



PROMOTING LEADERSHIP IN THOUGHT
THAT LEADS TO ACTION

THE WEALTH OF NATIONS REVISITED

CADMUS

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The CADMUS Journal

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

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Rethinking Growth: The Need for a New Economics*

Roberto Peccei

Professor of Physics and Astronomy, UCLA;
Trustee, World Academy of Art & Science; and Member, Club of Rome

For over 40 years the Club of Rome has been concerned with the sustainability of our planet. The conclusion of the famous first report to the Club of Rome *The Limits to Growth* that the world was on an unsustainable path was anticipatory and prescient.¹ Although *Limits* caused considerable debate, after an initial flurry of interest, the message of the Club of Rome was largely ignored. Only now is this message beginning to re-acquire the currency it deserves, but we have lost much time.

Today many people around the world understand that the “business as usual” path mankind is on will lead to major ecological, social and economic challenges in the future. However, very few really understand what practical steps need to be taken to avoid this predicament. It has become clear that understanding the problems humanity faces is not enough. One needs to find solutions and the will to implement them.

It is worthwhile reflecting on the reason why it is so difficult to find a solution to the predicament that mankind finds itself in. The Club of Rome and other like-minded organizations have been very good at providing a deep understanding of the reason for this predicament, which is rooted in the growth of population and of consumption in a finite world. The Club of Rome, as well as many other organizations and individuals, have also been very good at suggesting practical ways for moving towards sustainability through specific actions. In fact, the two most recent reports to the Club of Rome, *Factor 5: Transforming the Global Economy Through 80% Improvements in Resource Productivity* by Ernst von Weizsaecker et al, and *The Blue Economy* by Gunter Pauli suggest many practical ways to make the world more sustainable by increasing efficiency and relying on bio-mimicry.^{2,3}

As Ian Johnson, the Secretary General of the Club of Rome, has pointed out what has been missing on the whole in the work of the Club of Rome and that of others, is the crafting of the necessary legal and social instruments which help link the theoretical understanding of the problem with practical actions, based on a thorough analysis and extensive policy debates.⁴ This raises the question why it has been so difficult to devise these implementation mechanisms. In my view the reason is simple: it has been impossible to carry out this analytical and policy work using current economic theory because the underlying principle of this theory is economic growth.

If one believes that the central issue facing us today is that unbridled population and

* Based on talks given at the Paradiso Conference, Brussels, November 2010, the Romanian Academy of Sciences, Bucharest, March 2011, and the first joint meeting of the Latin American Associations for the Club of Rome, Buenos Aires, April 2011.

economic growth are untenable in a finite world, one must then logically develop legal and social instruments which will provide solutions to our present predicament **outside** of our present economic theory. Thus what is needed for progress to occur is a new economic theory – one where sustainability rather than growth is the central driver. Such an economic theory does not really exist!

The world needs a paradigm shift in economics similar to the one physics experienced at the dawn of the last century, when quantum mechanics and the special and general theories of relativity were invented to address new phenomena not explainable by Newtonian mechanics or Maxwell's electrodynamics.

I believe economics is ready for a similar paradigm shift. Modern economic theory was constructed on a foundation laid out by Adam Smith in his famous 1776 book *The Wealth of Nations*.⁵ Although economics has evolved in the last 200 years, many of its fundamental concepts derive from that time. This was a time of limited production capacity at the dawn of the industrial revolution where human capital was the main driver and the production of manufactured goods was synonymous with wealth creation. The nation state was the basic unit and one of Smith's tenets was that competition among nations led to economic advantage.

We live now in quite a different world- one where services rather than manufacturing accounts for the bulk of economic activity. Furthermore, the economy is now so globalized that the notion of nation state economies has lost most of its meaning. In addition, financial transactions, rather than being the means for economic activity, have become an end in itself. Given these changed circumstances, it seems obvious to me that one might want to rethink the underlying economic theory.

However, in contrast to physics a century ago, there seems to be no sense of urgency among today's economists to create a new economic theory to reflect better today's realities. A century ago, Einstein, Planck, Bohr and many other brilliant young physicists working in relative obscurity modified Newtonian physics to account for phenomena not explained by classical theory. We urgently need their equivalents in economics to forge the new economics of the future, where natural capital is no longer an externality and sustainability rather than growth is the key.

Gus Speth, a member of the Club of Rome and until recently the Dean of the School of Forestry at Yale University, described well what characteristics one wants this new economy to have. Let me quote what he said in his John H. Chaffee Memorial Lecture to the Council for Science and the Environment in Washington D. C in 2010.⁶

"We should be building what I would call a "sustaining economy"- one that gives top, over-riding priority to sustaining both human and natural communities. It must be an economy where the purpose is to sustain people and the planet, where social justice and cohesion are prized, and where human communities, nature and democracy all flourish, its watchword is caring - caring for each other, for the natural world, and for the future."

Constructing the new economics needed for a sustainable world will not be easy. One must be prepared to think boldly, clearly stating what are the goals sought and being prepared to jettison old concepts. Let me briefly illustrate this with an example, related to the

interconnection of unemployment and economic growth. One of the difficulties of imagining an economy without growth is that, in classical economic theory, unemployment rises if there is no economic growth. This connection between growth and employment is known as Okun's law, which is named after the American economist Arthur Okun who noted that there is an empirical relationship between growth in GDP and changes in unemployment.⁷ Percentage changes in unemployment are negatively correlated with GDP growth. In the United States, for instance, unless GDP grows around (2-3) % / year unemployment grows. Zero GDP growth causes unemployment to go up by 2%.

In a new economics, one must decouple unemployment from growth. This is possible, but it requires radical new thinking. Let me quote in this connection from a paper entitled *The Wealth of Nations Revisited* by Orio Giarini and Ivo Šlaus, both members of the Club of Rome, and their collaborators.⁸ Talking about the new economics needed, these authors state,

"...that requires formulation of a new theory, not just modification of prevailing concepts. There is no reason why we should not formulate a theory of economics based on the premise that all members of society have a right to employment, a theory that not only affirms the right but also presents the structures and processes by which this can be achieved."

In other words, in this new economics one must strive to put the welfare of human beings ahead of the production of goods and services. In principle, one can achieve a stable employment rate even with no GDP growth, if one can unlink the percentage of unemployment from the rate of growth of GDP. This may occur if one transitions to a different economy where there are more labor intensive sectors, as suggested recently by Tim Jackson and Peter Victor.⁹ It also can occur (at least in some sectors) in Gunter Pauli's "Blue Economy" where one makes waste streams productive via bio-mimicry, effectively creating new jobs where before there were none.

An employment-centric economics in a world of little or no-growth by necessity must be quite different than the present market based economics. Its natural time scale is the productive life-span of human beings, rather than the quarterly reports that rule modern corporations, not to speak of the millisecond transactions that now seem to dominate financial markets. On this human time scale, actions that incorporate the welfare of future generations and the preservation of the environment become natural.

In any consideration of the future, attention should be closely paid to what economic framework will underpin the society of the future. In my view, to aspire for a world that is sustainable, the economic thinking needs to radically change. Consumption can no longer be synonymous with wealth. Consumption increases current well-being at the expense of future well-being, while wealth measures stocks of natural and social capital carried into the future. Thinking of future society in an economic framework which puts people and nature first will lead to sustainable scenarios for the world. Sustainability and new economics are complementary concepts and mutually reinforcing.

To effect the needed transformations to implement a new economic structure based on sustainability and not growth is an immense and difficult task. However, it is important to note that although it is desirable to move the whole world along this path, it is unrealistic to

imagine that this will happen all at once or that it will happen in the same fashion in different regions of our planet. To move mankind towards a sustainable future, it is much more urgent to stop growth fueled by consumption in the developed world than in the developing world. In addition, it is much more likely that the changes needed to move our planet towards a sustainable future will be made first in a few countries or regions where these ideas will find more fertile ground. In my view, in this respect, regions of the world which are still not as beholden to a market economy based on consumerism as other parts of the world have great potential to play an exemplary role.

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Notes

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Rising expectations release enormous amount of social energy that spills over into social unrest when no suitable positive channels are available to utilize it for social advancement. Harnessing that energy for constructive purposes requires appropriate social organizations and productive skills.

Ashok Natarajan, Rising Expectations, Social Unrest & Development

I would suggest searching for a more appropriate word for failure, one not tainted with negative connotations. Because failure is the high road to innovation, because failure is the inevitable investment in the future, because failure is – the road to success.

Bengt-Arne Vedin, In Search of Failure's Silver Lining

First, we must recognize the crises we face are not black swans, fat tails or perfect storms, but symptoms of our limited perception, fragmentary reductionist mindsets, models, research methods and academic curricula, particularly in economics and business schools. Second, we must move beyond economics to capture all their "externalities" in multi-disciplinary frameworks, systems models, multiple metrics and pluralistic research.

Hazel Henderson, Real Economies and the Illusions of Abstraction

The wide range of innovative mechanisms commonly employed to settle disputes outside the courtroom is illustrative of the larger potential for organizational innovation in other fields designed to enhance governance nationally and globally.

*Michael McManus and Brianna Silverstein,
Brief History of Alternative Dispute Resolution in the United States*

Today humanity has acquired the conscious self-awareness and the organizational capacity for self-expression and coordinated action. Organizing the consciousness of the global power of citizenry is the natural step to transcend the nation state. It needs only the right pioneering leadership with the right ideas and the right values to sound the call.

Garry Jacobs, The Turn Towards Unity: Converting Crises into Opportunities

Global governance is clearly taking shape in complex and chaotic ways, with widespread dissatisfaction of present arrangements and numerous proposals for betterment — all at a time when many national governments are also being questioned, arguably due, at least in part, to deficiencies in global governance and international accords.

*Michael Marien,
Taming Global Governance Idea Chaos: A "Frontier Frame" for Recent Books*

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Inside This Issue

The world needs a paradigm shift in economics similar to the one physics experienced at the dawn of the last century, when quantum mechanics and the special and general theories of relativity were invented to address new phenomena not explainable by Newtonian mechanics or Maxwell's electrodynamics.

Roberto Peccei,

Rethinking Growth: The Need for a New Economics

Society is evolving. Understanding the present in the light of the past, we see only the problems resulting in gloom. Understanding the present in the light of the future compels us to evolve, we see the opportunities it points to.

Ian Johnson, The World in 2052

We have organized production to perfection, but left out the most crucial ingredient – humanity. We have raised the value of GDP phenomenally, but overlooked the value of human security. The process of society's past evolution offers hope and assurance that there is a better way and a better life for all humanity waiting to emerge. Human-centered economic theory and measures of wealth, welfare and human security can help us realize it now.

Orio Giarini & Garry Jacobs,

The Evolution of Wealth & Human Security

Working for peace is part of the heritage WAAS fellows have been given by Academy founders who, after helping develop the theories and technology for nuclear weapons, were amongst the first to recognize that they should be banned. Two of the seven founders of WAAS (Robert Oppenheimer and Bertrand Russell) became global figures in proposing nuclear disarmament.

Melanie Greenberg, Robert J. Berg & Cora Lacatus,

Mediation of Conflicts by Civil Society

The difference between predation and competition is that predation knows no rules. In contrast, competition can be made fair. Making sure that it is—by disallowing rankism in all its guises—a proper function of government.

Robert W. Fuller, Moral Arc of History

Continued . . .