

## Economic Growth: essential, desirable, sustainable?

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**W**hen discussing issues of public policy, economic growth is commonly offered as the panacea. A growing economy cures all: it creates utility, adds value, produces jobs, income, wealth and tax revenues. It provides options and lowers opportunity costs. Or so it is believed. What *is* “economic growth”? Is it essential, desirable, sustainable?

Increases in the flow of materials and energy through the economy (“throughput”) over time as measured by Gross Domestic Product (GDP) describes economic growth. GDP interprets this “total economic output” in dollar amounts, it aggregates all production (of both “goods” and “bads”) into one metric. GDP is thus an abstraction, perhaps a misleading one, that tells us little that is useful but leads to more fundamental questions: is the human economy so measured (the “econsphere”) a subset of the global ecosphere, or is the ecosphere a subset of the econosphere? Is it the role of the ecosphere to “feed” the ever-growing throughput needs of the burgeoning human economy? Or is the expanding econosphere only a subset of the broader global ecosphere and subservient to its inherent design principles (“the ecological imperative”)? Conventional wisdom assumes the former configuration to be true, modern science has determined the latter to be so.

Understanding that the econosphere is a dependent subset of the ecosphere makes clear that the continued draw-down of ecosystem sources and degradation of its sinks in the pursuit of economic growth eventually involves liquidation of the natural capital upon which the econosphere depends. The further growth of economic throughput – of both goods and services (services being “goods-lite”) – *increases* the opportunity cost of future economic activity; the costs outweigh the benefits. It is the buying of dimes with dollars, but we measure only the dimes acquired (GDP) while ignoring the dollars spent (source and sink degradation). Recognizing this, economist Kenneth Boulding has argued that the GDP be renamed “Gross National Cost” (GNC).

In a closed ecosystem such as ours is economic growth *always* undesirable? At what point does GDP become GNC? Studies of ecological succession (the process by which natural systems reestablish maturity and stability after disturbance) suggest an answer. Drawing from the work of ecologist Howard T. Odum, economist Herman Daly offers the following analogy to economic systems:

*Young ecosystems [and “less-developed” economies] tend to maximize “production efficiency”, that is, the ratio of annual flow of biomass produced to the preexisting biomass stock that produced it. Mature ecosystems [unlike our “developed” economies] tend to maximize the inverse ratio of existing biomass stock to annual biomass flow that maintains it. The latter ratio increases as “maintenance efficiency” increases. Economic theory is thus lagging behind ecological succession.*

Economic growth, up to a point, then, is beneficial; beyond that point it is increasingly counter-productive, costly and short-lived. Modern developed economies (high throughput economies) must mature; they must “succeed” from production-orientation to maintenance-orientation in order to become sustainable. For developed economies, the virtues of yesterday have become the vices of today.

Yet a deeper question remains: Why fret over “growth” at all? What is the purpose of economic throughput? What are the satisfactions we seek from it? Economic activity is a means to an end, the end being human welfare; economic activity is the *cost* of the welfare derived. As Boulding has suggested, we eat in order to achieve the state of being well-fed; moving our jaws is the “cost” of satiation. We would be mistaken to focus our attention on the act of chewing as the desired end-state when it is simply “the price we pay” to become fed. Yet modern economics focuses on the act of production-consumption not on the well-being derived from it; we measure what is consumed, not the level of satisfaction achieved. We are maximizing chewing in the hope of becoming well-fed. In this intellectual muddle of colossal historic magnitude, conventional economic thought has confused means with ends and costs with benefits and has sought to maximize that which should be *minimized* (throughput), and has ignored that which should be *maximized* – human welfare.

