

The Oil Drum: Campfire

Discussions about Energy and Our Future

Depletion Thoughts #1 - Sunk Costs and the Endowment Effect

Posted by [Nate Hagens](#) on February 7, 2009 - 6:28pm in [The Oil Drum: Campfire](#)

Topic: [Sociology/Psychology](#)

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Below the fold is a guest post from [Cornelius](#), who explores the impact that sunk costs have on our social systems. It is first in a series of thought experiments attempting to address issues surrounding resource depletion.



One of my first graduate school textbooks was [On Aggression](#), by Konrad Lorenz. Pages 23-43 describe the familiar phenomenon that a dog will fight harder to keep its own bone than to take a bone from another dog. This biologic concept is translated into the human sphere in economics under the name of '[endowment effect](#)'.

The Endowment Effect: *The value of a good increases when it becomes a part of a persons endowment. The person demands more to give up an object than they would be willing to pay to acquire it.*

The endowment effect is related to the financial concepts of '[sunk cost](#)', where people overemphasize the weight of prior decisions, and [loss aversion](#), where people prefer avoiding losses to achieving gains. We all are familiar with how these phenomenon manifest in everyday life. If our portfolio, which has stayed flat for a year suddenly increases from \$100,000 to \$120,000 in one day, and a week later declines back to \$110,000, we feel worse than had it not gone up at all due to the sharpness of decline, despite the fact we are better off. If we order a \$70 lobster dinner, but despite becoming full on appetizers and potatoes, are still inclined to eat 'all the lobster' to the point of getting a gut-ache, because it cost so much. Rationally, a 'correct' strategy would be to eat exactly as much lobster as provides the optimal satisfaction - the 'decision' to order the expensive meal is in the past and can no longer be changed. (These and other behavioral economic concepts are outlined in Dan Ariely's "[Predictably Irrational](#)")

How does this relate to resource depletion and new social trajectories? Many of our current government decisions (e.g. stimulus plan) are based on the sunk costs associated with our lifestyles. We require food, water, shelter, an appropriate range of temperatures, and a modicum of social interaction. But beyond these minimums, our choices and expenditures are directed towards maintaining what we already own, and the institutional infrastructure we are used to. Put differently, our choices are comprised of fixed and variable components - the fixed are largely biological in nature and the variable are largely cultural.

The cultural component itself has a fixed and variable component - we are still following the social trajectory of the internal combustion engine and related suburbia. There are over 300 million vehicles in the United States. There are over 150,000,000 [jobs in the US](#). There are over 100,000,000 houses in the US. These houses, jobs and vehicles comprise a type of social endowment effect and a barrier to thinking about change. [Recent economic research](#) has shown that the endowment effect does not rely on factual ownership per se but is the result of subjective feelings of ownership induced by possession of the object.

Many of my colleagues concerned about sustainability say that all we have to do is go back to a 1960's lifestyle, when our resource footprints were smaller and we were generally happier and healthier - but given what we know about 'giving things up' that we perceive as our own, how can we make this happen with the large increases in built capital over the past 40 years? It seems as long as the weight of current infrastructure predominates, energy and resources will be sucked into the existing physical and emotional sinks. As long as the 300 million vehicles exist, vehicle fuel will be desired to fill them. As long as 6,000 sf mansions house families of 4, heating oil, natural gas and appliances will be supplied to fill them. How can we use increased knowledge of our penchant to overweight what already is into changing what we can one day envision?

Questions to ponder:

- What would we do if all of our vehicles 'vanished' and we had to restructure our basic needs without the sunk cost of automobiles?

-Would the answers to the above question ONLY be implemented IF all our vehicles 'vanished'? Why or why not?

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Additional References:

[Here](#) is a literature review on the endowment effect, primarily from economics.

Here is a recent article on the endowment effect in the [Economist](#)

[The Endowment Effect in Chimpanzees](#)



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