

**phil henshaw**

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**From:** amerikalistan-owner@mg.skola.mark.se on behalf of Stanley Salthe [ssalthe@binghamton.edu]  
**Sent:** Wednesday, September 10, 2008 3:11 PM  
**To:** pfh@synapse9.com  
**Cc:** amerikalistan@mg.skola.mark.se  
**Subject:** RE: Hawking Business as Usual - Finding bottom

Phil --

Stan,

In keeping that note short I only alluded to the way efficiency is always a driving force in economic competition.

It's this way of putting it that I don't think is right. Efficiency seeking is always a brake on the competition to get energy gradients before something else gets them.

That the global rates of energy use efficiency improvement seem to have not changed at all in response to increasing energy scarcity is a telling sign to me.

Because competition is still happening.

Still, I do accept that economies don't respond to things till they collide with them, and that the foresight of a few intellectuals does not have any noticeable effect on marketplace decisions.

The main reason I see efficiency as a continuous driving force is price competition. It's quite invariable that the sale goes to the product or provider that a) satisfies the need and b) does so for the least cost. Every single economic decision seems to follow that two part rule, quality with efficiency. People will pay more to satisfy their need, but will always choose to pay less (the provider that do it with less effort) if there is a choice of providers.

There is more than one way to cut costs. In fact there are many ways, as most workers now understand in the gut. Essentially these ways tend to produce a lower quality product.

I think the 'sleeper' is that the way limits appear at first is as very slowly increasing resistance to improving efficiencies, that then suddenly seems to balloon out of proportion when our mental fixations of what is 'normal' break down. For oil, for example, the use of a little more oil to extract each barrel of oil was hardly noticed as long as the end result still seemed like a gusher of money, but it was the signal we should have paid attention to. That might have been evident 50 years ago I expect. I'll try to find out.

Does that make sense?

As above.

STAN

Phil Henshaw

**From:** amerikalistan-owner@mg.skola.mark.se [mailto:amerikalistan-owner@mg.skola.mark.se] **On Behalf Of** Stanley Salthe  
**Sent:** Wednesday, September 10, 2008 10:07 AM  
**To:** pfh@synapse9.com  
**Cc:** amerikalistan@mg.skola.mark.se  
**Subject:** Re: Hawking Business as Usual - Finding bottom

Phil --

To the Intelligent Press,

Thanks to Media Lens for a great effort to aim straight at the intractable center of the global sustainability problem. Most are familiar with the simple formula [ Impact=Population\*Affluence\*Technology ] To get to the bottom of the problem I state it as [  $I = P^F * A^C * T^L$  ]. That gives each term with it's primary driver, the growth factors. Then you have Impact = Population multiplied at the Fertility rate \* Affluence multiplied at the Compounding rate \* reduced by Technology improved at the Learning rate.

What people don't really control, and are not doing very well with, is the 'L' factor, our rate of learning how to use less. The long term real doubling rate for economies has been about every 20 years and real doubling for energy efficiency about 40 years, despite efficiency always having been a primary competitive advantage and central business objective.

I challenge this last statement. Energy efficiency becomes an issue only in the face of energy shortage, and this has been only recently in regard to our economy. Effectiveness, not efficiency, is the natural criterion for all dissipative structures. In competitive situations this leads to more rapid work, which is always less energy efficient. As well, even in times of energy shortage, competition (as in our capitalist economy) always favors effectiveness over efficiency.

STAN