



## The Course of Our Lives May Be Determined by the First Derivative of a Function

Posted by [Prof. Goose](#) on August 11, 2005 - 1:33pm

It seems to me that one of the keys to the puzzle of why people don't understand peak oil and other sustainability issues is innumeracy and a lack of understanding spatial functions.

A few folks have mentioned this before around here, EP, SB, myself, and a few others. (And, being on the front lines of higher ed, I am sorry to say that there isn't much we can do to get people to think about things like this, because very few people want to take a stats class or a methods class.)

So, what prompted this post? Well, I found a [lecture \(linked over at FTD last week but housed at peakoil.com\) by Dr. Albert Bartlett](#) (link is to an .mov file, large file warning) last week with the tagline: "The greatest shortcoming of the human race is our inability to understand the exponential function (as related to peak oil and sustainability)." Dr. Bartlett professes physics at the University of Colorado.

Now, I happen to know and use calculus and differential equations pretty frequently, so this stuff is already in my head. But, because I use it so much, for some reason, I forget some days that most folks do not have exposure to these ideas or the ability to use them in their daily lives.

Sure, we've talked about versions of this around here by saying "we aren't actually running out of oil and that we're at half of supply" and talking about "percentage rates of depletion." However, the problem is that people, journalists, even some experts do not know what the functions behind these ideas mean, or more importantly their implications for the future. However, getting  $100 \cdot \ln 2$  (~=70, btw)/rate per annum=doubling time in years through your head ain't that hard...is it? It is if you're a math/spatial-phobe!

So, if you have an hour, I would suggest that everyone in the world watch this lecture by Dr. Bartlett. Please. You may need to watch it twice or three times or even more to explain it to others or to be able to use these new tools for your toolbox.

One of the main points of Dr. Bartlett's lecture is that "we cannot let other people do our thinking for us." So, so true. But to do that, you have to have the toolbox to actually think for yourself!

Which reminds me, there's another book that I suggest for my students: Joel Best's *Damned Lies and Statistics*. It's a wonderful primer on how experts, politicians, and the press screw statistics up on a daily basis. This is another important book I would suggest that everyone reads to pick up the daily fallacies that try to enter our cerebra.

I swear, every single person on this earth should have to take a research methods course (understanding measurement, science, modeling, etc., etc.) and a calculus or statistics

Technorati Tags: [peak oil](#), [oil](#)

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