



Boundary conditions: Learning to live in a finite world

Peter Timmerman

Faculty of Environmental Studies, York University, Canada.

“Feeling the world as a limited whole -- that is the mystical.”
--Ludwig Wittgenstein, Tractatus Logico-Philosophicus.

*“To trace back modern world alienation, its twofold flight
from the earth into the universe, and from the world into the self.”*
-- Hannah Arendt, The Human Condition.

1. INTRODUCTION

It isn't the burgeoning global human population that is the main threat to planetary sustainability, but rather the burgeoning expectations of a global human population rapidly committing itself in ever-increasing waves to the current Western "mindset". This mindset, based on, or at least crystallized by modern economics over the last 200 years, generates a world in which economic actors operate as if each individual were an infinitely desiring self, devoted to expressing itself and its need for "freedom" in a society driven by a dynamic of constant progress, and thereby requiring an infinite bounty of resources on an

infinite planet to meet his or her infinite desires. These exploding, fantastic infinities -- the personal and the planetary -- need, reflect, and reinforce each other.

However, we now find ourselves confronted by a new boundary or "frame" within which we find ourselves, a frame that presents us with a fundamental challenge: the challenge of living in an interdependent, "no growth", and finite world. The unexpected arrival of the first powerful symbol of the finite in modern times -- the Earth seen from space as a bounded sphere - - and the grimness of subsequent scientific warnings about our increasing encroachment on planetary limits, are proving to be catastrophic

Corresponding author: Peter Timmerman, Email: ptimmer@yorku.ca

to the continued proliferation of endless infinities, fueled as they are by misconceived notions of progress, and a toxic concoction of neo-classical economics and Romantic individualism.

This confrontation with boundedness is the connecting theme underscoring, expressing, and exemplifying such cultural shifts as: the rise of ecological understanding, the deepening of environmental consciousness, the potentially transformative insights of ecological economics, and expressions of pre-emptive mourning for a deteriorating future.

This tightening of habitable boundaries around the Earth (visually, socially, imaginatively, scientifically) is causing what I call an “implosion of sensibility” -- a slow replacement of the images, metaphors and ideals of the infinite self of the modern individual with a new (and also in many ways very old) ethos based on the images, metaphors, and ideals of a finite, bounded person, earthbound -- a person whose growth and personal development is intensive rather than extensive.

The sources and implications of this belated, but quickening turn -- or return -- to living according to such a finite and bounded ethos are sketched out in the rest of this paper.



Figure 1. Planet Earth

2. EXPLOSION AND AFTER

In the 1970s, the prophetic theorist Marshall McLuhan argued that with the arrival of the image of the Earth from space, and with the almost simultaneous growth of the “satellite surround”, there was no longer any wilderness left on earth (e.g. *Culture is Our Business*, 1970). More profoundly, and by making reference to the familiar image from Psychology textbooks of the figure/ground reversal (enshrined in the duck/rabbit or the kissers/flower vase (see Figure 2), McLuhan stated that the Earth, which was once the ground on which the human “figured”, had now become a figure within the ground of the human enterprise. He noted that we are now able to hold the world in our heads and our hands. We can focus our attention on the world as a whole, and speak of “managing planet earth”. It can become subject to global imperialism on a practical, local scale. We can drop drones on anyone we please anywhere we please. We have reached what was once the “God’s eye view”.

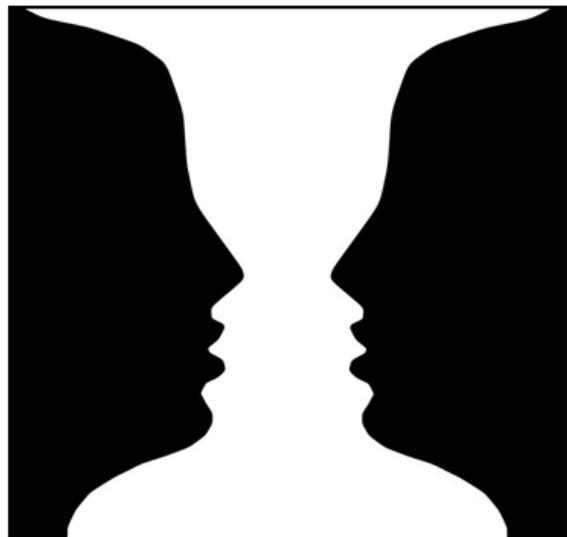


Figure 2.

Ironically enough, this encirclement of the earth, this revelation of its extraordinary living boundedness from a God’s eye view perspective, was the unexpected result of a long dynamic drive towards the infinite -- what we

might in fact call the modernist project of replacing God with ourselves. The aspirational agenda of modernity: freedom from constraint, freedom of movement, freedom from dependence on others, and of course immortality -- these derive from the original model, the omnipotent, omniscient, all-seeing God as a kind of draft, or “stalking horse” for us.

This modernist agenda was fueled by the well-known sagas of the Scientific and Industrial Revolutions, those astonishing breakthroughs and breakings away from previous natural and technical constraints on population, agriculture and energy use; as well as the toppling of the ancient fossilized regimes of king and priest in the related sequence of political Revolutions (Wrigley, 2010) . This explosive dynamic of revolt from constraint was echoed and reinforced by a complementary dynamic creation and conceptualization of the modern individual, articulated most powerfully in the poetic stirrings of late 18th and 19th century Romanticism. While Romanticism itself came about in part as a resistance to the bleaker aspects of the emerging modern world, it ironically also contributed to the heroic glorification of the “strivings” of humankind to “break all the chains”.

There is no room here to explore this topic in detail, except to say that Romantic individualism was born both as an internalization of the new powers of emerging modern heroes (cf. Napoleon), and as a reaction against the mobilization of mass numbers of people in industrial, military, and sociopolitical contexts (that is, I am not a statistic, I am an individual!). I simply cite a famous description of modern man released from bondage, as seen through the eyes of Percy Shelley:

The loathsome mask has fallen, the man
remains
Sceptreless, free, uncircumscribed, but man
Equal, unclassed, tribeless, and nationless,
Exempt from awe, worship, degree, the king

Over himself; just, gentle, wise; but man
Passionless--no, yet free from guilt or pain,
Which were, for his will made or suffered
them;
Nor yet exempt, though ruling them like
slaves,
From chance, and death, and mutability,
The clogs of that which else might oversoar
The loftiest star of unascended heaven,
Pinnacled dim in the intense inane.
(Prometheus Unbound, end of Act III (1820)

This is the Romantic individualist hope under construction. Human beings are not yet free of all constraints, but perhaps in time and with enough resources they will become as God, should they find a way around chance, and death, and change.

3. INFINITE ECONOMICS

This soaring desire was captured and reconfigured by the arrival of modern standard economics. Modern standard economics began as a description of the quickening movement of goods, services, and people in early capitalism, and then evolved from the middle of the 18th to the end of the 19th century into a strange quasi-scientific model (dubbed neo-classicism) that sketched out the workings of an abstract market of utilitarian individuals rationally maximizing the fulfillment of their infinite desires under conditions of scarcity.

The appeal of this model to its originators, and to subsequent generations, is primarily due to its seeming explanatory power, its simplicity, purity, and its mathematizability. It is one of the earliest systems models -- deliberately aping Newtonian physics -- and it contains within it an almost magical and paradoxical micro-level/macro-level opposition (deriving originally from Bernard de Mandeville’s *Fable of the Bees* (1715), a satirical work that promoted spending on “private vice” as promoting employment and the enrichment of the larger “public virtue”). Thus, the individual pursuing personal aspirations, however self-

interested, contributes unwittingly to the wellbeing of all. Adam Smith's *Wealth of Nations* (1776) carried this model further, and in more detail, and essentially founded modern economic theory. As a model, it captures some of the aspirations of the Romantic individual, marrying the expression of infinite aspiration to the emerging toolbox of 19th century physics and statistics. Ultimately, as economics developed, it produced the following rough little summary sketch: individuals have desires that are deemed to be essential to their self-fulfillment; these desires can, on a grand scale, be managed and adjudicated through the neutral mechanism of market prices; everyone involved is assumed to have perfect information from which to make their choices; demand curves beautifully intersect supply curves; all markets clear; everything is either at, or tending towards equilibrium; etc., etc.

A further appeal of this model was that it also captured -- and subsequently fostered -- a modern phenomenon dubbed "disembedding". The basic idea of "disembedding", as originally described in the work of Karl Polanyi (*The Great Transformation*, 1944) and adopted by later influential sociologists like Anthony Giddens (1991), focusses on how the arrival of capitalism uprooted labour, land and capital from their original contexts and dissolved them into marketable commodities. Ripping people and things out of the web of their original homes and relationships enables them (to use Marxist terminology) to be priced according to "exchange value" as opposed to ordinary "use value", and thus makes them intercomparable and interchangeable with everything else. Once on the market, everything now has its price, and its value is that price. The specific, embedded character of things is replaced by whatever they are now worth, as priced in the universal market.

These forces of commodification and marketization are the acid bath of modernity as it spreads. Their assault on traditional webs of life has historically been the source of agonies

of many kinds as they disembed, uproot and dissolve alternative forms of social and cultural meaning all over the world in the name of capitalist development. What has made this phenomenon particularly poisonous in the modern era is the combining of the dynamic of capitalist disembedding, fostered by neoclassical assumptions of theoretical purity, with the arrival of cheap fossil fuels.

Fossil fuels first generated the quintessential portable modern invention, the steam engine. These engines could be located almost anywhere (thus de-localizing energy supply). Then, as the Industrial Revolution proceeded, further inventions and applications of fossil fuels accelerated this process, particularly in transportation, to the point where we now live in what seems to be an energy-rich, frictionless landscape over which people, goods and services can locate and dislocate themselves at will, moving effortlessly, rootlessly, infinitely. California strawberries arrive at our tables year round practically for free (and have spawned the local food movement in counter-response). This is because cheap transportation has essentially flattened the world.

What is of course ignored in this delightful, seemingly almost cost-free global movement of people, goods and services is the massive, silent subsidy being paid for by the atmosphere -- to speak of only one affected sector of the biosphere -- and meanwhile greenhouse gas emissions multiply. This supposedly frictionless runawayness corrupts and unmoors everything from place, time, and even language, making it harder and harder to pin down what's going wrong, particularly with ourselves.

4. IMPLOSION

The end of this illusion of frictionless runawayness is now upon us. Climate change is the return of heat, that is, friction to our lives. The work of the Stockholm Resilience Centre headed by Johan Rockström (first published in 2009, and updated in January 2015, has actually

