

A 2012 View of the Possibility of a World Without Nuclear Weapons

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Abstract

A stable world without nuclear weapons must be based upon a sustainable economic picture for the entire globe. The present economic system is maximally unsustainable; therefore major change is necessary, and the needed changes cannot be attained with the present pervading paradigm. This paper outlines the new paradigm and points to the nature of the ecologically sound economic system that must replace what is in operation today to make the goal of a stable nuclear weapon-free civilization possible.

The most significant change in the world's plight since Pugwash held its first meeting in 1957 is surely the shift from nuclear war being the greatest danger to humankind and many other species, to the hugely greater threat of a major extinction which is currently being brought about by the acidification of the ocean. It is a characteristic of humankind that people do not react to very significant changes on a timescale that would be appropriate for facing up to the realities; and this slowness of human adaptation perhaps explains why the Pugwash Council was wise in proposing this workshop having a long-term future perspective.

The very limited task of achieving a world without nuclear weapons requires the much more difficult achievement of the conditions necessary for a sustainable civilization, a *sine qua non* for a meaningful nuclear weapon-free world. This paper therefore asks the community of activists who pursue the nuclear disarmament objective to expand the framework within which they pursue it, and to place it into the larger picture of the Earth's plight and the imminent collapse of civilization [1], rather than only the narrower picture of human suffering, which of course would exceed all imagining should nuclear war occur [2].

Civilized humankind has become very narcissistic as a species. One can observe this by looking at the output of the movie industry. The commercial part of the industry is almost exclusively focused on people, often very narrowly so, on a particular subculture or minor feature. But our knowledge of the ecosphere would indicate that we, the human race, are inextricably related to the other living species. It may be the constantly growing cities that have given rise to this separation of *homo sapiens* from the rest, to the point where most city dwellers are unaware of almost all of the species with whom they share their world. They are thus unaware of the essential interconnectedness of living beings.

Climate change affects all species and our recent knowledge of the ocean shows that its acidification puts us on a path leading to universal death or at least to a major extinction [3]. At a recent planning meeting [4], Alanna Mitchell pointed out that the current rate of rise of atmospheric carbon dioxide is much larger than the rate that gave rise to the Permian Extinction about 252 million years ago. In the Permian Extinction, which was a transition from a generally cool to a generally warm era, 95 percent of all species were wiped out, including most trees. Paleontologists are now more or less agreed that the warm eras (those with large ocean volume and no icecaps) in the Earth's history correspond to atmospheric CO₂ concentrations above 450 ppm, and the cool eras (with icecaps and intermittent ice ages) to concentrations below 450 ppm.

Extrapolating present trends, the atmosphere will pass the 450 ppm concentration in 2027, fifteen years from now. This does not necessarily mean certainty for transition to a warm era, but the transition will be hard to avoid, since reversal of the CO₂ trend will necessarily be slow.

What do these facts imply? How should they affect Pugwash? How would we rewrite the Russell-Einstein manifesto if we were asked to do it in the light of current information?

I cannot answer those questions directly but, assuming it is not too late, I can delineate a possible route by which a new major extinction might be avoided, and civilization could be saved from collapse.

Change of paradigm

The first requirement is the adoption of a new paradigm, replacing the 300-year old paradigm that still underlies most thinking today, and went as follows.

The human being was seen, at the time this classical paradigm established itself, not as an animal, but as a separate kind of being, more complex than any animal, and superior to all other creatures, and one having the privilege of control. The origins of the element of control almost certainly came from the book of Genesis. The Standard Revised Version (1, 26) gives humankind “dominion over the fish of the sea, . . . the birds of the air. . . cattle, and over all the Earth, and over every living thing.” The exhortation to “go forth and multiply” adds a fillip to the growth element of the paradigm, which is another of its significant elements: growth *per se* is good. Even if the eighteenth century thinkers didn’t fully adopt the notion that growth is good, then it surely became established in post-WWII economics [5]. The concept of *more is better* can certainly be found in the Bible, if only because the alternative in the narrative was drought and famine. In the classical paradigm, new technological developments were generally accepted as good, as exemplified by the advent of steam power, even if there were opponents to such technology. The railways made transportation of goods cheaper on routes not paralleled by any canal system and made travel affordable to millions of people who could not afford to travel at all previously. So technology appeared as a way forward, more or less completing the paradigm, which we can now summarise: rationality; the human race in control of the planet and exploiting planetary resources using new technology to yield economic growth and consequently the betterment of human life.

But the part of the paradigm placing the human race apart from other creatures and in control was dealt a fatal blow by Darwin’s establishing *homo sapiens* as merely another animal, and claiming that we were the descendants of some more primitive species. This change was so profound that its full consequences still haven’t sunk in. Also the importance of biodiversity was not understood in those earlier days, though it was understood by aboriginal people (see below), whose world view was most definitely not appreciated by the movers of western civilization.

The importance of ecological footprint [6] has also not sunk in either in business or in political circles, nor has it yet helped give rise to a new paradigm to replace the classical one that has been the mental backdrop to almost all of our learning, at least in western civilization. The footprint information, being quantitative and scientific, should have hit all rational thinkers, whether at universities, in businesses or civil services, law, medicine, high schools, or houses of parliaments, with a huge jolt, like an electric shock.

But life went on after Wackernagel and Rees came out with their findings, as if nothing had happened. Logically, we should all have been asking the question, “What do we have to do to bring our footprint — our impact — down to 1.0 or less?”

North Americans have the particular advantage of having substantial populations of aboriginal people, who have in the main preserved their outlook with respect to the land and its creatures from before the arrival of Caucasian people. They believe that we are part of our surroundings and must learn to live in harmony with life around us. It is a viewpoint completely opposite to the mode of modern industry, which is to exploit nature so as to reap maximum profit. If a shortage of trees is projected to occur at some future date, then the classical paradigm would be consistent with cross-breeding faster growing trees, rather than cutting fewer trees today, so as to have enough for tomorrow.

These thoughts brings us directly to what the new paradigm must adopt at its core, besides retaining the essential element of rationality: **preserving the web of life** [7]. There are religious groups and individuals who have known this all along. An example of failure to take biodiversity into account arises in the establishment of monocultures of eucalyptus, which do not support the life forms that were already present. Such modern developments can lead to the extinction of species and as such tend to be ecocidal. They thus require very broad, precautionary study in advance, having regard to preservation of the web of life, and should never be embarked upon lightly or initially on a large scale.

A world without nuclear weapons

The world without nuclear weapons cannot be sustained under the classical paradigm, which today dominates industry, business and politics. Nor can it be achieved and sustained in the present economic system, which maximizes the throughput of primary resources, and thus maximizes pollution, fails to measure full costs and confuses money with wealth. The economic arguments are too many to raise here, but new endeavours by economists, especially those in environmental fields are coming to grips with tomorrow’s needs. One of the larger groups doing this is the New Economic Institute [8], which has assembled an important team to study and promote necessary alternatives. Many others are working on these problems [9].

Therefore, whatever detailed modes government or styles of control of fissile materials are devised for the world without nuclear weapons, they will fail under the old paradigm and under the current economic system, because the economic system is not merely unsustainable, but is designed to maximize the race to collapse.

A glimpse of a new economic system

Enough is known about ecological economics that one can envision a system that might work so as to permit the human race a sustainable existence with a continuing civilization. I state “might work” because the system will depend on widespread support and upon widespread adoption of the new paradigm. Such a system will require:

- Resource accounting

- Minimum extraction of primary resources including trees, and maximum recycling

- An end to fossil-fuel burning

- Adoption by industries of extended producer responsibility [10]

- An end to planned obsolescence, at least its wasteful characteristic

Controls or understandings on advertising

Encouraging the further development of *benefit corporations* [11] and improving the legislative basis for their existence

Establishing nationally owned banks (or regionally owned banks for single-currency areas) across the world, and policies for use of these to maintain various aspects of the system, for example, important infrastructure and restoring the commons

Maintenance of high/full employment, partly through restoring the commons

Greatly reduced social inequities

Population reduction [12]

Measuring wealth changes, not using GDP as a measure of economic success!

Each of the above deserves a chapter, not merely a paragraph, but most of them are clear enough. The list begins with resource accounting, which would permeate industry, while the measurement of wealth would also be in terms of resource capital: natural, built and human. Decisions would be made on the basis of resource wealth (all three types) and needs, so that money would not dominate the system as it does at present. It is easy to demonstrate that money represents many a resource very poorly, which is why resource accounting in units appropriate to each resource is important. The listed measures will not be achieved without the change of paradigm discussed above, and the most difficult single change will be that of persuading the most powerful corporations that it is in their long-term interests to follow such a route, the alternative being collapse.

A start can be made toward implementing such a system through changes in taxation. In July 2011, Herman Daly proposed elimination of sales taxes, value-added taxes and income tax, and retaining only resource taxes, that is, taxes on what I have here called primary resources. Such a change would hugely encourage recycling, and would likely appeal to ordinary people, who never have liked income tax or sales taxes.

The single step of tax changing as suggested by Daly would reduce rapidly the footprint of extravagant societies.

The new economic system, essential for sustaining civilization, cannot sustain the kind of militarized world we have today. Militaries need to be looked at in terms of resources and waste/pollution. Military conglomerates are the most extravagant resource users on the planet, and Rapoport [13] makes the case that they exist largely to defend themselves, that is to uphold themselves, the industrial empires that support them as well as their colleges and educational systems. Nothing whatever produced by this most extravagant system on Earth has the end use of benefiting anyone outside the military system itself except where policing and protection are concerned. And the policing operations have been discussed at length by such authors as Peter Langille. They do not require more than a small fraction of the world's present military budget.

The new economic system will thus have general disarmament built in out of necessity (to attain sustainability), and it would be merely a matter of time before the nuclear arms would be dismantled.

Elsewhere I have argued that disarmament is most easily achieved through reciprocal unilateral steps, because negotiation enables hawks to delay outcomes endlessly. Having disarmed, one then more easily drafts a treaty to codify the status quo. This much, at least, was learned from the Cold War.

Notes

1. Joseph Tainter *The Collapse of Complex Societies* (CUP 1988) 216 pp.; Ronald Wright *A Short History of Progress* (House of Anansi Press 2004) 132pp.; Jared Diamond *Collapse: How Societies Choose to Fail or Succeed* (NY: Viking 2005) 575pp.
2. The most likely result of a nuclear war would be the destruction of civilization and of most of the human population and large mammals in the northern hemisphere, with relatively little effect in the southern hemisphere other than the obvious devastation to its north. It is even likely that civilization could continue in the southern hemisphere notwithstanding the.
3. Alanna Mitchell, *Sea Sick: The Global Ocean In Crisis* (McLelland and Stewart, 2009, 2010) 238 pp.
4. Minutes of the planning committee of the Global Issues Project for an ocean roundtable, 26 June 2012.
5. Peter A. Victor *Managing Without Growth: Slower by Design, not Disaster* (Edward Elgar Publishing 2008) 260pp.
6. William Rees “Ecological footprints and biocapacity: Essential Elements in Sustainability Assessment, in *Renewables-Based Technology: Sustainable Assessment*, eds. Jo Dewulf and Herman Van Langenhove (Chichester UK: John Wiley, 2006) Ch.9.
7. Phyllis Creighton and Derek Paul, “A Holistic Paradigm for the 21st Century” 2008, (unpublished; an earlier version of this paper was presented in a poster session at Ryerson University, 2004, Fourth Interdisciplinary Conference on the Evolution of World Order).
8. The New Economics Institute includes about 110 people including its Board and affiliated people. Berkshire Office 140 Jug End Road, Great Barrington, MA 01230 413 528 1737 neueconomics@neueconomicsinstitute.org
9. For example, a team including John Fullerton (Capital Institute, USA), Tim Jackson (University of Surrey, UK), Juliet Schor (Boston College), Gus Speth, former Dean, Yale School of Forestry and Environmental Studies, Peter Victor, York U, Ontario, and others is pursuing similar goals. A recently formed Institute for New Economic Thinking is funding projects in this field.
10. Annie Leonard, *The Story of Stuff* (Free Press 2010) pp. 197-99, 233-34, 256.
11. The benefit corporations of today are legislated corporations having responsibilities that go beyond making a profit for shareholders. As of early this year, six states of the USA had passed legislation permitting incorporation of benefit corporations.
12. Population reduction has already begun in some countries, and the world population would soon halt its rapid growth if women’s health requirements and provisions for family planning were accessible everywhere.
13. Anatol Rapoport, “Whose Security Does Defence Defend?” in *Defending Europe: Options for Security* (Taylor and Francis 1986) pp.271-280.