Closing Remarks for the 2010 Paradiso Workshop

Roberto Peccei
University of California at Los Angeles
The Club of Rome

I am very happy to make a few closing remarks for the 2010 Paradiso Workshop. My name is Roberto Peccei. I am a physicist by profession and for the last decade I was the Vice Chancellor for Research at the University of California at Los Angeles, overseeing all research programs at UCLA. I am a member of the Club of Rome and also the President of the Aurelio Peccei Foundation in Italy, which serves as the Italian Chapter of the Club of Rome. The Foundation, of course, is deeply connected to the Paradiso Project through the work of Roland Burger, who is a member of our Board of Trustees and, as Roger knows well, a person of unbounded enthusiasm.

The goals of the Paradiso Project, to explore how society might evolve in the future and how the Internet might help make this future better, are totally aligned with the thinking of the Club of Rome and that of my father, Aurelio Peccei, who was the Club's founder with Alex King in 1968. Although my father did not live to see the Internet grow and blossom, I am sure he would have seen immediately its enormous implications for social change. He often remarked that the future of our planet depended not so much on technical advances but on improving human quality. The internet, much more than a technical marvel, is an instrument to better human quality by providing crucial linkages in our societal fabric. These characteristics are what make the internet so essential to our society, and indeed, in the end, it is how the internet can and will help move humankind along a more sustainable path.

The Club of Rome has been concerned with moving humankind along a more sustainable path for over 40 years. The early efforts of the Club of Rome to detail the interconnected problems the world faced – the, so-called, problematique- and the dangers that these problems presented to our society if they were ignored led to the famous first report to the Club of Rome *Limits to Growth.* The conclusion of *Limits,* that the world was on an unsustainable path was anticipatory and prescient. However, after an initial flurry of interest, the message

of the Club of Rome was largely ignored, and only now it is beginning to re-acquire the currency it deserves.

Today, on the bright side, there is a broader understanding among people around the globe of the predicament that mankind is facing. Many people understand that if we continue on the "business as usual" path that we are on, the world will face major ecological, social and economic challenges ahead for which we are largely unprepared. Unfortunately, understanding the problems the world faces is not enough. One needs solutions and the will to implement them.

In this respect, our planet is not better off now than it was in the 1970s. In fact, we are considerably worse off, since the problems have become more acute and very little progress has been made towards the goal of having a sustainable planet. In light of this situation, the Club of Rome, rather than just simply continuing to raise the alarm that the world is in trouble, has turned more to the task of identifying options and solutions to address these challenges.

The desire to focus on solutions was evident in the program of the Club of Rome General Assembly which was held last month over four days in Winterthur, Vaduz and Schaffhausen. Topics that were part of our discussions included the future of finance in a changing world, as well as scenarios to address mobility and growth, and even happiness in such a world. In addition, considerable attention was given to practical ways for moving towards sustainability through specific actions. Two 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 give many practical examples of actions that can be taken to become more sustainable.

Much effort has been put forth by the Club of Rome to understand the fundamental reasons behind our present predicament, rooted in the growth of population and consumption in a finite world. Besides this theoretical work, the Club of Rome has also identified practical actions (as exemplified by the above two recent reports to the Club) that one can take to make the world more sustainable, ranging from increased reliance on bio-mimicry to increased efficiency. However, as Ian Johnson the Secretary General of the Club of Rome has emphasized recently, what has largely been missing in our work, and that of other like-minded organizations, is the analysis, policy debates and development of legal and social instruments which are needed to link theoretical understanding with practical actions.

Part of the reason that it has been difficult to pursue the analysis, policies and instruments needed to implement meaningful practical actions to achieve sustainability is that this analytical work cannot really be done using current economic theory. If one believes that the central issue facing us is that unbridled population and economic growth is untenable in a finite world, one must then logically look for solutions within a new economic theory – one where sustainability rather than growth is the central driver. The world needs a paradigm shift in economics similar to the one physics experienced at the dawn of last century, when quantum mechanics and the special and general theories of relativity were invented to address new phenomena not explainable by Newtonian mechanics.

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.* 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. Then the nation state was the basic unit and one of Smith's tenets was that competition among nations led to economic advantage.

We live in quite a different world now, where services rather than manufacturing account for the bulk of the economic activity. Further, the economy is now so globalized that exports account for a quarter of global world product. 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 seem 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, another member of the Club of Rome and until recently the Dean of the School of Forestry at Yale University, in the 2010 John H. Chaffee Memorial Lecture of the Council for Science and the Environment in Washington D. C.

described well what characteristics one wants this new economy to have. Let me quote what he said:

"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, named after the American economist Arthur Okun who noted fifty years ago that there is an empirical relationship between growth in GDP and changes in unemployment. 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 (1-3)%.

In a new economics, one must decouple unemployment from growth. As Orio Giarini, another member of the Club of Rome, and his collaborators in their recent paper *The Wealth of Nations Revisited* 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."

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 matters. On this human time

scale, actions that incorporate the welfare of future generations and the preservation of the environment become natural.

Let me come back at the end again to the Paradiso Project. Here, my recommendations are simple to state, but challenging to implement. Fundamentally, I would urge that in considering what future society might, or should, look like, and how the future internet may help shape such a society, attention should be closely paid to the economic framework that underpins that society. In my view, for a scenario to be sustainable it must be based on new economic thinking, where wealth is not synonymous with consumption and where the welfare of human beings is put ahead of production of goods and services. Conversely, 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. The Paradiso Project has much to offer by imagining what future society will look like, empowered by the connectivity which the future internet will provide.

Invited Talk Presented at the 2010 Paradiso Workshop, Brussels, Belgium, November 23rd, 2010