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Changing Climate, Changing Economy: how to think about Climate Change

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The purpose of this article is to explore how the impacts of climate change can be best addressed through changes in economic systems, and in the macroeconomic theories used to help us understand and guide our economies[1]. What I especially want to spell out is the focus that climate change will put on issues of poverty and inequality.

Standard perceptions of what makes for a healthy economy contain many elements that are not environmentally sustainable. The challenge, therefore, is to promote changes in how the economy works that will accomplish the following:

- Reduce to an acceptable level, as quickly as possible, the environmental harms that result from economic activity
- Maintain or increase human well-being in the present
- Preserve and, where necessary, rehabilitate, the productive resources required to maintain or increase human well-being in the future
- Cope with unavoidable harms to the natural and social environments

These challenges are especially important in relation to the economic activities that are significant in causing climate change, which has potentially enormous disruptive consequences for human well-being and ecological health.

Contemporary thinking on climate change define two distinct kinds of activities.

The first is **mitigation – activities that will reduce or halt the sources of additional climate change.**

The second aspect of the challenge we face is **adaptation – activities designed to cope with the harmful impacts of climate change.**

For the next 10-15 years it will be essential to put a major emphasis on mitigation, because the more mitigation is done, the less adaptation will be necessary. However, the effects of climate change are already beginning to be felt in many parts of the world, and will be felt with increasing force in years to come, even under the most optimistic scenario for mitigation efforts. The momentum set in place by greenhouse gasses already in the atmosphere means that there are some very heavy costs of climate change, in financial terms and in terms of human suffering, that simply cannot be avoided.

We can't know just when or where the impacts will hit, but for the US in coming decades we can predict a high likelihood that there will be years in which two or three cities are hit with storms as devastating – in human and financial terms – as hurricane Katrina. Insurance will become much more expensive, or simply unavailable, for people living in areas increasingly prone to fire, flooding, or high winds; and decisions will need to be made about building expensive dikes, or abandoning airports and other coastal infrastructure.

Adaptation will be much more difficult for poor, developing countries, which are likely to suffer from droughts and food deficits beyond anything experienced in the last century. The international community will face myriad regional conflicts over increasingly scarce resources of fresh water or arable land. The concept of "environmental refugees," familiar now to only a few people, will become part of the common language. The rich countries can take many kinds of action on mitigation, as will be spelled out below. The poorest emit very little in the way of greenhouse gasses; because they are not the ones causing climate change, there is very little they can do to avert it. Yet, in a situation of tragic unfairness, they will receive most of the worst effects of climate change. According to any known ethics, a significant portion of the wealth that created the problem should be used to assist in adaptation for those who will bear the brunt.

In the industrialized world many of the activities required for mitigation will call forth investments and create good, new jobs within the economy as we now know it. The challenge will spur technological, cultural, political, and other innovations with potentially large positive effects on the economy and society. A massive climate change mitigation effort – on the scale of mobilizing for a major war or space program – can be a highly successful economic development strategy, without requiring a radical change in the economy, or in the theory of economics. But much deeper changes will be required to prepare the world to adapt to the shocks that even the best mitigation activities will not prevent.

There are two social characteristics which are increasingly being perceived as essential for adaptation.

- One is *resilience*, which means, among other things, that the least advantaged groups in society must be strengthened so that they will not be crushed by the requirements for adaptation[2]. The disaster of New Orleans, so ill-prepared to respond to Hurricane Katrina, is a dramatic reminder of the importance of resilience. The April, 2007 report from the Intergovernmental Panel on Climate Change describes many ways in which poverty, especially in the tropics, spells disastrously low resilience against the likely effects of climate change.

- The other requirement for successful adaptation – and a prerequisite for resilience – is *social cohesion*, which means that people identify with larger social goals than their own immediate interest. Among the things that are most damaging to social cohesion are wide inequalities. At the time of this writing, income and wealth inequality in the United States are at about their high-water mark for the last hundred years; inequality is also exceptionally high, by recent standards, in many other parts of the world.

If we are to create a livable world over the next fifty years, economies must be reorganized in ways that encourage all actors to think long term and to act with concern for broad human well-being. This is deeply contradictory to the understanding that is promulgated in economic theory, and that motivates many economic decisions, especially those made by corporations. Alas for Adam Smith, that he ever made his comment about self-interest motivating people to act for the common good, "as if guided by an invisible hand." Sometimes the market does work that way; too often it does not. Market economies, which do many things spectacularly well, are poorly designed for protecting and enhancing natural and human capital, let alone social capital. Too often, indeed, markets – and the economic theory of markets that has been popular for a number of decades – encourage the opposite: behavior that seeks to gain advantages for individuals or firms, even when the immediate or long run environmental or social consequences are clearly disastrous. Some types of mitigation activities can be set in motion through the system of incentives existing in the economy as we now know it, but the best mitigation scenarios, and any serious effort at adaptation, will require a changed environment of incentives.

Standard economic theory is not adequate to the task of focusing on how to create resilience and social cohesion in societies throughout the world, and in the world community as a whole. A quick run-down of the impediments in the theory includes:

1. **Inappropriate goals**: standard economic theory prizes wealth creation above all, and most often defines this goal in terms of steadily growing GDP – instead of focusing on what economies should really produce, which is human well-being, in the present and the future.
2. **A de-contextualized view of the economy**: economic systems are viewed as operating in a vacuum, without regard for the critical ways in which the economy affects, and is affected by, the ecological and social contexts.
3. **A truncated list of essential economic activities and concerns**: the standard list of economic activities is "production, exchange, and consumption." As feminists and environmentalists point out, this omits the critical aspects of caring activities and resource maintenance.
4. **Difficulty in dealing with the future**: the standard use of discounting often drives conclusions that make future concerns seem insignificant.
5. **Bias toward monetary values**: application of cost/benefit analysis often leads to an effort to apply monetary values to human values, such as dignity, health, or fairness. This can be seriously misleading. Moreover, the focus on what can be submitted to the measure of money leads to an overemphasis on formal markets, and insufficient attention to critical unpaid economic activities.
6. **Bias toward the status quo:** a number of conceptual tools and concepts used in economic analysis accept the existing distribution of resources as "given" – not really up for discussion. These include the concepts of Pareto optimality, aspects of the Coase theorem, and a focus on aggregate growth indices at the expense of disaggregated inequality indicators.

Those are some of the reasons why *new* – and some revived *old* – thinking in economics is required, if the human race is to adapt to the climate-related catastrophes that will occur within ours and our children's lives. A successful effort to meet these challenges will bring together streams of thought that have sometimes, in the past, seemed to be in conflict. People have often felt that they had to choose whether to emphasize *social justice, individual well-being*, or *environmental sustainability* – and, in embracing one value, have felt that they might have to accept sacrifices in one or both of the others. This choice may no longer be necessary – if it ever was.

[1] This is the first of a series of four related articles written by Neva Goodwin that Opinion Sur will published in its July-October issues.

[2] See Special Issue: "Resilience, Vulnerability, and Adaptation - A Cross-cutting Theme of the Human Dimensions of the Global Environmental Change Program". In: *Global Environmental Change,* Vol. 16, Iss. 3.; also Resilience Alliance: http://www.resalliance.org/1.php. Also, Brian Walker and David Salt (2006) *Resilience Thinking; Sustaining Ecosystems and People in a Changing World.* Island Press