminate a problem than to continue with it, which is one of the greater defects of our system of governing science and technology. Ernest Fitzgerald said: “There are only two phases to a major military program. The first: It is too early to tell, the second: It is too late to stop.”

* See http://www.brainyquote.com/search_results.html?q=john+desmond+bernal

The idea progresses in the view that scientific advances are most likely to arise, or are most easily promoted, when scientists from different disciplines are brought together and encouraged to free themselves from disciplinary constraints.

Gaining an understanding of the meaning of words is often the beginning of knowledge. The linguistic roots of the word “technology” can be traced to the Indo-European stem *tekhn-*, which seems to have referred to woodworking. It is the source of the Greek word *techne*, which can be variously translated as “art”, “craft” or “skill”. It is also the root of the Latin word *texere*, “to weave”, which eventually took on the larger meaning of fabrication or construction. The term “technologist” was occasionally used by Aristotle and others in his time, but in their usage it referred to a grammarian or rhetorician. By the early eighteenth century the word had come close to its present meaning when an English dictionary defined it as “a Description of Arts, especially the Mechanical”.

Significant progress, which is an uncertain process with many unforeseeable consequences, is likely across a broad spectrum of technologies such as computing, genetics, brain technology, new materials, in particular miniaturization and smart composites, energy, transportation and environmental tools and systems. But, perhaps the most dramatic breakthroughs in the not-too-distant future will be achieved through combinations of various scientific disciplines. For example, work cutting across biochemistry, physics, molecular biology, neurosciences, biotechnology, nanotechnology and microelectronics is all set to make significant advances in the field of bioelectronics, and neuroinformatics. The major advances in other cross-disciplinary fields could take to the creation of synthesized gene-derived enzyme catalysts, non-existent in nature; biological processes to fabricate molecular structures and more complex materials; bioengineered plants to produce pharmaceuticals and raw materials for plastics, and many more.

History has demonstrated that the availability of a particular scientific discovery or innovative technology is no assurance that its potential would be extended only to useful applications, or that it would diffuse widely or render its fullest utility to those who might use it most productively. No doubt tomorrow’s technologies will contain destructive potential that will be both powerful and difficult to control. They could pose threats to the natural and human environment, either by accident or through malevolence. Furthermore, purely technological risks involve the possibility of greater vulnerability to systems. Many fear that as the world becomes more diversified, decentralized and dependent on technology, there will be a higher risk of unmanageable failures in either the physical or social systems that underpin survival. Certainly, at the same time, one should not ignore effects related to ethics, values and mindsets, having in mind that everything depends on a complex interaction with underlying economic, social and political conditions.

American sociologist W.F. Ogburn began to wander in the tracks of Marx, as early as 1922, arguing that inventions occur most often in the field of material technology, perhaps because the advantages of improvements in technology are self-evident. A strain or stress has been set up between the new technique and various organizational aspects of the social

system. The result being disequilibrium between new technology and old social organization, which is termed social lag.

“Technological change does not take place in a social vacuum. Science and technology are human creations, and because humans are social creatures, scientific and technological change is necessarily a social process.”

The theory of cultural lag formulated by William F. Ogburn is predicated on the belief that habits, thoughts, values, and social arrangements often fail to change at the same speed as scientific and technological innovations. They move ahead, but many other things lag behind. Our spirituality does change very slowly in time compared to scientific and technological advancement, what in time scale makes us human beings more different compared to what we experience in practice. The belief that technology acts as an independent force in our life, unaffected by social forces, is known as ‘technological determinism’ and if it is true, we have become the servants of technology instead of its master.

Technology has deeply altered our modes of life. With each development in technology there comes, however, some disturbance to the effective working of the existing social order. The institutions of family, religion, morality, marriage, state, and property have been altered. On top of that inventions and discoveries in science have shaken the foundations of religion while at the same time strengthening nationalism. People are becoming more secular, rational and scientific but less religious in their outlook. The function of the state or the field of state activity has been widened. Modern governments which rule through the bureaucracy have further impersonalized human relations. In brief, people in the Middle Ages believed in the authority of their religion, no matter what; today, we believe in the authority of our science and technology, no matter what, not taking much care of how they are controlled.

The interrelation of science, technological and cultural changes is especially relevant in the globalized era in which we live. Closely associated with a belief in technological determinism, convergence theory argues that the nations of the world are becoming more similar to one another—that is they are converging—as they make use of the same technologies. Although this belief has been widely accepted, much of the evidence for convergence theory is impressionistic and anecdotal. Although the case for convergence theory is possible on both theoretical and empirical grounds, the role of technological change in promoting the convergence of societies is less certain. It would certainly be inadmissible to think of technological change as a universal solvent that dissolves all prior cultural, religious and social patterns so that they are dictated by modern technology.

Certainly, possible applications of technology two or three decades from now call for a better understanding of the ways in which scientific and technological performance trends interact with societies’ readiness to embrace and control economic, social and technological

change. In this case, it is important to keep in mind that technological change does not take place in a social vacuum. Science and technology are human creations, and because humans are social creatures, scientific and technological change is necessarily a social process. In recent years, the study of technological change has been strongly influenced by a perspective known as “social constructivism”. According to this approach, technological change does not occur because new devices and processes demonstrate their clear-cut superiority over other ways of doing things. For social constructivists, the analysis has to begin with the need to explain why certain technologies are assumed to work better than others.

Today’s science and technology leaves us both exhilarated and terrified. Recent technological developments have presented us with such marvels as spacecraft leaving the solar system, instant access to billions of Internet web pages, and diseases cured through gene therapy. At the same time, the inexorable march of technology has produced global pollution, they could pose threats to the natural and human environment, overpopulation, and the threat of nuclear annihilation. On many occasions technological change has also produced social disruptions, as when automation destroys jobs in a particular industry or a new weapon upsets the balance of power between nations. Ever since technologies were employed these tools often have had a double edge—not only for survival but also for conflict. Scientific achievements and technological advances *per se* provide no foregone conclusions about how they will be used. Even the initial steps in the long-term development and diffusion of radical innovations could pose unusually strong challenges to existing ethical and cultural standards, and put greater burdens on people’s tolerance of the unknown and foreign. This could generate serious social unrest.

As Bacon expressed, it is a world in which the idea of human progress has been replaced by the idea of technological progress. The aim is not to reduce ignorance, superstition, and suffering but to accommodate ourselves to the requirements of new technologies.

The answer is perhaps given by Vaclav Havel posed in an address to the U.S. Congress. “We still don’t know how to put morality ahead of politics, science, technology and economics, we are still incapable of understanding that the only genuine backbone of our actions— if they are to be moral—is responsibility. Responsibility to something higher than my family, my country, my firm, my success.”* And that is the most important responsibility to the future.

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References

1. Taro Kuriyama, “Phaedrus” *GradeSaver* <http://www.gradesaver.com/phaedrus/study-guide/summary-discussion-of-writing-274b-277a>
2. Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962).
3. Derek J. de Solla Price, *Little Science, Big Science and Beyond* (New York: Columbia University Press, 1963).

* <http://www.vhlf.org/havel-quotes/speech-to-the-u-s-congress/>

4. David Hull, *Science as a Process: An Evolutionary Account of the Social and Conceptual Development of Science* (Chicago: University of Chicago Press, 1988).
5. *English-World Information*, wordinfo.info/unit/2664
6. Ogburn's Theory, *Boundless* www.boundless.com/sociology/textbooks/boundless-sociology-textbook/social-change-21/sources-of-social-change-139/ogburn-s-theory-766-7484/
7. Daniel Chandler, *Technological or Media Determinism* www.visual-memory.co.uk/daniel/Documents/tecdet/tdet02.html
8. Convergence Theories, *what-when-how* <http://what-when-how.com/sociology/convergence-theories/>

Foundations of Economic Theory: Markets, Money, Social Power and Human Welfare

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Abstract

The future science of Economics must be human-centered, value-based, inclusive, global in scope and evolutionary in perspective. It needs to be fundamentally interdisciplinary to reflect the increasingly complex sectoral interconnections that characterize modern society. It must also be founded on transdisciplinary principles of social existence and human development that constitute the theoretical foundation for all the human sciences. This paper examines three fundamental aspects of modern economy to illustrate the types of issues and perspectives relevant to a reformulation of Economics framed within a broader political, social, cultural, psychological and ecological context. It examines the social forces responsible for the present functioning of economies, which can be effectively addressed and controlled only when they are made conscious and explicit. Whatever the powers that have shaped its development in the past, the rightful aim of economic science is a system of knowledge that promotes the welfare and well-being of all humanity.

Markets and money are instruments for the conversion of social potential into social power. They harness the power of organization to transform human energies into the capacity for social accomplishment. The distribution of rights and privileges in society determines how these social institutions function and who benefits. Freedom means access to social power and is only possible in the measure all forms of that power—political, economic and social—are equitably distributed. The current system is inherently biased in favor of privileged elites reinforcing domination by the more powerful. The emergence of the individual is the vanguard of social evolution and the widest manifestation of creative individuality is its pinnacle. This emergence can only be fully achieved in conditions of freedom and equality. Economic theory needs to make explicit the underlying forces determining the distribution of power and its benefits, so that conscious policy choices can be made to reorient markets and money to serve their intended purpose promoting human welfare and well-being.

1. Introduction

Less than a decade after the most severe global economic crisis in a century, the world economy is once again veering toward the edge. Economists, central bankers, corporate leaders and politicians are scrambling to understand and respond to the threat. But as in 2008, debate focuses on how to tinker and patch up holes in the existing system. Few are willing to recognize the deeper implications. Centrally planned economies were discredited a quarter century ago, leading to a resurgence of neoliberal theory and public policy that

dismantled social welfare systems, disempowered labor unions, liberated the wealthy from the burden of taxation, and enabled multinational corporations to stalk the earth unhindered by competition and rule of law. Prevailing economic philosophy is a reversion to obsolete concepts and policies.

The call for New Economic Theory arises from many sources and resonates with many different concerns. The present crisis has exposed the inherent fault-lines and structural deficiencies of the existing economic model. Meanwhile most economists remain preoccupied with theorizing about what went wrong within the confines of the existing theoretical framework rather than re-examining the fundamental premises on which it exists and looking beyond for a more viable alternative. Ten years ago such a call would have met with derision from leaders, economists and the public-at-large. Today there is a growing sense of unease, inklings of Hamlet's deeper perception that all is not well within the state of Denmark. A shift in focus is needed from efforts to reinforce an inherently flawed and failing system to conceptualizing a better one. That necessitates a reexamination of the social and political foundations of modern economic systems to fathom the underlying forces that have shaped their development and are now driving evolution to something else.

The quest for new theory needs to lay bare both the explicit assumptions and implicit premises on which current theory resides. It needs to reject the notion of immutable economic laws in favor of the concept that economic systems are human constructions framed under the pressure of prevailing circumstances and forces in the past and, therefore, capable of continuous evolution and radical improvement. Formulation of new theory should commence with a thorough re-examination of economy from first principles. In an age of rapid globalization, accelerated social evolution and unprecedented integration, it is necessary to re-examine the narrow spatial, temporal and conceptual boundaries that circumscribe current economic concepts, models, institutions and policies. The future science of Economics must necessarily be global rather than national in scope and evolutionary rather than static in perspective. It needs to be fundamentally interdisciplinary in order to fully embrace the increasingly complex sectoral interconnections that characterize modern society. It must also delve beneath the surface of economic activities and institutions to identify the transdisciplinary principles of social existence and development which constitute the theoretical foundation for all the human sciences.

This paper examines three fundamental aspects of modern economy to illustrate the types of issues and perspectives relevant to a reformulation of Economics. It seeks to frame the functioning of economy within a broader political, social, cultural, psychological and ecological context. It seeks to unveil underlying social forces responsible for the present functioning of economies, which can be effectively addressed and controlled only when they are made conscious and explicit. The notion that economies work the way they do because of intractable social forces may be deemed expedient by practitioners, but it cannot serve as the basis for valid scientific theory. Economy and Economics are both human inventions. Whatever the forces that have shaped their development in the past, the only legitimate objective of economic science is a system of knowledge that promotes the welfare and well-being of all humanity.

The central argument of this paper is that markets and money are remarkable inventions designed to organize human relationships into power for social accomplishment. They are instruments for the conversion of social potential into social power. They harness the power of organization to transform human energies into social capacity. The distribution of rights and privileges in society determines how these social institutions function and who benefits. Freedom means access to social power and is only possible in the measure all forms of that power—political, economic and social—are equitably distributed. The current system is inherently biased in favor of privileged elites reinforcing domination by the more powerful. Fullest development of individual and social welfare can only be achieved in conditions of freedom and equality. Economic theory needs to make explicit the underlying forces determining the distribution of power and its benefits, so that conscious policy choices can be made to reorient markets and money to serve their intended purpose promoting human welfare and well-being.

“The only legitimate objective of economic science is a system of knowledge that promotes the welfare and well-being of all humanity.”

We start with the premise that the purpose of any economic system is to maximize the economic security, welfare and well-being of its citizens. In comparison with the past, the current system has had remarkable success providing unprecedented levels of prosperity to an expanding global population. Any critique of the current system must commence with a deep appreciation of its achievements.

2. The Market

Modern market economies are a subset and component of a much larger set of social institutions on which economy is founded and depends for its accomplishments. The birth of the primordial market was a simple device designed to bring buyers and sellers together at a specific place and time to exchange goods. The traditional village fair gradually coalesced into centralized urban market centers linking different regions of the countryside with one another and through sea and land routes to more distant places. The rise of the annual cycle of Champagne Fairs during the Middle Ages marked an early stage in the emergence of All-European markets based on the same principle.

The wealth of modern economies is founded on the ever-expanding organization of human relationships. The market is a simple but extremely powerful example of social organization that acts as a catalyst for production by stimulating exchange. Before markets, farmers had little incentive to produce anything more than they required for personal consumption and local exchange. Markets broaden and elevate the power of economies by shifting the center from production to exchange.

The creation of markets transformed subsistence agriculture into commercial agriculture by providing farmers with an incentive to maximize production and exchange it for an increasing diversity of essential and exotic goods. Eugen Weber documents how grape

farmers in an isolated corner of rural France without access to regional markets used to feed their excess grape production to the pigs, since there was only so much fruit and wine they could consume locally. Within a year after bridges and roads were constructed connecting the village with wider markets, they were exporting wine to the Middle East.¹ Adam Smith recounts the time before improvements in transportation supported the development of national markets in Scotland. Feudal barons controlling large extents of land had little incentive to increase production beyond the level needed to feed their families and large contingents of armed retainers, since surplus production beyond this level had little value. Once connected to urban markets, large landholders drastically reduced the number of their dependents—in one case from several thousand to just 50—in order to convert surpluses into a wide range of luxury goods.²

All social accomplishment is the result of the process of generating, releasing, directing and channeling human energies by organizing and coordinating the interactions and relationships between individuals, activities, and institutions. The immense capacity of market economies for production and innovation arises out of the freedom of choice and action they accord for individual initiative and innovation and for organized and finely coordinated collective action. Freedom liberates productive human energies. Market opportunities direct those energies for productive purposes. The evolution of intricate networks of markets at the local, regional, national and international levels channels those energies effectively to maximize the production and exchange of goods and services. The spatial expansion of markets enhances the range and variety of goods available and enables buyers to source products from producers with the greatest comparative advantage.

From earliest times, economy and politics have been inextricably intertwined. Freedom of production and exchange meant little without ensuring ownership and security of property, enforcing contracts, arbitrating disputes, and protection against arbitrary seizure. The most productive market economies developed in places where the rights of the individual, rule of law and protection for property were most respected. Thus, democracies and market economies evolved hand-in-hand and were mutually reinforcing. So too, markets thrived in communities with the best infrastructure for transportation and communication, as well as the most skilled, literate and well-educated people.

At a time when the power of monarchs and emperors far exceeded the capacities of any commercial enterprise, Smith opposed the mercantile policies of European governments which promoted the interests of the crown and a small community of prominent traders at the expense of the general public. He never imagined the emergence of huge multinational corporations whose economic and political power would exceed the wealth and influence of many nations and even have the capacity to undermine the ecosystem of the planet. The rise of huge trading corporations during the 18th century and private transcontinental railways and massive industrial enterprises during the 19th century shifted the balance of power and the source of threat to free markets from governments to producers, traders and transporters. The multiplication of social power generated by the Industrial Revolution generated unprecedented economic capacity while posing new threats to human freedom and creativity.

The development of market economies during the 20th century is inseparable from the development of political systems to govern the actions of enterprises, educational systems to provide the skilled manpower required, scientific research institutions to support rapid technological innovation in products and production, continuous advances in transportation and communication, combined with a dense fabric of laws and judicial mechanisms to define and protect rights and responsibilities, preserve competition, ensure fair treatment of workers and consumers, protect and support communities, and safeguard the environmental rights of present and future generations.

The enormous productive power of modern economies is a subset and an inseparable element of the growing power of an increasingly sophisticated and complex global social organization encompassing virtually all aspects of human existence. Modern economies have evolved in conjunction with stable national governments, democratic systems of governance, peaceful international relationships supported by rapid development of international law and an expanding network of international institutions, transparent judiciary systems, banking and market regulatory institutions, independent media, systems of education and research, social welfare systems, consumer and environmental protection agencies, and a plethora of other organizations.

The central importance of this underlying social fabric is dramatically illustrated by recent attempts to rapidly introduce market economies in countries that lack the capacity for democratic governance, rule of law, and social justice. The history of Ukraine and other countries of the former Soviet Union over the past 25 years presents startling evidence of how totally dependent development of an equitable market economy is on the prior and proportionate development of all the other institutions of modern social organization.³

3. Myths of the Market

However remarkable and unprecedented its achievements, by comparison with any conception of optimality, the present market economic system fails to impress. Judged in terms of its contribution to maximizing the security, welfare and well-being of all citizens, it dismally fails to effectively harness the superabundance of available productive capacity to meet the ever expanding needs and aspirations of the world's population. It fails to effectively develop and fully engage the precious and perishable human capital which represents the foundation, peak and core of humanity's advancing civilization and culture. Today approximately 200 million workers are unemployed and an estimated billion or more are underemployed. The labor force participation rate is falling while youth unemployment is rising. The present system fails to ensure an equitable distribution of the extraordinary benefits of modern economic processes to all human beings. Levels of economic inequality have risen to their highest in nearly a century. Meanwhile the basic needs and aspirations of billions of people remain unmet and levels of poverty are rising in some regions. The system fails to provide the level playing field which is the *sine qua non* for a true market economy. Multinational corporations enjoy unprecedented freedom from national accountability in a wild west of globalization. Mergers and acquisitions are restricting competition on a global scale. The present system also fails to effectively utilize financial capital for the welfare

of society. Today, the supply of money is superabundant but only a small portion of it is utilized for productive investment. Out of approximately \$250 trillion in global financial assets, probably less than 20 percent is actively engaged to support the real economy.

“Based on a quest for a natural science of economy, the Newtonian equivalent of the laws of motion, Economics is based on the conception of a mechanized, clockwork system miraculously independent of the consciousness of the human beings by whom it has been fashioned.”

However impressive today’s achievements by historical standards may be, they fail to impress when compared with the magnitude of unmet needs and underutilized capacities. All these failings are symptoms of an economic system increasingly divorced from human needs and the welfare of society. Financial markets which are intended to serve and support development of the real economy have become autonomous and increasingly divorced from it. The unbridled application of new technologies has created a rapidly widening gap between production and employment at a time when welfare systems have been cut back and individuals possess no alternative means of meeting their consumption needs. Economic activity is increasingly threatening the security of individuals, the stability of society and the sustainability of the planetary environment.

Perhaps the most compelling argument given in support of the existing market economic system is that it is better than the known alternatives. There was a time when it could well be said that monarchy was better than the alternative of a politically divided system of independent feudal barons or when the introduction of coinage represented a considerable advance over barter. That has been true of thousands of social advances in the past, each of which in turn has been eventually superseded by something better.

The deep appeal of the market economic system stems from its association with universal human values. The market is a compelling symbol of freedom, self-reliance, individuality, innovation, and creativity. By eliminating the intervention of self-enriching, tyrannical monarchs, it presents itself as the democratization of economy. Basing itself on universal principles, it purports to be guided by the social equivalent of the universal laws of nature discovered by science that govern the natural world.

The intellectual appeal of neo-classical economic theory is a mirage founded on prevailing myth and profound misconceptions which prevent intelligent debate. The market economy is not a phenomenon of nature but a creation of humanity. It is not founded on immutable universal laws, but rather on principles and rules formulated by human beings to serve specific interests, which continuously shift over time. The market economy is not a construction of God or Nature. It is a social construction of reality and our understanding of it is powerfully influenced by socially constructed ways of thinking. In quest of a natural science of economy,

the Newtonian equivalent of the laws of motion, Economics is based on the conception of a mechanized, clockwork system miraculously independent of the consciousness of the human beings by whom it has been fashioned, who formulate the rules by which it is governed, and who make the countless decisions by which it functions. We attribute almost mystical powers to the market to rationally maximize efficiency and human welfare with impartial equity and justice for all. But these powers are largely mythical. The notion of markets as impartial, unbiased, independent playing fields is a fabricated illusion.

Markets as they function today are not rational, fair, equitable or efficient, and they certainly do not maximize human welfare. The notion of fairness and equity is undermined by patent and copyright laws, which according to *The Economist*, accord rights far beyond what has been proven to be socially beneficial.⁴ It is distorted by uncompetitive monopolistic practices, excessive consolidation of industries by M&As, and tax policies that favor capital investments or employment of people and the wealthy over other income groups. It is subject to powerful influence by the lobbying of vested interests, the temptations and allurements of corrupt politicians, and biased procurement practices. It is biased by the rent-seeking of a plethora of privileged communities, including licensed professionals, which permeates the entire policy environment governing the operations of the market. For instance, an artificial constraint on the number of medical school seats in the U.S., which has remained flat from 1980 to 2006 despite a 37% increase in the population, allows doctors to extort higher prices from middle class Americans.⁵ *The Washington Post* recently drew attention to the obscure example of dentists in the USA who have exercised their influence to maintain monopolistic prices more than twice the market level on non-medical practices such as tooth whitening.⁶

The efficiency of markets is largely a question of one's definition and book-keeping. Markets do indeed encourage efficient means of production when narrowly defined at the level of the firm. At the same time they foster socially wasteful competitive activity and generate huge social costs, which are treated as externalities. The bias for capital and energy-intensive technologies over labor is not a law of nature, but rather a consequence of policies that incentivize capital investment, tax labor, price energy far below its true replacement cost, and ignore the true social costs of pollution. While the firm may maximize efficiency by replacing labor with machinery, society as a whole incurs enormous financial and social costs resulting from rising levels of unemployment and underemployment, poverty, crime, physical and mental illness, social alienation and violence. A study by Randall Wray in the USA estimated that the social costs of rising levels of unemployment equal or exceed the direct cost of employing people.⁷

As economist and former investment banker Tomas Björkman points out in his forthcoming book *Market Myths*, our adherence to orthodoxy prevents us from seeing the glaring gaps between the myth of the market and the highly unrealistic assumptions on which the neo-classical economic model is constructed, on these theoretical models and the actual way in which markets work, and on the way markets work now and alternatives that could be created while remaining within the framework of market economies.⁸ Economists are so preoccupied with understanding the minuscule characteristics and idiosyncrasies of the

present system that little thought is directed toward questioning the basic premises on which it is based or on exploring more attractive alternatives.

Economics is still governed by a mythical concept of market equilibrium. If markets tend toward equilibrium, why is economic inequality rising to historically high levels? Why have multinational corporations consolidated domination of one global market after the other? Why has oil soared to \$150 a barrel and then fallen to \$30 a barrel within a short period of time? Why do financial and property markets swing so widely from one extreme to another? Why do central banks have to suppress irrational exuberance and then try to stimulate higher investment and consumption? Why is unemployment rising inexorably in spite of the dismantling of protective labor legislation in many countries? The Newtonian conception of a world in equilibrium was rejected by physicists a century ago. Today it is universally accepted that we live in an evolving and rapidly expanding universe. The conception of eternally static forms of life was replaced by Darwin's conception of biological evolution in the 19th century. The startling speed of scientific and technological evolution is too blatantly apparent to require illustration. Yet economic theory clings to a concept of static equilibrium by externalizing the powerful forces compelling the rapid evolution of the entire global political, economic and social system.

It is understandable that the wealthy, the corporate sector, politicians dependent on them and central bankers obeying narrow constitutional mandates should cling to the present dogma and endeavor to hold it above scrutiny or reproach. But that does not explain why the vast majority of economists engage themselves in analysis and tinkering rather than in-depth questioning of the underlying premises and efforts to conceptualize a better alternative.

4. Evolution of Human-centered Economics

Society evolves by a progressive organization of human activities to an increasing extent in space and time, with increasing coordination between its myriad activities and increasing integration between the multiple layers of the social fabric. The market is an extraordinary product of human ingenuity, a social organization capable of managing inconceivable and ever increasing levels of interconnectedness and complexity with ever greater velocity and precision. Yet it is only a form of social technology. Like democracy and other forms of social technology, *its value depends on the central purpose for which it is applied, the values by which it is guided and the principles on which it is founded.*

The failings of mainstream economic theory recounted above are really minor in comparison with its most fundamental flaw—deviation from its central purpose. Social institutions are created to serve society. That is their rightful claim to legitimacy. Yet they have a nearly irresistible tendency to diverge from that intended purpose over time, as the church, the state, the military and other institutions have so often done. Like other institutions, the market has veered from the intended purpose which Smith extolled and has been diverted to serve powerful vested interests. That purpose can and must be restored. It may be argued by some that markets have always functioned in this manner subject to the same distortion, just as governments have always served the interests of an élite, regardless of their proclaimed

ideals. This is indeed the case, but does not weaken the justification for rectification. Just because every democracy has failed in its pursuit of liberty, equality and justice for all, that does not justify the *status quo*. Rather it calls for evolutionary or revolutionary action to realize the original ideal.

What is needed now is nothing less than a Copernican Revolution in Economics to liberate our minds from the myths, illusions and misconceptions on which current theory is founded. But this should be a revolution in reverse. Copernicus challenged the anthropocentric, geocentric conception of the physical universe that grossly distorted and exaggerated the place of earth and humanity in the universal scheme of things. Instead, he projected a heliocentric perspective that placed earth as a mere satellite of the sun, a tiny dot in an infinite universe. Humanity was dethroned from its place at the center. It was a humbling experience for God's chosen. In contrast, the prevailing economic model perversely positions the market, money and technology at the center and places the interests of humanity at the periphery. Its goal is to maximize economic activity, not human security, welfare or well-being. It thrives on unlimited consumption and mindless ecological destruction. It maximizes accumulation of wealth among a few, rather than dissemination of economic welfare among all. It worships illusory Gods of the market and attributes unassailable wisdom to blatantly flawed processes. *Reversing the model, we need to reposition human beings at the center of economic theory and conceive of a market system that will maximize the freedom, security, and welfare of all people.*

The choice is not simply between regulated and self-organizing free markets. Self-organizing markets are rarely or never free. The self-organizing character of the Internet does not prevent a few giant firms from controlling an increasing share of all web traffic and revenues. Free markets exist and only exist within the structure provided by democracy, rule of law and regulatory authority. Regulations that enforce rules of law, fair practices, humane standards and prevent monopoly are essential to the operation of a market economy. But that does not mean that direct regulatory intervention by government is required for the smooth functioning of every market. Much can be done by ensuring the laws and rules governing the operation of markets are fair and equitable.

A historical perspective on the origin and development of current laws and practices will make evident that other social forces have continuously intervened to distort the workings of the market in favor of the privileged and powerful. That is why a true science of economy has to be founded on a science of society which comprehends the sources of social power and the means by which the rightful exercise of that power is diverted to serve the interests of a privileged class.

The debate between public and private good is misconceived. *Markets are founded on fundamental principles of human relationship and social organization.* All knowledge, all wealth, all discovery and invention are the product of collaboration between enterprising individuals and the communities in which they function. *There can be no optimal private good for all individuals in this world without simultaneously optimizing the benefit to society as a whole. Every individual achievement is founded on the cumulative achievements of all*

humanity over millennia. Digital computing today owes its astounding accomplishments to invention of the zero, Hindu numerals and decimal place by Indian mathematicians more than 1600 years ago and their transmission by Persian scholars some four centuries later. Nothing can be thought, expressed, invented or produced without drawing on that universal reservoir of social wealth. So too, there can be no social advancement, discovery, innovation or creativity without the aspiration, inspiration and invention of creative individuals.

Markets have evolved from rudimentary origins in the distant past. In addition to growing in scale, diversity and complexity, they have also become more equitable and humane over time. There is no reason to think that the present system is the most just and perfectly attainable. Rather there is every reason to believe it is a partial and highly imperfect form of a social system with immense potential for further evolutionary advancement. The increasing concentration of wealth today and divergence of money from the real economy impose severe constraints on the further development of economic prosperity worldwide. Democracy has proven a far more powerful and stable form of government than any monarchy because it enables every citizen to enjoy political rights and freedoms. So too, market economies can only fully realize their potential for wealth generation when they create opportunities for all citizens to productively contribute and enjoy the benefits of society's labors.

Social systems evolve along multiple dimensions. The quantitative capacity, geographic reach and speed of operation of every system are a function of organization and technology. The qualitative values they manifest are a function of conscious awareness, choice and political will. A human-centered science of Economy needs to reexamine the purpose, values and principles on which the market economy functions to optimize its capacity to meet human needs, promote human welfare and foster human evolution.

5. Money

What is true of markets is equally true of money. Conventional economic theory describes the function of money as a means of exchange, unit of account and store of value. But this oft repeated formula fails to describe the reality of money or to adequately explain its remarkable powers as a catalyst for economic, social and human development. A fuller understanding of the reality of money reveals the enormous scope for more effectively harnessing its creative powers to promote economic and social welfare. Its most fundamental contribution is to human psychological development, which is the ultimate aim of civilization.

5.1. Money as Organization

The power of money arises from the fact that it is a social organization in the same way language, market and the Internet are social organizations. Language is an organized system of letters, words and sounds. The words we use have no intrinsic value other than the value we assign to them by social convention and psychological association. The power of words arises from the fact that they carry a commonly shared meaning. If each person had his or her own language, it would be useless for communication with others. The more widely a language is shared, the more powerful its words as a medium of communication. Social convention rather than intrinsic value makes words powerful.

The same is true of money. Most people regard money as a thing, even though most of the money we utilize today no longer takes the form of a tangible object. Money is not a thing in itself. It is a social convention for harnessing and organizing the power of human relationships which derives its power from the fact that the convention is shared. The development and acceptance of a common convention and standard of acceptability of money have evolved over many centuries. That convention is made possible by the institutions that issue it in standardized forms; the laws that govern its issuance, acceptance as legal tender and the rights of ownership; the procedures and mechanisms for its transference, transport, storage and convertibility; methods of accounting for it, lending and borrowing, etc.

The power of money arises not from any intrinsic value of its own, but from the complex social organization which supports its creation and utilization. The utility, productivity, use value and social power of money derive from this organization and can be multiplied without limit by enhancing the quality and reach of that organization. The wider the population covered and the greater the quality, reliability, trustworthiness and accountability of that organization, the greater the power of money. Thus, we see in times of financial uncertainty and political unrest that the value of money can shrink dramatically and even collapse altogether.

Money is a social organization consisting of an intricate network of tangible social agencies. But the reality of money is confined to its external form, structure and economic function. Money is also an intangible social institution that transcends the finite boundaries of the organizations through which it is created and operates. It is governed by informal social practices and conventions, social values and acquired rights, social influence and power that enhance its utility but are not limited by that utility. The hallmark of great speakers is not confined to their vocabulary, the content of their messages, clarity or strength of voice or correctness of grammar. It arises from a sense of trust, confidence, credibility, sincerity, conviction, courage, strength of personality, logical coherence, idealism, insight, inspiration or other intangible qualities conveyed through the act of speaking. These intangible factors can and usually do exert a far greater influence than the verbal content of the message conveyed. Thus, Churchill, Mahatma Gandhi and Martin Luther King attracted crowds in the hundreds of thousands and stirred entire nations to act on their words.

The same is true of money. The real power of money derives from the subtle fabric of society which is an unlimited reservoir of knowledge, energy and capacity for creativity and wealth-creation. Money is a subtle force. Like knowledge, it multiplies when it is shared, as Google has grown exponentially to become the most valuable company in the world based on a core strategy of free services to the global public. The immense creativity released since the advent of the Internet two decades ago reveals only the tip of the iceberg of the creative social potential which lies unperceived and unutilized. It was an understanding similar to this that prompted US President Franklin Roosevelt to address the American people on radio as soon as he assumed office in 1933. The country was in the midst of an unprecedented nationwide financial panic that had already led to closure of more than 6000 banks. Nothing FDR had learned studying Economics at Harvard prepared him for handling a crisis of this magnitude. None of the conventional policy instruments applied by President Hoover during the previous three years had been effective. Roosevelt understood that the real foundation of the banking

and monetary system was psychological and social. The value of money depends on public trust in the system, the government and the underlying economic system. In his address, he recounted to his audience the great strengths of the American people—their courage, enterprise and ingenuity. He attributed the bank failures to the cancerous spread of fear among the public, which he urged them to reject. He called on his fellow countrymen to act with courage and faith in their nation, by redepositing their hard earned savings in the bank. The following week the panic subsided and the banking system was saved.

*“The New Deal
humanized cap-
italism.”*

Crises arise from opportunities that we are unable to absorb through appropriate social organization, either because the existing system is inadequately developed or because entrenched forces powerfully oppose progress. The Great Depression was not essentially a financial or economic crisis. It resulted from the resistance posed by outmoded institutions and vested interests to a great evolutionary social transition. The New Deal humanized capitalism. It marked a new phase in social evolution, leading to unprecedented growth and prosperity.

5.2. Money as Symbol

Organization is an immense power for social productivity. But the power of money does not issue solely from being a social organization. Money is also a mental symbol and symbols possess an extraordinary power of their own that multiplies the power of organization. A 2015 report rated the value of the Apple brand at \$170 billion and as the most valuable in the world.⁹ The company’s logo of an Apple with a bite taken out of it is a symbol that represents not only the company, its products and financial assets, but all the energy, creativity, innovation, glamor and prestige associated with it. Apple products are a status symbol. A job at Apple qualifies one as a member of an élite group of hi-tech professionals. To sit on the Board or Management Team of Apple opens closed doors around the world. The CEO of Apple can meet any monarch or head of state, even the UN Secretary General or the Pope, just because of his position.

What does money symbolize? At the most basic economic level, money is a symbolic representation of all those things—products, services, technologies, physical and intellectual property, companies, and other forms of capital, etc.—for which it can be exchanged. At a deeper level it symbolizes the economic capacity of the nation that issues and honors it—the natural resources with which it is endowed, the education and skills and enterprise of its people, its physical infrastructure and industrial capacity, etc. Still deeper, it represents the degree of public trust and confidence in the stability of the society and its government, the strength and integrity of its political institutions, its capacity for self-defense and self-preservation, the quality of its educational system, its aptitude for innovation and invention, the value it accords to human life and individuality, its legal protection of property and other rights, and the prevailing cultural values such as those related to freedom, integrity and hard work. The American dollar is accepted today as a *de facto* world currency because it is regarded as a symbol not only for the enormous wealth, resources and productive capacities

of its economy, but also for the energy, social organization, individualism, creativity and freedom on which American society is based.

Symbols such as the national flag, the President's seal of office, an Academy Award, Nobel Prize, the policeman's badge, a PhD or MD from Harvard or Cambridge carry far more than utilitarian functional power. The world listens to Nobel Prize winners when they speak, even on subjects for which they have no educational or intellectual qualification. Consumers buy perfumes, watches, designer garments, and sports cars because of the actors and sportsmen depicted in advertisements. Symbols exercise an influence far beyond their utilitarian value.

As a symbol, money can be used to represent many other things, including virtually every type of product, service and material or immaterial asset that is available for purchase or sale in the world. Money also represents other social powers, the capacity for transport and communication, access to education and entertainment, influence over politics, legislation and administrative decision-making, legal recourse to enforce or defend one's rights. Possession of money also carries with it an intrinsic power to access and attract more money. The more money a person has, the more likely it is that others will entrust one with more money. Moreover, the mere possession of money imparts social importance, respect, acceptance and influence over other people which is inherently productive. In combination these powers not only make money valuable and productive, they also make it extremely creative. Money has the capacity to create new opportunities and circumstances, to bring together and combine people, resources and organizational capabilities in innovative ways, to promote the discovery of new knowledge and development of new technologies.

None of these symbolic powers of money is adequately described or explained by conventional economic theory. Nor are they effectively harnessed and utilized for public good by the application of conventional economic policy. But, all of them contribute tangibly and immensely to the productivity and catalytic role of money and its capacity for multiplication and self-multiplication. Only when the subtle nature and deeper powers of money are fully taken into account can the creative capacities of this unique social institution be fully leveraged to maximize human welfare and well-being.

5.3. Human Value of Currency

But the real value of money cannot be effectively judged in any of these terms. The true value of any economic or other social system must be weighed in terms of its capacity to promote the security, welfare and well-being of its people. Similarly, markets should be valued in terms of their capacity to stimulate production and promote mutually beneficial exchange between individuals, organizations and nations. So too, the value of money lies in its role as catalyst to facilitate, accelerate and maximize the harnessing of all available social resources for the betterment of humanity. A monetary system that promotes the security and welfare of a few is no better or fairer than a political system that reinforces the power and privilege of an authoritarian party, a military dictator or an aristocratic class.

The real value of money must be judged in terms of how effectively it serves the fundamental purpose for which it and all other economic institutions have been created—to

promote and ensure the welfare and well-being of people. The real value of money cannot be judged in terms of what it can buy. The real value of currency is its human value in service of humanity. By that standard, money, like markets, dismally fails to live up to its social mission. As markets are distorted and biased in favor of the economically and politically powerful, the functioning of money in modern society is subject to a wide range of overt and subtle influences that distort its functioning, impact and influence.

The social power of money to legally and illegally influence public elections, government legislation and administrative policy decisions is universally prevalent to varying degrees. It is utilized to influence government spending and subsidies, tariff barriers, export and import policies, patent and copyright laws, rates of taxation on incomes and payroll, capital gains and wealth tax, defense spending, and environmental protection, to name only a few. It explicitly or implicitly determines the actions of central bankers to favor stability of present wealth over policies to stimulate new wealth, job creation and equitable distribution. It skews public policy in favor of technology and energy-intensive investments rather than human capital-intensive investments. None of these influences are taken into account in a narrow consideration of money as an economic tool. But all of them powerfully influence the ultimate impact of economic policies and activities on human welfare and well-being. A right understanding of money can enable nations plagued by corruption to convert the destructive power of mafia into constructive energies for nation building, on the same principle that inoculations and vaccinations are used in medicine to generate a protective immune response and the repeated assault of viruses and identity theft on the Internet have been used to dramatically elevate the overall level of Internet security.

5.4. Signals

Recognition of the wider role of money in society complicates immensely the attempt to reduce Economics to a set of universally valid laws, policy prescriptions and quantitative equations. But efforts to filter out the real complexity of money represents a striking example of what Herbert Weisberg refers to as ‘willful ignorance.’¹⁰ The character of willful ignorance is to collapse reality into a simplistic, manageable set of assumptions detached from the real world and therefore incapable of effectively managing its complexity and uncertainty. Tomas Björkman came to the same conclusion about the models of the market which only vaguely resemble the real world and are most definitely not the only possible or best system we can conceive of.

There are abundant symptoms today of the distorting and confining influence of prevailing economic concepts that prevent us from perceiving, comprehending, seizing and harnessing the fuller productive powers of the global community to promote human welfare.

1. *Multiplication of Financial Assets:* According to McKinsey, global financial assets have risen 12 fold from a mere \$12 trillion in 1980 to about \$225 trillion in 2012. Real Gross World Product grew only fourfold during the same period.
2. *Financial Instability:* According to the International Monetary Fund, in the four decades between 1970 and 2010, there were no less than 145 banking crises, 208 monetary

crashes, and 72 sovereign debt crises around the world. This adds up to an astounding total of 425 systemic crises—an average of more than 10 countries in crises each and every year!

3. *Global Savings Glut*: Although Ben Bernanke alluded to it in 2005 during his term as Chairman of the US Federal Reserve, other economists have been quick to dismiss the notion that there is a glut of money in the world today. He attributed the steep rise in real estate and other asset prices to global surplus savings that are in excess of investment. The onset of the global financial crisis in 2008 lent greater credence to this assertion. While many other explanations have been offered for this phenomenon, the essential fact is that abundance of wealth generated over the past 35 years is not being optimally utilized to enhance the welfare and well-being of the world's people.
4. *Rising Inequality*: One obvious reason is the increasing inequality in the distribution of wealth and income globally during this period. Increasing concentration of wealth at the top among those whose consumption needs have already been met to saturation has the minimum impact on growth in global demand for investment in productive assets. This is also associated with rising levels of unemployment globally. In demand-short economies, the greater equity achieved through more progressive taxation means more spending and fuller employment of resources.
5. *Unemployment*: Rising levels of unemployment globally is another indication that the money is not being productively employed. Today there are upwards of 200 million people unemployed and more than a billion are underemployed globally. This figure grossly underestimates the real deficit. Alternative measures of labor force participation rates in the USA indicate the rate of underemployment is at least double the unemployment rate.¹¹ According to ILO, the number of working-age individuals who did not participate in the labour market increased by some 26 million to reach over 2 billion in 2015. Vulnerable employment accounts for 1.5 billion people, or over 46 per cent of total employment. In both Southern Asia and sub-Saharan Africa, over 70 per cent of workers are in vulnerable employment. Underemployment reaches as high as 75% in some countries.¹² In a world with rapidly expanding population and a few billion people at or below the poverty line, there is an ever increasing need for basic goods and services and rising number of people eagerly in search of work opportunities to generate the incomes needed to obtain them. The mismatch between surplus money and productive capacity and unmet human needs signals a dysfunctional financial system. Under these circumstances, greater equity achieved through more progressive taxation would result in more spending and fuller employment of both human and financial resources.
6. *Global Casino*: Another reason for the global savings glut is the rapid growth of global casino capitalisms following deregulation of banking in the 1990s. This was supported by the fact that companies with strong profits and cash flow accumulated huge cash hoards, rather than increasing investments for business development.
7. *Divorce of Financial Markets & Real Economy*: Foreign currency exchanges exceeded \$5 trillion per day in 2015, fourfold higher than they were 20 years ago.¹³ It has

been estimated that only 2 or 3 percent of these fund flows is related to real trade or investment; the remainder 97% takes place in the speculative global cyber-casino.¹⁴ The real economy thrives on stable, predictable price levels and stable sources of long and medium term investment. Financial markets have become increasingly divorced from the real economy. An increasing proportion of capital is circling the world in search of speculative returns unconnected with the real economy. Originally established as an effective means to pool the huge amounts of capital needed to support international commerce and industrialization, today computer driven financial markets specialize in leveraging minute differences in prices for fractions of a second. Hedge funds place huge short term bets on exchange rates and asset prices, leading to increasing instability. After deregulation even banks enjoying the support of the central bank joined the bandwagon. As Stiglitz observed recently, “When banks are given the freedom to choose, they choose riskless profit or even financial speculation over lending that would support the broader objective of economic growth.”¹⁵

8. *Rising Forex Reserves:* The steep rise in global foreign exchange reserves is another indication of a system functioning in highly unstable conditions. Total forex reserves were in excess of \$21.7 trillion in 2014 compared to \$2.1 trillion in 2000.* Countries are compelled to hold higher levels of reserves as protection against the increasing instability and uncertainty of the global market economy.
9. *Negative Interest Rates:* Money represents productive capacity and social power. An economic system that cannot productively employ the available money to promote economic security, welfare and well-being for all is inherently inefficient and ineffective. In turn, if money does not serve this essential social purpose, then it loses value. One result is the price it attracts in the market place. Today interest rates are negative in economies which account for 25% of global GDP, including Japan, Switzerland, Sweden, Denmark and the Euro area.¹⁶

5.5. Money Myths

The market myths Björkman highlights are not the only myths in town. The gap between our conception of monetary systems and the way they actually work is as great as that which separates economic models of the market from the real world. The gap between the way they work now and better alternatives is equally wide and comprehensible, once we break the conceptual barrier— Canadian Mathematician William Byers’ ‘blind spots’—that prompts us to cling to distorted images of reality instead of discovering the real thing.

Most of the essential recipes for a more human-centered monetary system are already well known and debated. A tax on short term speculative financial transactions will encourage rather than hamper stable, longer term investments in the real economy. That will help stabilize financial markets which are hypersensitive and unpredictable. A progressive capital gains tax inversely proportionate to the period of investment would have a similar impact. Eliminating the payroll tax and replacing it with a tax on energy will shift the investment

* See World Bank <http://data.worldbank.org/indicator/FI.RES.TOTL.CD>

curve from technology to people, removing the artificial bias caused by accelerated depreciation. Reinstitution of progressive income tax rates will support policies conducive to more equitable distribution. Negative interest rates will be a stimulus to both consumption and investment. And so forth.

“Only when we have the intellectual honesty and courage to squarely confront the truth about money and markets can we hope to change the system.”

A more serious objection to reform of monetary systems is the opposition of vested interests and the power of plutocracy, which present serious barriers to reform. The misuse of social power is indeed a real impediment to policy initiatives as it has been throughout history. But that is no excuse for preserving the illusory notion that the present system is either equitable or the best possible. Only when we have the intellectual honesty and courage to squarely confront the truth about money and markets can we hope to change the system. It is time to lift the veil that conceals the underside of society behind the façade of economic theory. Therefore, the concluding section of this paper turns to address the deeper reality so often ignored during discussions of economic theory and policy—the reality of social power.

6. Social Power

A rational assessment of the present political, economic, social system needs to be founded on an understanding of the underlying reservoir of social potential, how it is converted into effective power, how that power is distributed and how the special interests skew its distribution and usurp that power for private gain. It is thus necessary to develop a vocabulary that distinguishes between the unstructured field of energetic *social potential*, the organized structures and activities wielding *social power*, and the informal mechanisms, both legal and illegal, that result in vast *social inequalities* in the distribution of power and the benefits it generates.

6.1. Social Potential

To truly understand the role of social power, we must look beyond the structures and systems that define the formal organized institutional framework of modern society to the infinite reservoir of creative social energies, knowledge, resources and opportunities which represent the zero-point energy field from which all social constructions and achievements emerge. Because it lacks structure, this intangible field of political, economic, social, cultural and psychological energies is difficult to perceive, define, grasp and manage, therefore it is largely neglected by the social sciences which thrive on definition and measurability. Yet this reservoir of power is the source and driving force for social development and evolution and its power exceeds that of the formed society to the same extent as the foundations of an iceberg hidden below sea level exceed the proverbial tip visible on the ocean’s surface. This unstructured amorphous field of society is an inexhaustible reservoir of social potential.

In practice, we are able to grasp the magnitude of that social potential only after it is organized and assumes the form of a social structure. Before the Sears mail order catalog in the 1890s, no one conceived that a company could become the world's largest retailer without operating a single retail store. A century later Amazon repeated that achievement for book retailing in cyberspace, and e-Bay created the first global store in which every consumer can become a merchant. Until Bank Americard morphed into an international credit card system called Visa International a half century ago, no one imagined that electronic credit card transactions could ever replace currency as the dominant medium of exchange. Today global credit card transactions exceed \$12 trillion annually. Before Über, no one conceived that a global alternative to local taxi services could be created almost overnight by harnessing the vast unorganized reserve of private cars and car drivers with time to spare and the need for extra cash. Before AirBnB, building a global hotel chain required decades and tens of billions of dollars' investment, because no one conceived that vacant rooms in private homes around the world could be woven in a few years into a global network. Imagine a system that can effectively harness a portion of the world's unemployed and underemployed and you begin to grasp the magnitude of the social potential waiting to be organized.

6.2. Social Power

In its widest sense, social power is the capacity of the society to achieve the goals and aspirations of its people. Social power is generated by releasing, directing and harnessing social energies for effective action by creating effective laws, social systems and institutions to organize the diffused energies. Thus, ten thousand years ago migrant tribes of hunter-gatherers evolved into settled communities by adopting a new organizing principle for obtaining food—agriculture. Minute observation of the processes of food production in Nature led them to comprehend the essential role of seeds, water, sunlight, soil and season in food production. They reorganized the entire life of the community to replicate and culture these natural processes. The resulting gains in productivity enabled the world's human population to multiply tenfold.

Social power expresses as the power exercised by individuals. It is the quantum of power an individual can draw from the society as permitted and supported by formal rights, laws, rules and social systems and by informal institutions, customs, usage and values. Each new technology such as the cell phone, each new freedom such as the extension of voting rights, each new law enhancing social security and equality magnifies the power of individuals and of the society as a whole.

Today global society possesses unprecedented and ever expanding power. That power takes innumerable forms: such as the power for transport, communication, production, exchange, security, governance, education, entertainment, research, invention, discovery and creativity. Over the past half century humanity has witnessed an exponential growth of many forms of social power. Democracy, human rights, rule of law, open markets, entrepreneurship, scientific discovery, technological innovation, globalization, higher education, and access to information have been major drivers of this growth. These gains have led to significant progress in enhancing human security, welfare and well-being, but *the progress has not been*

commensurate with the potential, because the distribution of the power generated is skewed and biased to favor small economic and political élite.

6.3. Social Equality

Effective power refers to the actual way in which total social power is exercised so as to determine who benefits by it and in what measure. There have always been vast inequalities in the way social power is distributed among the population. In 1880 the 29 greatest British landowners possessed enormous estates. They all had titles; 12 of them were dukes. Fourteen owned more than 100,000 acres each. The Duke of Sutherland, whose holdings were largely in the Scottish Highlands, had well over a million.¹⁷ In addition, this small group occupied the top positions in government, the military and the church. Until 1918, only substantial land owners were permitted to vote in elections. Even long afterwards tenant farmers throughout the country were under obligation to vote for the candidate of their lessee's choice. The higher education needed for social advancement and to gain entry into the seats of power was largely confined to the upper classes. English women only acquired the right to vote in 1932. Needless to say, rights of their overseas colonists were even more limited.

Historical evidence confirms that the greatest social power is generated and the greatest social welfare achieved when the benefits of social advancement are widely and equitably distributed. Modern democracies are far more politically powerful than the monarchies and feudal societies of the past because they are able to more effectively release, direct and channel the energies of their people through freedom and rule of law. Similarly, market economies achieve greater productivity and wealth creation by empowering a much wider section of the population to freely and productively engage in commercial activities.

By historical comparison, the sheer power and productivity of the current market system far excel all previous economic systems. But when the restraints on distribution of social power are fully taken into account, it becomes evident that the present system is far from optimal. There is a vast gap between the total magnitude of social power and the results it generates in society. Vast inequalities in the distribution of social power impact on total social power in the same manner as vast inequalities in the distribution of income and wealth limit the total wealth and prosperity of society. The greater the equality of distribution, the greater the total power generated and the greater the overall benefit to society as a whole. The total effective power of democracy far exceeds that of earlier forms of governance. So too, the dynamism of the market far exceeds that of centrally planned economies. By the same token, a more equitable distribution of social power would dramatically enhance the overall effective power of society to fulfill the needs and aspirations of its citizens. It is noteworthy that since the collapse of communism, economic theory has remained remarkably silent on this issue, as if the subject were taboo.

The world today has the capacity to provide high quality education to every human being, yet access to education and educational attainments remains far lower and the unequal distribution of wealth is a major reason. The same is true for nutrition, healthcare and other critical needs. Björkman argues that these inadequacies arise from the way in which the

market system is being utilized rather than an inherent insufficiency in the system itself. The same basic system can be restructured to generate very different results.

Today the barriers to social equality are prodigious. They take the form of laws and public policies consciously skewed in favor of vested interests, informal support of government for big business, powerful lobbying groups influencing legislative agendas, the influence of money power in elections and consequently on tax policies favoring the rich, along with more overtly illegal forms of corruption and crime that usurp public power for private benefit. Today more than one hundred countries function under the rubric of democracy, yet they vary enormously in the manner in which they elect officials, protect human rights, empower individual citizens, enforce rule of law, legislate and execute policies, etc. A plutocracy or oligarchy masquerades as democracy in some places

“The greatest strength of democracy is its capacity to foster the development of individuality in its members.”

where huge amounts are spent legally or illegally influencing the outcome of elections. In others a corruption of political power confiscates public wealth for private purpose. Law too preserves an unequal playing field in the form of tax loopholes for the rich, extended patent and copyright privileges, and countless other distorting influences. None of these distortions are essential to the functioning of democracies and market economies, but they have an inordinate impact on the social consequences of the way the systems operate. Yet they are largely ignored and unnoticed.

The distribution of social power has been radically altered over the past few centuries. Monarchy has given rise to democracy, slavery has been abolished, feudalism and serfdom have disappeared, imperialism and colonialism have been supplanted by national self-determination, women and minorities have made great strides toward more equal rights, the blatant aggressive exercise of superior military power—once prevalent throughout the world—has lost legitimacy and is in the final stages of decline.

Historically, all progress has been through violence. Democratic revolution shifted power to the people. Radical shifts in social power have been the result of violent revolutions as in America, France, and Russia and wars of total destruction as the American Civil War, the two world wars and wars of national liberation. It is only during the last seventy years that we have witnessed peaceful social revolutions of enormous magnitude, as in America’s New Deal, India’s Freedom Movement, the American Civil Rights Movement, the end of Apartheid, the fall of the Berlin Wall and collapse of the Soviet Empire. Still the threat of violence loomed as a very real force threatening to burst through if peaceful means proved ineffective. Fear of communism was a powerful motive for the humanization of American capitalism under the New Deal.

Thus, the violence avoided by Gandhi burst forth as communal conflict immediately following India’s Independence. The Occupy Wall Street Movement of a few years ago is only a reminder that the further distribution of social power is an evolutionary compulsion that is inevitable. The collapse of communism resulted in a temporary lull in the pressure for

social equality, enabling reactionary economic thought to regain respectability. But this lull can only be temporary and when the next reaction comes it is likely to be far more powerful and effective when freed of the obvious limitations of authoritarianism that undermined the credibility of communism.

“Economies thrive in the measure they release the energies of their people, channel them in protective activities, and develop the capacities of their members to contribute productively, dynamically and creatively.”

Today powerful vested interests violently support widening economic inequality, which is a legalized violence of the rich and powerful which has to be outlawed to enfranchise all. Historical precedent is no justification or rational basis for the future persistence of social injustice. It is time for economic science to fully acknowledge and impartially examine the underlying fabric of social forces and processes governing the operation of economy today.

7. Human-Centered Economics

What is Economics? As Political Science is conventionally described as the science of governance, Economics has been traditionally conceived in terms of production, exchange and consumption of goods and services. But it is evident that these descriptions are far too narrow and self-limiting to reflect social reality today. Governance today relates to the entire gamut of human needs and aspirations, from securing the nation’s borders and the physical security of citizens and their property to upholding individual rights, promoting social harmony, meeting minimum needs, developing the economy, managing the national currency and budgets, ensuring economic opportunity and security, safeguarding and improving public health, providing quality education, protecting the environment, and countless other activities designed to promote the greater welfare and well-being of all its members.

Democracy is the best means so far developed to accomplish these myriad objectives and it has proven immensely more successful than feudalism, monarchy, military dictatorship and other forms of authoritarianism. At its core, the objective of modern democratic governance is to guarantee basic rights and foster the fullest possible development of the potential of every citizen. Democracies thrive in the measure they are successful in releasing the energy of citizens and providing them with the knowledge, skills, organizational infrastructure and conducive atmosphere needed for their free, full and creative expression. The right to vote and choose a representative government of, for and by the people is a mechanism developed to achieve maximum protection of human rights and equality before the law. But, ultimately, the accomplishments of democracy depend on its capacity to not only protect and permit but also to actively support and foster the fullest possible development of the capacities of each individual.

The great humanistic psychologists of the later 20th century described the self-actualizing individual as a person able to think for oneself, choose for oneself, rely on one's own capacities, and act freely to realize one's highest aspirations, while respecting and supporting the equal rights of others and accepting the responsibility to contribute to the security, welfare, well-being and fullest development of the entire community. This conception of mature individuality contrasts with the much narrower, one-sided individualism embodied in the phrase 'every man for himself.' The greatest strength of democracy is its capacity to foster the development of individuality in its members.

By extension and necessity, the ultimate purpose of Economics must be the same. Although focused on the economic dimension of human activities, economy permeates and exerts a powerful determinative influence on every aspect of social existence. Freedom has little meaning in a country where people lack economic access to food, housing, mobility, information, education and other goods and services. Freedom without job opportunity and an ensured source of income is like dangling a carrot in front of a horse just out of reach. Economies thrive in the measure they release the energies of their people, channel them in protective activities, and develop the capacities of their members to contribute productively, dynamically and creatively. Here too, individuality is the key. It is the very essence of the entrepreneurial spirit that manifests in the capacity to think and act creatively with self-confidence and courage in pursuit of unrealized opportunities.

The individual plays a unique role in the development of society. Individuals are the birthplace of the rising aspirations, creative ideas, inventions, organizational innovations and dynamic initiatives that characterize a vibrant productive society. The individual is the most precious form of capital any society possesses and the source of its highest achievements. A truly human-centered science of Economics dedicated to the fullest promotion of human welfare and well-being reaches maturity when it conceives and supports measures designed to promote the greatest well-being and blossoming of individuality in all.

Individuality is the basis and ultimate source of social power. Social power is a measure of individual empowerment. Confiscation and seclusion of power as in income and wealth inequality and high unemployment disenfranchise and disempower both the individual and the society. A true science of economy must encompass these wider social and psychological dimensions.

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Notes

1. Eugen Weber, *From Peasants into Frenchmen: The Modernization of Rural France 1870-1914* (Stanford: Stanford University Press, 1976).
2. Adam Smith, *An inquiry into the nature and causes of the Wealth of Nations* (New York: The Modern library, 1937)
3. Anders Aslund, *How Ukraine became a market economy and democracy* (Washington, DC: Peterson Institute for International Economics, 2009).
4. "A Question of Utility" and "Time to Fix Patents", *The Economist* Aug 8, 2015, <http://www.economist.com/node/21660559>

5. Devin Helton, "Great Problems: An Epidemic of Rent-seeking," *Constructing a more accurate view of reality* April 14, 2013 <http://devinhelton.com/2013/04/14/rent-seeking-economy/>
6. George F. Will, "It's time to break the teeth-whitening monopoly," *The Washington Post* February 10, 2016 https://www.washingtonpost.com/opinions/is-this-the-end-of-judicial-review-of-economic-regulations/2016/02/10/cb2b6788-cf49-11e5-88cd-753e80cd29ad_story.html
7. L. Randall Wray, "How To Implement True, Full Employment", paper presented at World Academy of Art & Science Global Employment Challenge e-conference, 2009 <http://worldacademy.org/node/1748>.
8. Tomas Björkman, *The Market Myth*, 2016, in press.
9. Nathan McAlone, "Apple is the most valuable brand in the world - for the third year in a row," *Business Insider* 5 October 2015 <http://www.businessinsider.in/Apple-is-the-most-valuable-brand-in-the-world-for-the-third-year-in-a-row/articleshow/49231972.cms>
10. Herbert Weisberg, *Willful Ignorance: The Mismeasure of Uncertainty* (John Wiley & Sons, New Jersey, 2014).
11. Bureau of Labor Statistics, *Alternative Measures of Labor Underutilization for States, 2015 Annual Averages* <http://www.bls.gov/lau/stalt.htm>
12. *World Employment Social Outlook 2016* (Geneva: International Labor Office, 2016) http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_443480.pdf
13. Anirban Nag and Jamie McGeever, "Foreign exchange, the world's biggest market, is shrinking," *CNBC* 11 February 2016 <http://www.cnbc.com/2016/02/11/reuters-america-foreign-exchange-the-worlds-biggest-market-is-shrinking.html>
14. Bernard Lietaer, *Yes Magazine* June 30, 1997 <http://www.yesmagazine.org/issues/money-print-your-own/beyond-greed-and-scarcity>
15. Joseph Stiglitz, "What's holding back the world economy," *Market Watch* February 12, 2016 <http://www.marketwatch.com/story/whats-holding-back-the-world-economy-2016-02-08>
16. "Negative Creep," *The Economist* Feb 6, 2016 <http://www.economist.com/news/leaders/21690031-negative-rates-club-growing-there-limit-how-low-rates-can-go-negative-creep>
17. Robert Blake, "Never Has So Few Owned So Much," *The New York Times* November 4, 1990 <http://www.nytimes.com/1990/11/04/books/never-has-so-few-owned-so-much.html?pagewanted=all>

The Market Myth

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Abstract

*The Market can be understood as a self-organizing system that is constantly evolving. Like all social institutions, it is governed by principles and rules created by society, not by any universal laws of nature. If it does not work the way we want it to, we have the power and freedom to change its rules. However, prevailing notions about the market are veiled in myth. Many have argued that there is a vast gap between economic models of how the market is assumed to work and how it actually functions, but there is also a gap between the way it now functions and alternative possible ways it could be structured to more effectively promote social welfare and equity. ‘Unveiling the myth’ is therefore necessary to alter its enduring influence on us, for the betterment of humanity. Some have referred to this myth as ‘neoliberalism’, but this is not the emphasis here. The point, rather, is to show that understanding theories and models of the market in terms of the seven myths discussed in this article allows us to change the **constitutive rules** of the market and radically improve the pre-distribution of social benefits while preserving the dynamic freedom of the market, thus limiting the need for **regulating rules**.*

1. Introduction

The word *myth* is used in two main ways that are often conflated or confused:

1. A widely held but false belief or idea.
2. A traditional story—a narrative—especially one concerning the early history and enduring purpose of people or one explaining natural or social phenomena, typically involving supernatural beings or events.

The market fulfils both of these meanings. First, it is a myth that the market produces fairness or that it maximises the common good. We will come across a number of other myths of this kind; things most experts know are wrong but which we somehow keep believing as “folk-knowledge” about the markets. Second, the market is also the “big story”—the meta-narrative—of our time: it’s the story that explains the foundations of our new global world. It even involves supra-physical forces like the so-called ‘invisible hand’.

The first meaning of the myth is obvious. We dismiss stories as myths all the time. The second meaning is more interesting. This is the meaning, for example, of the myth of the creation of the world or the Tower of Babel. When we say these are myths, we are not necessarily dismissing them as false. We are saying they are not necessarily true in the

narrow sense that the Battle of Hastings is an historical fact. We are saying that they are important stories that help us make sense of the world, of life and of our human predicament. Human beings need meaning, and the myths we construct about life help us to put a symbolic frame around our reality so we can find structure and meaning in an otherwise chaotic and random existence.

“The market like every other social institution is a product of our conception and invention and if it does not work the way we want it to, we have the freedom and power to change it.”

The Cambridge University Reader and the World Bank economist Ha-Joon Chang highlights the way these new myths, just like the old religious myths, are insulated from factual reality:

“You have to know that academic economists today are not even interested in the real world. In the economics profession today, interest in the real world is an indirect admission that you are not very good. If you are really smart you do really abstract mathematical modeling. If you are a bit less good you do econometrics, basically manipulating statistics. If you are really down in the pits you are interested in the real world...It’s a strange academic culture... when you say these uncomfortable things, people refuse to listen to you.”¹

In the transitions from the Renaissance to the scientific revolution, to the Enlightenment, to full-blown modernity and its post-modern critics, we see our place in the universe being pushed farther and farther into the periphery of reality itself; we are no longer God’s chosen children, not at the centre of the world, and even our emotions, thoughts and choices are beyond us—our sense of free will is considered an illusion. At the same time, in what seems to be a strange and wonderful paradox, each time we are dethroned by the history of science, we rise above our previous understanding and become—usually unwittingly—more intimately involved in co-creating the natural, inner and social worlds, both external/objective, internal/subjective and social/inter-subjective reality.

If we want to reduce the savage inequalities and insecurities that are now undermining our economy and democracy, we shouldn’t be deterred by the prevailing myth of the ‘free market’. The central message of this essay is that the market like every other social institution is a product of our conception and invention and if it does not work the way we want it to, we have the freedom and power to change it. We can only do that when we overcome the conceptual illusion of the false dichotomy between a “free” market and a “regulated” market. We need not conform to the limitations of the current market system. We can make the system even more efficient *and* just. There is no inherent conflict between these two fundamental aims. We need a revolution in Economics as momentous as the one unleashed by Copernicus but in reverse. We need to fashion the future of economy on the principle that *human beings are sovereign, and need not be subject to ‘the market’ as if it were a natural feature of the world outside of their collective control.*

2. Myths of the Market

I have set out below what I believe are seven key myths—in the sense of false beliefs—of the market. These are not the only false beliefs that society holds about the market, but they are arguably the most dangerous ones. They are part of a bundle of propositions, shared perhaps most strongly by economic policymakers—possibly the group of people farthest from the frontline of business. Together, these type one myths about particular features and functions of the market are subsumed and thereby shielded from criticism from the type two myth of ‘the market’ as a shared societal given.

Myth #1: The invisible hand makes sure that the market is fair and maximises the common good in society.

Myth #2: The market takes care of long-term interests, and it does so by taking everyone’s interests into account.

Myth #3: The market creates diversity and freedom of choice.

Myth #4: The agents in the market are rational decision-makers maximising their individual ‘utility’.

Myth #5: The market tends towards equilibrium where supply and demand meet.

Myth #6: Private for-profit corporations will always be the best organisations for maximising efficiency and creating wealth, and their way of functioning can never be changed.

Myth #7: That the ‘free’ market is a natural system.

3. Origins of the Myths

Where did these myths about the market come from, the false beliefs that fuel the rhetoric of politicians and popular sentiment about economics? A number of world-changing key historical events and influential individuals came to create the fertile soil for the myths; the result of which we harvest today. We will here look briefly at two of these influential persons—Adam Smith and Friedrich von Hayek—and some interesting historical incidents.

Adam Smith, who was to become the founding father of modern economy, met in 1750 with the philosopher David Hume, a key player at the dawn of the Scottish Enlightenment. Hume was enormously influential in Smith’s construction of economic theories. Hume did not believe in causation—at least he was sceptical about whether you could ‘see’ what causes what under a microscope—and Smith likewise fell back on an economic “mystery” of a crucial unseen ingredient, which he called the ‘invisible hand’.

Smith also taught rhetoric. His choice of the ‘invisible hand’ was to describe what was happening in what he called a “more striking and interesting manner”.² The economics professor Warren Samuels investigated the original meaning of the phrase, arguing that contemporary economists had misunderstood it.³ They have interpreted Smith as if he were calling for less government or regulatory intervention, due to the self-regulation of “the invisible hand” when he on the contrary unambiguously demanded regulation to defend

property and for the defence of the poor against the rich. Smith had in his sights supporters of the prevailing doctrine of ‘mercantilism’: the idea that economic trade is a zero-sum-game and that each nation needs to protect its own market at the expense of other nations.

“Smith provided a spirited attack on mercantilism for its extraordinary restraints, but he did not extend the attack to government and law in general,” writes Samuels.⁴ “Indeed, many of those who do extend the attack, wittingly or otherwise, are silent about Smith’s candour.” So, Smith was arguing for free trade but realised that the market is very dependant for its functioning on the formulation of its rules and that these fundamental rules need to take the interest of the poor in mind.

The difficulty for us now, two centuries later, is that Smith’s insights have settled in the minds of those who rule us in ways that are alien to what he meant. We are confusing Smith’s arguments about *free trade* with a mythical *free market* mysteriously free from any rules at all. This is one important origin of the *Myth*.

Another very important historical event in the creation of the *Myth* occurred in 1947 when the Austrian economist Friedrich von Hayek arranged a conference that launched an academic society that was to become influential enough to shift the way at least Western leaders viewed economics. This was to be known as the Mont Pèlerin Society.⁵ It was at this conference that the neo-liberal market myth was first spun in its current form.

Hayek’s manifesto, *The Road to Serfdom*,⁶ was published in 1944 just as the allied forces were liberating Europe, and was aimed at the post-war world. Hayek respected the economic authority John Maynard Keynes, whose theories seriously challenged the old so-called “neo-classical view” of the 18th century economists. Hayek, having his own “neo-liberal” agenda, did not challenge Keynes’ ideas until after Keynes’ death in 1946. At that point, however, Hayek invited 36 friends and allies to meet him at the Hotel du Parc in Mont Pèlerin, near Vevey in Switzerland. There, in April 1947, he and his influential friends Milton Friedman, Karl Popper, and Michael Polanyi discussed the defence of what they called “liberalism” in post-war Europe. Their aim was political rather than economic and they thought that the old neo-classical economic theory could, in a twisted way (as will see), be made to prop up a policy of general non-governmental intervention: the ideological agenda of Hayek. The foundation for a systematic revival of the old neo-classical economic thinking was thus laid.

The events in Mont Pèlerin in 1947 demonstrate that the concepts and rules of the market are under discussion, and can be changed through systematic effort. It is a strange paradox—and it lies at the heart of the story—that those who proclaim that markets are natural phenomena, which should not be manipulated or shaped, are themselves shaping markets day-by-day! I am an enthusiastic participant in open markets, and in principle I don’t believe we should put up barriers that make it more difficult to do business. However, we risk losing the real quality and value of the openness of markets if we don’t understand what ‘markets’ are, how they change, and why they need to change.

The Mont Pèlerin Society was born and continues the same work to this day, and meets at the same hotel every year. In small steps it launched a movement in economics that has

become the new orthodoxy. It has been transmitted partly through academics with Chicago in the lead and partly through think tanks like the Institute for Economic Affairs in the U.K. and the Heritage Foundation in the U.S., founded by two Republican staffers in 1973. It was those staffers' ambitious document *Mandate for Leadership* that was handed to top Reagan official Ed Meese just two days after Ronald Reagan's election to the presidency in 1980. By 1982, there were leaders committed to the 'neoliberal' economic agenda in the U.K., U.S. and West Germany, and the victory of Mont Pèlerin was all but complete. The rest, as they say, is history.

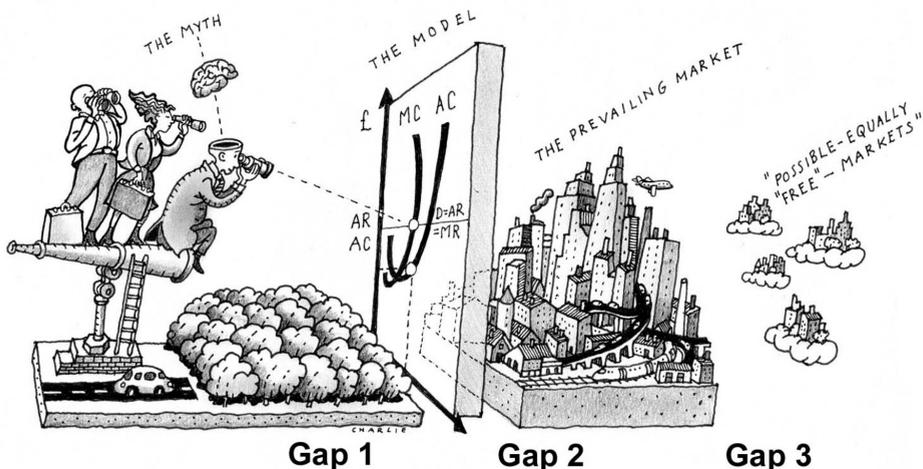
4. The Myth, the Model and the Market

There is not just one yawning gap between the myth of the market and the market as it exists; in my view there are at least three.

Consider the figure below. Between the Myth and the Market, there is a third peculiarity: the neo-classical Model of the market—the way the market is supposed to fit the mathematical language of economists. We have to understand the gaps between all three: the common understanding (the Myth), the prevailing model of the market (the Model), and the real market, in all its multifarious complexity (the Market).

Then there is a third gap, between the Market as it is now and the Market as it could be—between the actual and the possible. It is into each of these gaps that the distortions creep.

Figure 1: The model is obstructing our clear view of the prevailing market, and the prevailing market is blinding us from other possible, equally "free" markets.



Let's look at these gaps a bit more closely.

Gap 1: between the myth and the model. The myth of the market, our common understanding of it, is a very crude picture of the prevailing academic 'neo-classical economic model'. In fact, there is a huge gap between what the *model* is actually telling the economists and what we as the general public tend to believe it is telling us. Such beliefs are often not explicit, as we have seen, but creep in as underlying assumptions in language and policy making. Examples include forgetting that the model only works for private goods, overstressing it by somehow believing that the market could take care of public, sometimes called collective goods as well. Or not understanding that the so called "Pareto-optimal" distribution that the model predicts is not very "optimal" at all, and definitely does not make any claims of being in any way a just or equitable distribution. Or that the "perfect market" that the model refers to is just a set of rather unrealistic mathematical assumptions necessary for the *model* to work, not some perfect ideal that the real *market* should aspire to.

"Our collective failure to see that the market is a contingent social construct gives rise to myths that treat the market as a fixed reality."

One could say that this gap 1 is really an unnecessary gap based on confusion of language and misunderstanding of the predictions of the neo-classical model. The effects of this gap are myths like #1, #2 and #3 above that are all unnecessary misunderstandings of what the neoclassical model actually predicts.

Gap 2: between the model and the prevailing market. Then there is the other gap between the neo-classical economic *model* of the market and the real *market*. All economists know that the neo-classical model is not based on the real market. However, we tend to forget the very specific assumptions made in this model, and also the very limited scope within which the model has predictive value. The model is based on a set of very limiting assumptions of a 'perfect theoretical market'. How far these assumptions are true for the real world is indeed debatable. More and more recent research into the assumptions shows that they are utterly unrealistic. We can do nothing about this gap; it is necessary for the model to work in theory. The problem is that we tend to confuse these crude but necessary assumptions for real facts about the market. We start to believe that a good consumer actually is rational, or at least ought to be. We start to believe that we all could be fully informed if we just try hard enough. We might even start to believe that it is acceptable in the market to only act out of self-interest and that the "invisible hand" takes care of the big picture.

The neo-classical model needs these assumptions to work. But we should remember that they are only assumptions. When we mistake them for facts we get myths that are based on the confusion of assumptions and facts.

Gap 3: between the prevailing market and other possible markets. We make yet another mistake about the market: we assume it is a fixed reality when it is in fact man-made through a complicated, contingent, historical process that is still on-going. The gap here is between the *prevailing market* as we know it and other kinds of market there could be—markets that

might look very different and work very differently. This is the gap between the existing market and *possible markets*.

Our collective failure to see that the market is a contingent social construct gives rise to myths that treat the market as a fixed reality.

5. The Neo-classical Model

It should be noted that economic models in general are not designed to model the actual world. They are designed as a way to investigate what insights a number of theoretical assumptions and abstractions might lead to.

The originators of the neo-classical model did not make a blunder. They were not under any illusions about its links to reality, or lack thereof. The problem is that outsiders to economics are usually not really aware of tenuous assumptions on which the model has been built, and even economists often confuse their models for the way the real world works. As a result, they misinterpret these theoretical models, and incorporate them into the meta-narrative that supports the official worldview of the West—the *myth*.

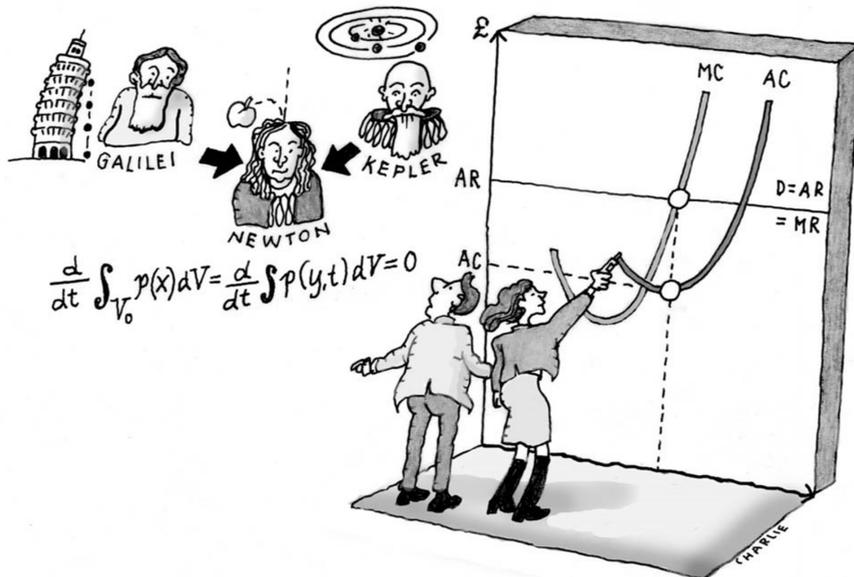
It is difficult to look more closely at the myths, because doing so seems to undermine important foundations of our worldview. There are incentives, economic, political and academic, to stick to the prevailing view. In the language of mental developmental theorist Robert Kegan,⁷ it is not so much that we have this worldview—in the sense of freely and flexibly choosing it—it is more like this worldview ‘has us’ in the sense that it shapes the structure of our attention, our perception of value and our sense of the possible.

Despite this mental limitation of ours, the neo-classical model of economics is coming under attack these days. In response to these detailed attacks, many economists have insisted that critics provide an alternative “scientific” theory. Doing so, they don’t seem to realise how much their own model uses metaphors to build theories.

For example, many economists don’t understand how much their economic thinking has been bounded by the Newtonian language, and by their search for natural laws of the economy that work alongside the Newtonian laws of mechanics. The elegant synthesis of Galilean terrestrial mechanics and Kepler’s celestial mechanics into simple mathematical formulas expressed in Newton’s newly invented mathematical language of calculus came to be the lodestar for every science during the 1800s. As I elaborate in my book *The Market Myth*,⁸ the neo-classical economists sought, very understandably, to express economic phenomena in the same, very potent language of calculus.

The neo-classical economists knew what they wanted: a simplified model of the market that could be expressed in the mathematical language of Newton. They also knew that to succeed, they had to make unrealistic assumptions about the operation of the market. Some of these assumptions we now mistakenly hold as truths about the market. They wanted a mathematical model of Adam Smith’s faith in the invisible hand that self-organizes the economic system.

Figure 2: The neo-classical economists knew what they wanted: a simplified model of the market that could be expressed in the mathematical language of Newton.



Had the 19th century economists had the computer tools we have today to model complex self-organizing systems, they might have opted to use those tools instead. But they did not have them, and they did as good a job one could do given the tools available in their time. But we have to remember that Newtonian calculus is not at all made to describe a complex system. It can actually only handle very simple systems, like two bodies moving under the force of gravitation. If we in this example add a third body, the Newtonian power of prediction breaks down.

To succeed in making a Newtonian model, they actually had to make a number of assumptions that simplified economics, fully aware that they were not quite real. In order to arrive at a model that could be expressed in the mathematical language that has been so successful for describing nature through physics, they had to make massive simplifications. They had to assume for example, as we will examine below, that all actors in the market are perfectly rational, that there is perfect competition and that all market actors are fully informed about everything going on in the market.

6. Interlude

Am I kicking in an open door here? Are not all students of Economics 101 told these days, to remember that ‘it’s just a model’? It is true that very few people would today explicitly subscribe to an unproblematic application of the model to the real world (whatever the ‘real

world' may be). Yet it somehow sneaks in, as we have seen, into public consciousness and becomes a myth. I would even venture to claim that many intelligent and well-informed individual scholars, citizens and policy makers, are together moved by a *malignant invisible hand*—towards preposterous conclusions and dire analytical fallacies, with resulting pathologies and instabilities in the market and society at large. The false belief in the model resides within the walls and pillars of our daily institutions, rather than with the individual student of economics.

“The neo-classical model of the market assumes that the operation of the market, just like planetary motions, is fixed once and for all, with given “utility functions”.”

So, what are the unrealistic assumptions of the model? Well, the model assumes that consumers are predictable, perfectly rational and conscious in their decisions. It assumes that they act from self-interest, are completely clear about what they want to buy and that they do not change their decisions.

It assumes that goods bought and sold in the market are *private goods*, owned by individuals and can be traded. It runs into difficulty when it comes to *collective goods*, sometimes called *public goods*, like military defence, culture or clean environment.

It assumes there is perfect competition, with a broad range of products from different suppliers competing on price and quality. It assumes there are always alternatives readily available in the market. It assumes perfect information, and that consumers and producers have access to all information about the item and of any alternative choices, as well as the infinite knowledge and time to evaluate it all. It assumes all actors in the market can predict the future consequences of their choices.

It is important to remember that all the above assumptions are made in order to make the model expressible in simple analytical mathematical language. The assumptions are not statements about the actual market; they were never meant to be. The idea that they are actually statements about the real market is one of the main reasons for the myths around the market: see gap 2 above.

7. The Market as a Man-made, Self-organizing System

Adam Smith was right; the market is a complex self-organizing system. But we have to realize that, in contrast to the many natural self-organizing system we learn about in biology,⁹ it is a *man-made* self-organizing system with a particular history that could have been different. The neo-classical model of the market assumes that the operation of the market, just like planetary motions, is fixed once and for all, with given “utility functions”. But the market system is fundamentally different from physical systems. Not only in the sense that it could be regulated from the outside with *regulating rules*, but also in the sense that the

constitutive rules, the rules that by definition are necessary to even have a self-organising system in the first place—like property rights and qualifying market agents—are man-made constructs.

This distinction between these two kinds of rules governing systems was introduced by the philosopher John Searls,¹⁰ to mark the ontological difference between rules of a socially constructed system or game that are necessary for there to be any game in the first place—like the rules that determine the movements of chess pieces in a game of chess—and rules that regulate the game once it is operating—like setting a time limit to a game of chess or a price regulation in the market.

With this distinction we realize that even a market free from any *regulating rules* will always need *constitutive rules* to start self-organizing. In a *natural* self-organizing system these *constitutive rules* are the feedback loops governed by physical constants or chemical reaction patterns that we humans can do nothing about. But for any *social* self-organizing system like the market, those *constitutive rules* can be implemented in many different ways: with very different self-organizing outcomes as result. Examples of *constitutive rules* include any definitions of property rights or corporate rights. The outcome of the market's self-organising process that Adam Smith called the "invisible hand" will therefore be dependant on the specific formulation of the *constitutive rules*. Hence, even the "free market" is always man-made. "Just how God or nature determine the strength and direction of gravitational forces, man determines the strength and direction of market forces."

8. The Two Invisible Hands of the Market

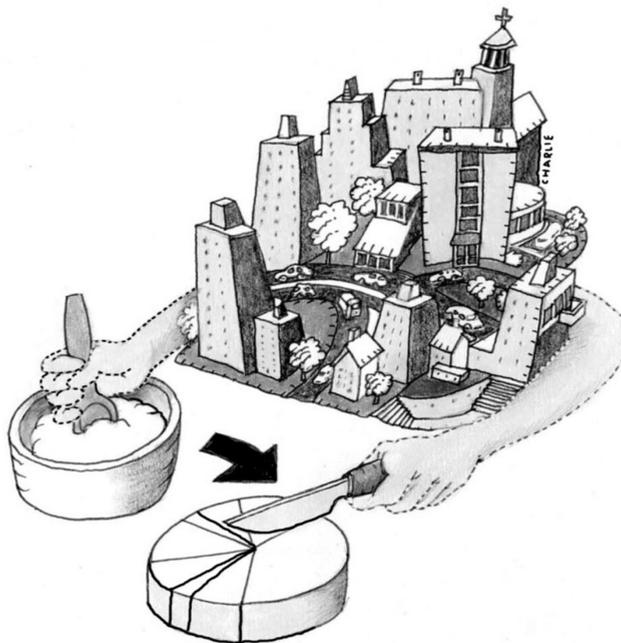
Different *constitutive rules* will result in different market outcomes both with respect to the amount of goods produced and their distribution. One would therefore want to construct the *constitutive rules* in a way that maximizes the efficiency in production and promotes a distribution of wealth that is considered fair. Once the *constitutive rules* have been optimized there might still be need to impose *regulating rules*, but in this way the administration and efficiency loss that is always the effect of *regulating rules* can be kept at a minimum.

It could be beneficial for our understanding of the market as a self-organizing system to extend Adam Smith's metaphor to include *two* invisible hands: one that bakes the cake and one that divides it. The first invisible hand takes care of the non-zero-sum game of creating wealth, trying to bake as big and nice a cake as possible. With respect to this invisible hand we are all more or less on the same side, all wanting a big, nice cake out of the oven of the market. But when it comes to the operation of the second hand, we all tend to want a bigger piece of the cake for ourselves. It is important to always keep in mind that the market's self-organising process constantly performs both of these functions, and that the outcome of each of them—the cake in the oven and the piece you get—is dependent on the *constitutive rules* of the market.

This means that, when we design the *constitutive rules* of the market, we need to take into account how such rules influence both the processes of production and distribution. For example, when we set the rules governing the length of patents and copyrights, we have to

take into account that the length of the property right will influence both the efficiency of the market and the distribution of wealth. If we have no copyrights, the market will provide much less incentive for creative production. If, on the other hand, we have too far extended copyrights, this will limit the possibilities for reusing ideas for new productions that would benefit everyone. For example, and given the short-term view of the market, I would estimate that around 10 years might be an optimal trade-off. From the economic perspective of an individual copyright owner wanting a bigger piece, the longer is of course better. No wonder big copyright holders are lobbying lawmakers to increase copyrights to 150 years. Copyrights are a good example of *constitutive rules*; they would not exist without legislation. On the one hand, one needs to shape the rules to encourage investment, which is the main purpose of intellectual property. On the other hand, one needs to shape the rules in such a way that diversity and competition are also possible and that the overall needs of society are most fairly and effectively addressed, and therefore limit the length of property rights.

Figure 3: The two invisible hands of the market. One hand bakes the cake and the other divides it up. It's a metaphor that helps us to remember the relative independence of the two simultaneous self-organising processes of the market.



We all need to ask some simple questions, when it comes to handing over any important task to the invisible hands of the market:

1. Will the market really be able to bake this particular cake? Are we using the market in the right way? Is the task structured in such a way that a meaningful (efficient, just)

self-organisation will occur in the economic system? Might this be a *collective good* or a *merit good* that the market is unable to handle? Will the market work effectively in this case, or do we need to use a different tool?

2. Will the cake look and taste good when it comes out of the oven? What other human values—in addition to economic efficiency—do we want to achieve in this matter? How do we make sure these values emerge as a result? How can we formulate the task and construct the *constitutive rules* around this problem so that the result of the market's self-organisation is in line with the services or products we want it to provide?
3. Given these rules, how will the market share the cake? What will be the distribution effects of these rules? Who will be the winners and who the losers? Can we design the *constitutive rules* otherwise to make the division of the cake more in line with what we would find reasonable and desirable?

“When we begin to understand social reality better, strangely, we find that it cannot be understood without understanding ourselves as its historical co-creators.”

And is it now the time to change the already existing constitutive rules? Because we now need rather different rules to shape our free market. Perhaps, in particular, we need to:

- Continue to create new ways of measuring results, a bottom line that extends beyond the purely financial. It will change the emphasis of business laws on protecting capital and investments and make their duties broader.
- Provide shareholders with wider responsibilities. We need to re-impose obligations on shareholders and broaden the obligations on board members and directors beyond shareholder interests.
- Limit companies' status of personhood. Businesses still need to be individual legal entities, but to give them human rights and freedom when they have overwhelmingly more power than most people jeopardises democracy.
- Promote a long-term view on business. Short-termism is a persistent problem for public limited liability companies. Perhaps if you commit to owning shares for ten years you ought to get ten times the voting rights.
- Democratise decision-making in business. Perhaps forms of participatory democracy can be incorporated so that employees have efficient ways of making their voices heard in the overall development of the company. This could be supported and facilitated by new legal forms of corporations.

When we realize that the way the market self-organizes is always a function of not only individual consumer decisions but collective political decisions about the constitutive rules as well, we will no longer be able to hide behind the concept of a “free” market. We humans

need to take responsibility for the outcome of the market. In order to do so, we need some kind of a reference frame to judge the market from. We need a reference frame greater than the market, a meta-narrative greater than the market. The problem is that we now have the correct post-modern insight that all meta-narratives are also man-made. This forces us to focus on the political process of formulating a new meta-narrative.

9. Need for a new ‘meta-narrative’

My fear for our society is not so much the various external threats we face, but rather the kind of emptiness and meaninglessness that can destroy society from the inside.

I believe that humanity has moved from *not* being at all aware of economics and the market, to understanding the market as a system of its own in the classical model. And that we are only now discovering how the economic reality we have taken for granted was really a mirror image all along, a reflection of our own inner lives, our hopes, fears, ideas and desires. When we begin to understand social reality better, strangely, we find that it cannot be understood without understanding ourselves as its historical co-creators.

Back in 1945, philosopher Karl Popper described the difficulty the market has—not in achieving efficiency—but in generating significance, meaning and value systems. His master work *The Open Society and Its Enemies*, warned us against this lack of meaning as well as against the classic totalitarian forms of control. In earlier societies, it was the lack of food and material goods that was the biggest problem; the richest societies now instead faced a lack of meaning and purpose, he said.¹¹ Market logic has relegated the role of citizens to passive consumers.

This is even true at the political level, where citizens are expected to push the political ‘shopping trolley’ between producers of political goods. When it comes to religion, they are reduced to choosing an individual product aimed at their personal needs. Even our love lives are reduced to a commodity where potential partners are considered as products to be kept or dumped, and who rarely live up to the marketing promises of magazines and media.

The market system needs no sense of meaning to work, but both society and individuals do need a *symbolic system* to create meaning. We need to operate within a context to know that we are part of something meaningful, something greater than ourselves that frames our lives and provides language and reference points to understand and navigate it. Without a larger frame, society unravels into a collection of individuals who are mere economic entities in the market. A society cannot consist of consumers and producers only, yet this is the vision of our world promoted under the current market-liberal worldview.

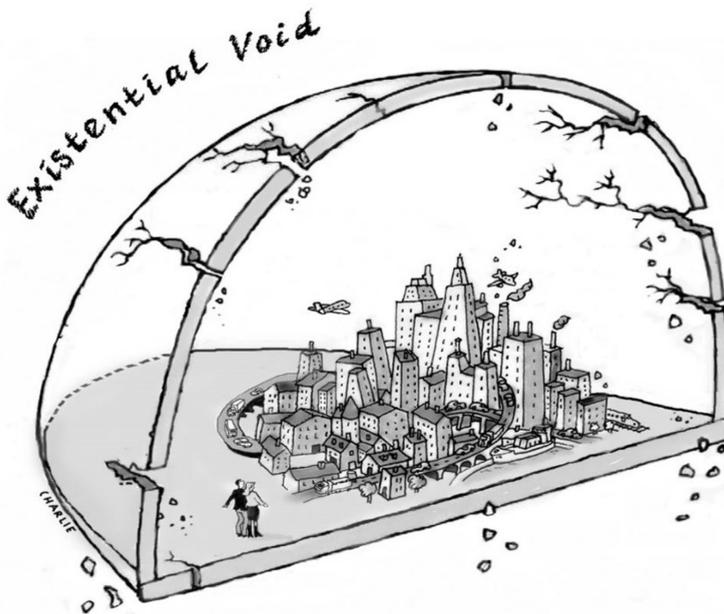
As discussed earlier, one definition of myth is this larger frame: the ultimate justifier and ultimate authority in a society. This kind of myth provides the meta-narrative—the big story—that keeps our society together in what may be an arbitrary, but also a necessary way. The American sociologist Peter Berger calls it “sacred” because there is nothing beyond it that can help us value it.¹² The myth is untouchable and beyond our judgements. It ‘just is’. It shields us from the fact that we have to provide our own ultimate authority on which to build

our otherwise completely arbitrary society. Like a “sacred canopy” it shields us from our collective existential void: it hides the fact that it is all up to us to create the symbolic system in which human values, meaning and purpose can be formed. This symbolic system and its meta-narrative are per definition a shared collective good, which, like all other collective goods, the market cannot produce.

Every society, every culture, has got its own outer boundary: its meta-narrative. For our emerging global society it is the Market. After the fall of the Berlin Wall in 1989, there was just this one contestant for a global meta-narrative remaining. The market claimed to be the ultimate “sacred canopy”. This was the “end of history”.¹³ This would suggest that we have abandoned our search for collective meaning, replacing it by a pursuit of individual utility. In practice, the Market serves the same purpose as God or Science once did: to provide us with an external ultimate authority. We have reverted to living under false absolutes, rather than living authentically, as the existentialist philosophers urged us to do. We believe that somehow, and uniquely, the market ‘just is’. We are, in short, *still alienated from our systemic freedom*: the freedom we can only exercise collectively in order to change the internal workings of our socially constructed systems.

“How do we balance our needs today with the needs of future generations?”

Figure 4: The “sacred canopy” of our symbolic system and meta-narrative shields us from our collective existential void. Our present sacred canopy—the Market—is starting to crack and fail as a shield, and so more and more of us are starting to notice the void.



The market has evolved as the unreflective answer to our need for collective coordination in today's world and our need *for an ultimate authority*. As an ultimate authority the Market myth is very thin. As efficient as the market is for allocating private goods, it is that poor at providing a satisfying shield against our collective existential void. And many can now feel the cracks in this shield. It must address the important common question of efficiency, and must also address questions about other common human values like justice, equity and meaning. Collective questions like 'How do we balance our needs today with the needs of future generations?' require a bigger framework to be answered.

Hayek and his friends at Mont Pèlerin in 1947 were myth-makers in both senses of the word. They were busy re-writing the story for our times and, as we have seen, this was propagated to the world as more than just economic doctrine. But at least that shows that it is possible for humanity to grasp the myths that govern the world and to rewrite them. Hayek and his colleagues did it. We need to do the same.

So far in history we have handled this by pretending that this *collective systemic freedom* does not exist. We have deferred our decisions to an external "ultimate authority" of different kinds in different societies and different points in history: God, Science or the Market—at each step increasing the complexity of our meta-narrative to meet the increasing complexity of our world. And now we need to do this again. We need a means by which we can agree on the common good that is the ultimate purpose of the economy. What do we want "the two hidden hands" of the self-organizing market to deliver? How do we define the common good? How do we define equity and justice? How do we balance our needs today with the needs of future generations?

And, again, the important insight is that these collective human values—as opposed to individual values like beauty—cannot pertain to the individual and her preferences alone. Ethical values must per definition have a collective aspect as they refer to the relations *between* individuals. Justice and meaning do not exist outside our common social reality. They are created in the relationships between individuals, not within single individuals. They are integral parts of our socially constructed world that we share with other people.

The world has become too complex and too fast moving for us to be able to formulate utopian visions of the future. We cannot any longer say what we want the world to look like in fifty years. But our inability to formulate precise visions must not stop us from taking responsibility for framing the future. However, the focus needs to shift from having a vision of the good *outcome* of history to having a focus on what a good *process* might look like. In our democratic market-society, "politics" and "the market" are the two most important processes that constantly form the future. We need to look closely at the *constitutive rules* of both these processes. Good rules for the political process are a prerequisite for creating good rules for the market. Our new narrative will have to be a narrative about the good man-made *processes* rather than utopian end results of the historical process.

10. Conclusion

First insight: We as humanity hold a *systemic freedom* to shape the inner workings of the market as a self-organizing system. A freedom we can only exercise collectively.

Second insight: We are in dire need of a bigger common framework than that of the Market, in order to be able to use our systemic freedom to create our social reality; not only for efficiency and individual interests, but also for the common good. We need a new meta-narrative.

The third important insight: We will never find this frame of reference, this meta-narrative, ‘out there’, as an object in the natural world, like we thought we had done with God, Science or the Market. We realise that all meta-narratives are in some way arbitrary and they are all man-made—but we still need them in order to survive and flourish, both as individuals and as humanity.

“How do we build a new meta-narrative when we have so many different, irreconcilable perspectives?”

Now we have to face the fact that we can look for no other place to find this meta-narrative than amongst ourselves: in the dialogue between humans. Our biggest frame of reference is always man-made and arbitrary. This is a source of enormous collective existential angst and the reason why we mobilise all our internal defences to avoid addressing it. It feels so much better just to continue pretending that we are in the hands of an external ultimate authority.

Previous generations might have looked to religion to provide the framework of a narrative by which they could judge the market, but that is not a path that is really open to us now. This is both a problem and an opportunity. The problem is that we can’t rely on any other external authority to provide an objective meta-narrative. The opportunity is: *we are free to create one.*

But why *one* meta-narrative? In a pluralistic and multi-cultural society there is surely place for more than one narrative! Yes, and in order for those narratives to be able to co-exist and to interact in a positive, constructive way that enriches our understanding and provides multiple perspectives on our world, rather than interact in a negative, competitive and violent way, we will need a good, meta-cultural “holding environment” for these multiple cultures/narratives. That meta-cultural holding environment will also have to be part of the new meta-narrative.

This brings us back to the main problem: how can this new global meta-narrative and meta-cultural container be formulated, especially when we have no means of agreeing on anything globally, and when the prevailing post-modern world view is suspicious of collective ideas of all kinds? So how do we build a new meta-narrative when we have so many different, irreconcilable perspectives?

We will never reach a final form of this narrative. It will have to be an open-ended process, and the narrative will be about this process. Still, it is within our powers to create a

good narrative forming process with rules that continually challenge the narrative and keep the dialogue alive. It is, in that respect, the most important project in human history: it began many millennia ago, but it has also only just begun. As complexity in our society increases, every so often this process gets stuck in a cul-de-sac—as it has done recently—and needs to be kick-started again.

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Notes

1. Ha-Joon Chang, “23 Things They Don’t Tell You About Capitalism,” *The Royal Society of Arts* <http://www.thersa.org/events/audio-and-pastevents/2010/23-things-they-dont-tellyou-about-capitalism> (quote at around 27 minutes)
2. Adam Smith, *Lectures on Rhetoric and Belles Lettres* (Oxford: Oxford University Press, 1983).
3. W.J. Samuels et al, *Erasing the Invisible Hand: Essays on an Elusive and Misused Concept in Economics* (Cambridge: Cambridge University Press, 2011).
4. Quoted in P. Inman, ‘Beware false sightings of Adam Smith’s Invisible Hand,’ *The Guardian* 7 Oct, 2011 <http://www.theguardian.com/commentisfree/2011/oct/07/economics-invisible-hand-adam-smith>
5. P. Mirowski, and D. Plehwe, (eds.) *The Road from Mont Pelerin: The making of the neoliberal thought collective* (Cambridge: Harvard University Press, 2009), 373-4.
6. Friedrich Hayek, *The Road to Serfdom* (London: George Routledge & Sons, 1944)
7. Robert Kegan, *The Evolving Self: Problem and Process in Human Development* (Cambridge: Harvard University Press, 1982).
8. Tomas Björkman, *The Market Myth*, In press
9. Fritjof Capra and P. L. Luisi, *The Systems View of Life: A Unifying Vision* (Cambridge: Cambridge University Press, 2014).
10. John Searle, *The Construction of Social Reality* (New York: Simon and Schuster, 1995).
11. Karl Popper, *The Open Society and its Enemies* (Routledge, London, 1945).
12. Peter Berger, *The Sacred Canopy* (New York: Doubleday , 1967)
13. Francis Fukuyama, *The End of History and the Last Man* (New York: Simon and Schuster, 1992).

Twelve Action Lines for a Better World: Finally Realizing the Four Major Responsibilities*

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Abstract

This article describes a global governance system that—from the author’s point of view—would lead to sustainability and allow the implementation of the Sustainable Development Goals (SDGs), which have just been adopted at the UN level. Major elements are (1) the integration of existing international regimes in the area of the UN, WTO and the world financial system into an integrated “Global Governance Body”. (2) This institution would, among other functions, be responsible for the major global commons and put a fee on their usage with two aims: (i) to protect them and (ii) to generate money for financing global development and the SDGs. (3) To monitor the income and property distribution by politics with the political mandate, to keep it in the so-called “efficient inequality range”. This may need international co-financing. (4) It will, if done properly, prevent two-class societies, it will furthermore allow the building-up of social systems everywhere in the world with the aim to have a reasonable balance of wealth in all states, and also between states. (5) It will also be of help if artificial intelligence systems took over hundreds of millions of jobs for highly qualified people in the next decade. (6) This global institution would also be able to pay in defense of cultural diversity and for the protection of the environment, e.g. rainforests. (7) This would also allow us to do what is needed for avoiding uncontrolled climate change, e.g. improve the recent Paris accord concerning climate.

1. Complementing the Four “Major Freedoms” with the Four “Major Responsibilities”

Important components of a liberal economic system are the so-called “**four freedoms**”:

- Freedom of property
- Freedom of concluding contracts
- Freedom of innovation
- Freedom of borrowing and lending of money, respectively

* The main ideas of this paper were presented by the author at the Annual Club of Rome Conference in Winterthur, October 15-16, 2015. They can also be found in the paper “A better governance for a better future”. “A green and inclusive global economy—the key for a sustainable future” is to be published in the *Journal of Future Studies*, special issue on “Exploring paths to a viable future: obstacles and opportunities, requirements and strategies” and incorporates the unanimous UN Decision on the Sustainable Development Goals of September 26, 2015 in New York and the recent Paris climate accord.

“Freedom without responsibility has its limits. In particular, focus should be on the equality of freedom.”

The world owes a lot to the enforcement of these freedoms, especially with respect to the production and the implementation of innovations. However, freedoms are not enough to ensure sustainable development or to implement the Sustainable Development Goals (SDGs). Freedom without responsibility has its limits. In particular, focus should be on the equality of freedom, otherwise this would be a freedom of the strong to plunder or abuse the weak. In an era of globalization, this is unfortunately a frequent pattern. Therefore, freedom needs limits and the acceptance of responsibility. Responsibility includes the respect of limits.

The enforcement of limits of freedom of individuals, companies and states is a topic of Global Governance or of regulation and therefore means a takeover of responsibilities by the society, more specially the global community. The collective nature of this task makes the issue difficult. There is a danger that a situation arises where no one is really in charge. This is because of the distributed nature of responsibility. However, the implementation of the SDGs until 2030 requires at least as much the establishment of an adequate global governance and the enforcement of such conditions as the global enforcement of the four major freedoms.

“A working global governance system is the key to sustainability.”

Four major responsibilities in times of globalization are:

- Responsibility of the establishment for a sustainable international regime
- Responsibility of economy and the financial sector for common welfare
- Responsibility for human dignity worldwide
- Responsibility for environment and nature

2. Assume Responsibility for Establishing Sustainable Global Governance

A working global governance system is the key to sustainability. Markets must honor what we officially claim, not the contrary. Prices have to tell the truth. The internalization of external cost is a must. We have to deal with the further advancement in intelligent systems, platform capitalism and the need to protect privacy. Here, the “great transformation” (towards sustainability) and the digital transformation (towards a digital future) have to be seen together.

2.1. Integrate global regimes coherently

Integrate UN rule sets, WTO ruling and world financial market rulings into one coherent Global Governance regime (including co-financing). This should follow the principle of subsidiarity and favor a green and inclusive economy, human rights, a world-democratic

perspective, the implementation of Sustainable Development Goals (SDGs) and sustainable development.

2.2. Protect cultural diversity

Protect cultural diversity (also against economic forces favoring uniformity).

2.3. Develop technology appropriate to common welfare

Take care of strict data security, generate much less data with a personal identity link, control machine intelligence, govern the internet (and the upcoming internet of things/entities) in the interest of humankind, and promote global governance favoring human rights and green and inclusive markets.

3. Enforce Responsibility of the Economic and Financial Sectors for Common Welfare

This is about utilizing the strong transformational power of the economic system and the financial system. Since the financial crises, we know that the financial sector is not the “brain” of humankind. It is an important subsystem—also potentially a dangerous subsystem—that needs careful regulation in favor of common welfare.

3.1. Secure transparency and responsibility of property

Make property (via cadastres) and financial transactions (via documentation) transparent to the (international) taxation and financial authorities. Take care for all property taking social responsibility. No legal protection of intransparent property ownership and of intransparent financial transactions.

3.2. Prevention of excessive market power of companies

Create a global antitrust body/avoid companies to become too big and too powerful.

3.3. Hedge the finance sector appropriately to common welfare and tax it suitably

Implement a strict regulation of the global financial market, control “wrapping”, dry off tax havens, make aggressive tax avoiding schemes impossible. Build on current G20/OECD work on these issues. One hundred states have by now agreed on an automatic data exchange between the banks of those countries and the financial and tax authorities responsible for the account holders. This is a big step forward. Eventually the world must succeed in also getting the US into this automatic data exchange system. Via its FACTA (Foreign Account Tax Compliance Act) law the US side gets all the tax data on foreign accounts it needs. But the US still refuses to help others to reach the same condition.

4. Assume Responsibility for Human Dignity Worldwide

Human dignity is a global challenge. Balanced income distribution (with corresponding distribution of property) is the key. Social security systems are required—everywhere.

International support for the establishment of such systems in developing countries is required. Each state has the responsibility to provide basic services. The world as a whole has to support this.

“What global governance system should we establish in times of tough future crisis? This article makes a proposal about the direction we should aim at.”

4.1. Enforcement of a balanced distribution of income and property

Care for a proper balance of the distribution of income and property (stay in the efficient inequality range). In statistics, deal carefully with the application of mean and median values. Go for a proper, progressive taxation of income, property and heritage.

4.2. Construction and financing of social security systems for every human

Implement social systems worldwide and co-finance them (including a Global Marshall Plan).

4.3. Ensure state responsibility for basic services

The states on their territory and all states together have the responsibility for issues related to basic needs, infrastructure for all, healthcare, education systems and social security. In particular, guarantee a minimum daily allowance for every human and overcome hunger, once and for all. Involvement of the private sector is possible, but only under adequate regulation, leaving untouched the final responsibility of politics for the delivery of all basic services.

5. Assume Responsibility for the Environment and Nature Worldwide

A fair dealing with the Global Commons is important for securing our future. It also holds the key for organizing global cooperation much more than today. To make clear the order of magnitude, to implement the SDGs alone may cost about US \$1,500 billion annually in global development partnerships of various kinds.

5.1. The international community has to assume responsibility for the global commons

Considerably increase the financial power of the international political field. In particular, care for and appropriately tax the use of Global Commons. Use this money for co-financing international concerns, in particular the implementation of the Sustainable Development Goals (SDGs, 2016-2030).

5.2. Preserve and protect biological diversity

Protect biological diversity, preserve important biological sites and regions, especially rainforests. Pay for protection.

5.3. Counteract in the climate issue

Solve the climate problem/create new energy technologies/promote voluntary climate neutrality of the private sector/invest massively in biological sequestration (global reforestation programmes/enhancement of agriculture and preservation and recultivation of wetlands)/co-finance necessary technological developments and the transition to a post-carbon energy system. Fill the green climate fund and promote other forms of financial transfers to realize at least the promised US \$100 billion transfer from rich countries to developing countries within a year. This is to support countries in development in climate-related fields of action.

6. Conclusion

This is a bold program, but it can be done. Usually, humans only act in times of crises under extreme outside pressure. Unfortunately, more crises and outside pressure will come. We have to be prepared for this situation. What global governance system should we establish in times of tough future crisis? This article makes a proposal about the direction we should aim at.

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Relevance of Spiritual Principles for Solving Global Social Challenges

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Abstract

Society unknowingly follows the course of spiritual evolution. Spirituality is the quest for self-existent order and harmonious perfection. The evolution of society is driven by an irrepressible aspiration for the values that are the translation and embodiment of that order. The history of civilization is a record of its progressive emergence. Spirituality is the quest for a unifying reality that transcends all limitations, distinctions and differences; an inner oneness that unites rather than divides us; a faith in and quest for perfection in all its myriad forms; and a power accessible to human beings to overcome impossible obstacles and achieve the inconceivable. It is founded on the principles of absolute freedom, equality and unity. In the modern era, faith in spirit is embodied in the realization of the intrinsic value, extraordinary endowments and unmanifest potentials of the human being. We find expressions of it in the idealism and power released by revolutionary social change. We revere its power in great individuals. The aspiration for perfection in any form or field of endeavor is spiritual. So also we recognize expressions of spirit in the movements of the masses. Spirituality is not confined to pursuit of the otherworldly or unattainable. It is a living power for the transformation of human consciousness and the solution to the compelling challenges confronting humanity.

Spirituality stands for a self-existent order and society shares the aspiration for such an order. The history of civilization is a history of a growing social order and in that sense society is heading in that direction. Ancient Greece expressed this aspiration in its quest for objective rational criteria for the determination of Truth. The high mental culture it developed expressed in its development of logic, philosophy, science, ethics, and drama etc. In ancient Rome, it expressed as the quest for a perfect organization of social life through development of law, governance, military, commercial and civic life. In France it manifested as intellectuality while in Germany it expressed itself as music, philosophy and a taste for physical perfection and punctuality. In England it appeared as honor and integrity. Spirit in India expressed itself as pursuit of knowledge and truth. Such social manifestations of spiritual aspiration appear in different forms in different nations. America experienced it as the quest for freedom, while Russia sought it as emotional fullness. In China, it expressed itself as a well-developed physical mentality while Japan developed it as a sense of beauty, cleanliness and orderliness.

The central importance of spirituality is universal and remains pervasive even in an age of extreme scientific materialism. Although the concept of spirituality means a great many different things to different people, it does possess some characteristics which may be considered universal. Spirituality is the quest for a reality that transcends all limitations, distinctions and differences; an inner oneness that unites rather than divides us; a power accessible to human beings to overcome impossible obstacles to achieve the inconceivable; a faith in and quest for perfection in all its myriad forms. Spirituality is founded on the principles of absolute freedom, equality and unity. It seeks freedom not only from the constraints of external political, social or economic deprivation and oppression, but also liberation from the limitation, subordination, domination and possession of the individual by ignorance, falsehood, desire, passion, egoism and all forms of psychological imprisonment. For spirituality is the quest to contact, experience and unite with an Infinite spirit, an Eternal reality, a transcendent Truth that is the origin, foundation and creative source of all that is finite. Rationalists conceive it as a utopian ideal to be sought after, even though attainment may be impossible. Some perceive it as a living presence active in the universe and in the lives of every individual.

In our modern era, our faith in spirituality is embodied in the realization of extraordinary endowments, capacities and unmanifest potentials of the human being. Today humanity has come to recognize and cherish the value and potential of each individual. We have discovered the wonders of human ingenuity and resourcefulness in the soaring aspiration and resourcefulness of penniless immigrants seeking a new life in a new world, the incomparable courage and self-confidence of Churchill and Gorbachev, the idealistic values of Washington and Lincoln, the humility and self-abnegation of Gandhi and Mandela, and the unlimited creativity of Leonardo and Beethoven.

1. Powers of Spirituality in Human Affairs

The march of civilization is a progressive unfolding of the powers of spirituality in human affairs.

1. Humanity has an irrepressible aspiration for freedom, truth and progress.
2. Spirituality is unbounded, unconditional freedom.
3. Freedom appears in the field of politics as Liberty.
4. True freedom is attained only when it is extended to the whole population.
5. When freedom shows itself as political equality, only then does it truly become effective.
6. Political equality is availed of by the citizenry through extension of franchise.
7. Economic equality can be assured only by giving employment opportunity to all.
8. Money is a very fit instrument to achieve that equality.
9. Political and economic equality become real only when society is mature enough to look at all its citizens with an equal eye.
10. When psychological equality becomes real, all other forms of equality also gain strength.

11. Spiritual equality which eliminates fundamentalism is the rock on which all other social edifices stand.
12. Society has been built up by Man and therefore it must serve his needs and not the other way around.

2. Applied Spirituality

Though many spiritual changes have taken place in society, they are only seen as political changes. The emergence of democracy is spiritual though it is not seen as such. When some impossible thing becomes possible it is recognized as spirituality in action. India's winning of independence through non-violence is seen as a political achievement. Only in 1943 did India lose some 3 million people to the severity of a famine in Bengal. In 1965 she received a warning from U.N that she would face an imminent famine threatening the lives of some 100 million people due to an impending food shortage. The nation woke up and successfully staved off the challenge by increasing food production by another 50%. Such accomplishments are spiritual though we don't recognize them.

"We insist on being blind as if it were our birthright."

Currently, global warming appears to be an intractable problem defying any solution. The nations that participated in the Arab Spring revolution in the Middle East present another insoluble problem. Millions of refugees are fleeing their home countries and looking for asylum in other countries. They have to be accommodated somehow. Robots are increasingly taking over our jobs and at this rate some experts fear total take over by robots of the job market with nothing left for people to do. After World War I expanding populations were seen as a great hazard. But the issue is seen in a different light now. Especially if the population is a skilled one, it is even seen as a valuable asset in itself. Robert McNamara, former American Secretary of Defense, who vigorously pursued the Vietnam War, later gave it up and started calling for the abolition of nuclear weapons. Currently, Ukraine seems to be on the brink of disaster. In such a situation, the question of the relevance of spiritual principles to solving such problems arises and further it is highly interesting to find out how such principles are relevant to the issues at hand. We also need to inquire into what man should do to solve such problems.

On a certain day, the heads of Germany and U.S.S.R wondered about the future of Berlin Wall not even knowing that it would be demolished in 2 days. If we study all the psychological, economic and cultural factors that went into the break-down of the Berlin Wall, we will know all the secrets about the relevance of spiritual principles to our social ills. As with six blind men who struggled to understand an elephant, we too are equally blind and what is worse, we insist on being blind. The reality today is that America dominates the world with a show of her military might and economic wealth. She derives that wealth from the productive capacities of the Individual. The European serf came to the U.S and instead of seeing all his production go to his Lord, was pleased to see all of it coming to himself. It signified a political freedom for the entire peasantry. So great was the impact of this freedom that it reversed the economic fortunes of America and Europe and made the former give economic aid to the latter. Freedom is spiritual and when it comes to a very large

section of the population it becomes very effective. We are unaware of this simply because we do not want to be aware of it. We insist on being blind as if it were our birthright. Indian Prime Minister Indira Gandhi ruled for 11 unpopular years and then suffered a humiliating defeat. But after 3 years in political wilderness, she came back to power in an astounding manner which was not understood by any political observer. It is here that all the secrets of spirituality lie waiting to be discovered. It is a wise approach to learn valuable lessons from the past. When Man truly wants to know, these truths reveal themselves and they also reveal the process by which they go into action.

“Stock markets were originally created for collecting funds from the public for business use. That original purpose has been reversed now.”

It may sound strange to hear that Man is in love with his suffering and does not want to be freed from it. This would mean that slaves don't want to be freed of their slavery and the poor don't want to be liberated from their poverty. Worse, they actually make an ideal out of their poverty. Spiritual relevance cannot exclude these two issues. If these two issues are left out, we may find the spiritual relevance still real. Malthus was real when he warned about the threat of the explosive growth of population. Such a warning prompted humanity to awaken to the reality. Reality included not only the threat of catastrophe but also the possibility of human resourcefulness. Unwillingness to make use of human resourcefulness is not to be appreciated.

3. Spirituality is Power

The only object that has evoked man's universal admiration and has retained it over the centuries is Money. It contains an enormous symbolic power that man is subconsciously aware of. Currency contains enormous social power and thus, money rules the world today as nothing else does.

When Greece joined the E.U it was doing fairly well and had a flourishing economy. Her joining the E.U was a sign of her political maturity and a good indicator of the political potentials of the E.U itself. Later developments show a parallel to what happened in U.S.S.R. The U.S.S.R realized the folly of having become a state economy and as a result moved towards market economy. It is to be regretted that she took the advice of IMF. The market economy of the West grew on its own strength and later succumbed to many artificial ways. Under the guise of the market economy Russia accepted many of these artificialities. A country is a whole by itself and draws its strength from its foundations. Each country sustained on the strength of its foundation can, by joining others, contribute to the union. This was apparently the understanding at the time of the formation of the E.U. The formation of the Euro came as an expression of the political advancement of the E.U. The real power of the Euro issues from the political authority of the E.U. The Euro as it has turned out, is dominating E.U., its creator, which is a very retrograde step.

In the 19th century, American President Andrew Jackson tried something along these lines but failed in his attempts. The emergence of the computer and economists winning Nobel Prizes by developing algorithms for stock market trading only shows that this tendency has returned. As a mark of protest for this tendency, the two Nobel Prizes that were given should be withdrawn. It should be noted that Monetarism is only a part of the Economy which is the whole. Economy is a part while Society is the whole. Further Man is the center of Society and not its subordinate. Speculation has put a check on money serving Man by reversing its spreading tendency and concentrating it in fewer and fewer hands.

“Conservative philosophies belong to the past and have no future. The future belongs to human-centered values.”

Money arrived on the scene by way of trade. Farmers related to their fields by directly making use of the produce of the field. Trade made farmers relate to other people. It made them get in touch with civilization and not be totally lost in the soil. This widened the range of their relationship with others. Trade generated wealth through a system of productive values. Coin is a symbol of that activity. While coins are limited by the scarcity of metal, paper currency removed that impediment. By enabling money to purchase anything available, Society immensely improved the power of money. As a result Money became all-pervasive and very nearly omnipotent.

Money became Man’s most powerful social instrument. This was followed by the arrival of banks. The institution of banks gave a solid physical form to the conceptual form of money. Agriculture ceased to be the fountainhead of productivity. The creative role shifted to trade and its instrument of money. Banks through which trade was conducted then gained enormous social power. This enormous power has been used to benefit society. Stock markets were originally created for collecting funds from the public for business use. That original purpose has been reversed now. Money kept on accumulating and later acquired a destructive character. It is in the midst of this situation that Greece got entangled in the debt trap of the E.U.

While Greece struggles with its financial problems, a parallel problem has appeared in the form of refugees. The world looks at refugees as a national problem while in reality it should be looked at as a global one. As a world government is in the making, the problem of refugees can be solved only if the nations of the world adopt a similar approach. Money that used to be a market instrument is no longer so. The market has become too small a place for the 21st century. Society has emerged all important and is demanding a global government for itself. Money has risen in its value to become a comprehensive power that includes educational, cultural and social power of society. However, truth demands that all these powers serve Man rather than vice versa. He must be able to dominate those institutions that are supposed to be his instruments. If such a perspective is gained, the present disorders in society will acquire the capacity to automatically set themselves right. Neither royalty, nor aristocracy nor the racial purists of Nazi Germany have any great future. It is democracy, liberty and

equality and such other values that have a bright future. Man is short-sighted and myopic in the extreme. It is pardonable to be a little myopic but it becomes unpardonable when myopia is venerated as something divine. Even the superstitious will protest the elevation of myopia to this divine level. Chamberlain was at his myopic best when he called Hitler a gentleman but suffered the rude shock of seeing Hitler break the agreement. Conservative philosophies belong to the past and have no future. The future belongs to human-centered values.

Spirituality is relevant to all of us in our daily lives. During 1940, patriotism was the spirit of the British people. For India, it was breathing freedom without taking recourse to war in 1947. Refusal to surrender was a spiritual moment for the European nations during World War II. Thus, we see that any social problem can be solved. As for E.U, the greatest step it took was when it formed itself very much like the American union was formed in 1865 after victory in the civil war. When the depression hit the U.S in 1929, FDR displayed spiritual courage in taking the steps he did to conquer the depression. The winning of Freedom by India was a clear demonstration of the relevance of spiritual principles at work. Green Revolution was one more demonstration of this point. Present-day problems look formidable when we know that world leadership as such does not exist. Spiritual law says that attacking the problem straight may end up energizing it rather than destroying it. So it would be wise to focus our energies on strengthening counter measures to the evils that the world is facing today. The world has successfully fought and tried to eliminate such evils as epidemics, terrorism and violence, hot and cold war etc. Commensurate with these achievements, the stature of man has also risen. In spite of all adverse criticisms, it can safely be said that the world is a much better place to live in today than a century ago. Instead of energizing the evils that exist today, let us as a countermeasure enhance our human rights. We can issue a call to Muslim women to come out in the open and assert their human rights. Environmental groups such as Green Cross are worried about availability of water which is a legitimate worry. Its availability can be enhanced if we choose to pay more attention to water. In Tamil Nadu, a lot of water is wasted in agriculture. The state government chose to conduct an experiment to recharge the aquifer in all the towns. Building rain-water harvesting devices was made compulsory in all households. Tamil Nadu normally gets 40" of rain per year. But in the next year after the scheme was implemented, Tamil Nadu got 80" of rain which was simply double. This perfectly proves the power of the spiritual principle of attention.

In conclusion we can say that the present problems faced by the world are the result of shortcomings of our mentality such as narrow outlook, lack of adaptability, lack of wide-ranging vision and ignorance of our inherent potential. Spiritual principles have no such shortcomings and exhibit the very opposite of these qualities. They are comprehensive in outlook, highly adaptable, have a long-range and multifaceted vision and are abundantly productive. We have seen so far that rational approaches to solving the world's problems are not yielding any promising results. If so, it is advisable that humanity looks for solution in the direction of suprarational approaches and as such spiritual values and principles which are suprarational eminently deserve consideration.

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Special Notice to WAAS Fellows

“The S&S Guide offers a unique and invaluable glimpse of 1,500 mostly non-profit organizations of global interest—more than half begun since 2002. Especially note some 80 information portals, and nearly 100 alliances, consortia, and networks.

– Ted Trzyna (WAAS Fellow; Editor, *World Directory of Environmental Organizations, 2001*; President, *Inter-Environment Institute, Claremont, Calif.*)

The Security & Sustainability Guide: 1,500 Organizations Pursuing Essential Global Goals

Prepared by Michael Marien, David Harries, and Michael Sales

A 250-page “Interim Draft” PDF of The S&S Guide, a project of the World Academy of Art & Science, will be available for limited distribution free of charge to WAAS Fellows in June 2016. It reflects the critical fact that sustainability and security are both essential and can only be achieved in concert. The Guide is not yet complete, but the compilers believe that, even in its current state, many WAAS Fellows will find it useful for illuminating many of the most serious problems facing humanity under the broad, overlapping categories of “Security” (weapons proliferation, terrorism, cyber-attacks, economic and food insecurity, human rights, peacemaking, crime and corruption, inadequate infrastructure, etc.) and “Sustainability” (climate change, biodiversity loss, pollution, energy, agriculture, population growth, cities, oceans, forests, vulnerability to disasters, green economics and finance, etc.)

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 - D. 25 Notable Individuals (to be added in August)
 - E. 80 Information Portals (to various security and sustainability topics, e.g. climate)
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For a free PDF of the **S&S Guide**, contact WAAS Fellows Dr. Michael Marien (mmarien@twcny.rr.com) or Dr. David Harries (jdsharries@bell.net). Comments on this work in progress are encouraged; also suggestions for funding to make this project sustainable.

