



The Oil Drum QuoteCollage (No Comments Just Quotes) 2/20/2009

Posted by [Nate Hagens](#) on February 21, 2009 - 10:38am

Topic: [Miscellaneous](#)

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I was going to write something tonight on natural capital and how all the talking heads on the networks are completely missing the bigger picture. Instead, let's mix it up a bit by having a post with one rule: anyone can post up to TWO (2) quotes (with or without links) from academic or historical literature that have bearing on the current social/financial/energy morass. Please, for this thread only, **no discussion**, just posting of educational, relevant, pithy, or interesting quotes. (*For those unfamiliar with html, here is [primer](#) on blockquotes.*)

The problems facing humanity have been discussed long before 2009 - we just happen to be living them. Let's try to accrue some generalist wisdom from the breadth of specialists that read and post here. My two, below the fold.

"The idea that low-entropy matter-energy is the ultimate natural resource requires some explanation. This can be provided easily by a short exposition of the laws of thermodynamics in terms of an apt image borrowed from Georgescu-Roegen. Consider an hour glass. It is a closed system in that no sand enters the glass and none leaves. The amount of sand in the glass is constant-no sand is created or destroyed within the hour glass. This is the analog of the first law of thermodynamics: there is no creation or destruction of matter-energy. Although the quantity of sand in the hour glass is constant, its qualitative distribution is constantly changing: the bottom chamber is filling up and the top chamber becoming empty. This is the analog of the second law, that entropy (bottom-chamber sand)always increases. Sand in the top chamber (low entropy) is capable of doing work by falling, like water at the top of a waterfall. Sand in the bottom chamber (high entropy) has spent its capacity to do work. The hour glass cannot be turned upside down: waste energy cannot be recycled, except by spending more energy to power the recycle than would be reclaimed in the amount recycled. As explained above, we have two sources of the ultimate natural resource, the solar and the terrestrial, and our dependence has shifted from the former toward the latter."

From Herman Daly and John Cobb, [FOR THE COMMON GOOD](#), 1989

and

“All animals present individual differences, and as man can modify his domesticated birds by selecting the individuals which appear to him the most beautiful, so the habitual or even occasional preference by the female of the more attractive males would almost certainly lead to their modification; and such modification might in the course of time be augmented to almost any extent, compatible with the existence of the species.”

From Charles Darwin, 1871, [The Descent of Man and Selection in Relation to Sex](#) p. 750-751.



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