



A Cowboy or Spaceman Economy

Purpose

This Discussion Paper is published by the Quaker Earthcare Committee as part of a series exploring contemporary Quaker thinking on a range of critical environmental issues. The papers are written by a range of authors with expertise in the relevant area.

Summary

Our current economy is not based on modern science. Kenneth Boulding called it a cowboy economy. He proposed instead a spaceman economy.

Background

In 1966 Kenneth Boulding, a Quaker economist, gave a lecture that has become famous: *The Economics of the Coming Spaceship Earth*.¹ He contrasted an open ended economy and a closed economy. The open economy he called the "**cowboy economy**," the cowboy being symbolic of the illimitable plains and also associated with reckless, exploitative, romantic, and violent behavior, which is characteristic of open societies. The closed economy of the future might similarly be called the "**spaceman**" economy. Here the earth has become a single spaceship, without unlimited reservoirs of anything, either for extraction or for pollution. Humans must find their place in a cyclical ecological system that is capable of continuous reproduction of material form even though it cannot escape having inputs of energy. Boulding stated that economists in particular, for the most part, have failed to come to grips with the ultimate consequences of the transition from the open to the closed earth.



A cowboy economy is usually based on the belief that the market is the best method for the allocation of resources. The individual, led by an invisible hand through an unregulated and competitive market, responds to prices on goods and services, and brings about the efficient maximisation of social welfare. As a resource is used, the market causes prices to rise naturally over time. This encourages the introduction of resource substitutes, new capital and technology. Neoclassical economics assumes that substitution is always possible which makes scarcity only relative. The neoclassical framework has been adapted by some economists to attempt

to deal with environmental externalities (where costs of such matters as pollution are not included in the price) and market limitations without challenging the basic

¹ http://arachnid.biosci.utexas.edu/courses/THOC/Readings/Boulding_SpaceshipEarth.pdf

assumptions of the neoclassical model ².

Boulding joined a group of economists who recognised that neoclassical economics is based on outdated science. John Stuart Mill, Frederick Soddy, Nicholas Georgescu-Roegen, Herman Daly, Robert Costanza, Peter Victor ³, David Korten, and Tim Jackson, are some of the economists who are called ecological economists.

⁴ They question the sustainability of any market-generated economic growth path. They argue that production requires the economic process to receive a continuous flow of energy-matter obtained from the natural environment. As such, extraction, use, and discharge of this flow must conform to the immutable laws of thermodynamics.

The prominent scientists who developed the thermodynamic laws were Nicholas Carnot, Rudolf Clausius and William Thompson (Lord Kelvin). The First Law of Thermodynamics states that all matter and energy in the universe is constant, that it cannot be created or destroyed. The Second Law (entropy law) states that matter and energy can only be changed in one direction, from usable to unusable, from ordered to disordered. The Earth is a closed system except for the entry of energy in the form of sunlight. This energy can be used by humans to change matter, but unless the waste from the process is taken into account, the result is pollution. The more society relies on an increase in material flows to satisfy an increasing demand for production, the greater is the level of pollution and the malfunctions associated with it. Taking the laws of thermodynamics as an economic first principle, Georgescu Roegen ⁵ concludes that a global society with an endlessly increasing thirst for material production dependent upon a coinciding flow of resources is doomed to extinction.



Neoclassical economists believed in the existence of natural laws of economics that were analogous to the laws of physics. They substituted economic variables for physical variables. The physics they used was soon to be outmoded. By copying the equations of mid-19th century physics, economists fell victim to the assumptions of the time. Unlike physicists, economists held tenaciously to their now unfounded theories. Amazingly, these long-outmoded ideas still remain central in neoclassical economics. Neoclassical economics, starting from unscientific assumptions but using a formidable

array of mathematical tools, has created a vast assembly of theories that have no real basis in fact. By promising outcomes such as continuous growth and infinite substitutability of scarce resources, economists then gained positions of considerable power in government and commerce. This is completely at odds to the idea of a resilient and sustainable relationship between humanity and nature. ⁶

² Nadeau, R. 2011. Environmental and ecological economics. http://www.eoearth.org/article/Environmental_and_ecological_economics?topic=49536

³ See Victor's utube explanation <https://www.youtube.com/watch?v=yorcbB7xqHs>

⁴ Underwood, Daniel, and King, Paul, 1989. On the ideological foundations of environmental policy, *Ecological Economics*, 1, pp 315-334

⁵ Georgescu-Roegen, Nicholas, (1975), *Energy and Economic Myths* Southern Economic Journal Jan, 41,3, pp 347-381.

⁶ Sustainable Aotearoa New Zealand. 2009. *Strong Sustainability for New Zealand: Principles and Scenarios*. Nakedize Ltd, www.nazedise.com

We are now seeing such a breakdown as predicted by Georgescu Roegen. Climate warming is but one indication of this. The evidence from ecological footprint analysis is another. Today humanity uses the equivalent of 1.5 planets to provide the resources we use and absorb our waste.⁷ Water and toxicity, and energy⁸ are all indications that a cowboy economy is leading us to a predicted collapse of ecological systems.

A number of companies have recognised the need to take a spaceman rather than a cowboy approach. An example is Interface started by Ray Anderson. Interface makes carpets, and it aims to be sustainable by loaning rather than selling carpet⁹, amongst other initiatives. It takes a circular rather than linear approach to its resources.

The mindless pursuit of growth in the production of goods and services does not contribute to a flourishing healthy life (in fact the opposite). The economy is destroying the ecological systems that we are dependent on for life. It is an illusion that the current economic measurements and cost benefit analysis method bring progress and well-being. The current economy fosters conflict and expectations that can never be realised. It is both unpeaceful and unsustainable.

Discussion

- 1 A non-growth economy does not mean that there is no development: there can be changes to parts but not overall. Does your community/city/region have a commitment to growth? How would it look if it does not grow overall, in terms of population, buildings, technology, and jobs?
- 2 What organisations (commercial, government, NGOs) in your community/city/region are like Interface? What does your community/city/region do with its waste?
- 3 Pension and superannuation funds are committed to growth in order to meet future payments. Banks are currently also committed to growth. Yet in so doing they are contributing to the destruction of ecological systems that are critical for life. What criteria would you give to Yearly Meeting (or your organisation) in the choice of the funds it invests in, and the bank that it uses?
- 4 How can the Quaker principles of simplicity and respect for the earth be applied to a spaceman rather than cowboy economy?
- 5 What other groups or organisations in your community/city/region are thinking about how to bring about a spaceman rather than cowboy economy? What ethical principles do they use?

Quaker Earthcare Committee
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⁷ http://www.footprintnetwork.org/en/index.php/GFN/page/world_footprint/

⁸ QEC Discussion Paper on Energy

⁹ http://www.inc.com/magazine/20061101/green50_industrialist_pagen_2.html ;
[http://en.wikipedia.org/wiki/Ray_Anderson_\(entrepreneur\)](http://en.wikipedia.org/wiki/Ray_Anderson_(entrepreneur))