



- This is the image taken in 1968, famously known as “Earthrise.”
- It is perhaps the most transformative photograph ever taken, and yet, it has become so taken-for-granted.
- So, too, is the idea of “economic growth.”
- It has been incredibly transformative, and yet, is totally taken-for-granted.

“The overarching priority of economic growth was easily the most important idea of the twentieth century.”

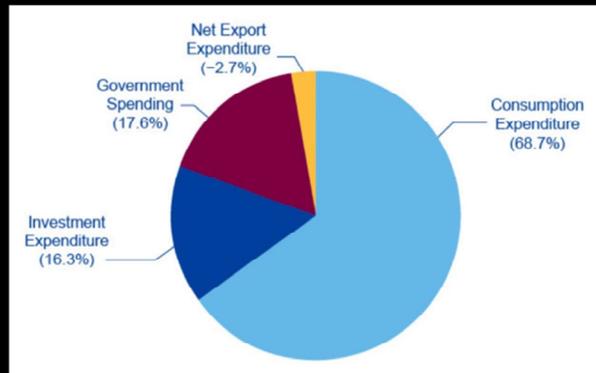
“Economic growth became the indispensable ideology of the state nearly everywhere.”

McNeil, J. R. 2000. *Something New Under the Sun: An Environmental History of the Twentieth Century World*. New York: W. W. Norton and Company, Inc. Pp. 335-336.

- In his masterful review of the twentieth century, historian J. R. McNeil concludes that the “priority of economic growth was easily the most important idea of the twentieth century.”
- The idea dominated everywhere. As McNeil states, “Capitalists, nationalists – indeed almost everyone, communists included – worshipped at this same altar [of economic growth]” (McNeil 2000, 334).

So, what is economic growth, and how is it measured?

Economic growth is an increase in the monetary value of goods and services in an economy as measured by all legal exchanges of money (GDP).



<https://johnny-kaguilar.blogspot.com>

- So, what is economic growth, and how is it measured?
- This is the example of the U.S.
- Economic growth is an increase in the monetary value of goods and services in an economy as measured by all legal exchanges of money (GDP).
- The largest share of economic growth is consumption..

Important points:

- It is a gross measure of ALL activity (bad things as well as good, such as cleanup of an oil spill or body shop work after a car crash)



<https://www.sciencephoto.com/media/184321/view>



<https://russellgrayblog.wordpress.com>

- Important points about measuring economic growth
- First, it includes bad, destructive things. For example: all money spent on cleanup of an oil spill or fixing cars after they crash is considered positive economic growth.

Important points:

- It is a gross measure of ALL activity (bad things as well as good, such as cleanup of an oil spill or body shop work after a car crash)



<https://www.sciencephoto.com/media/184321/view>



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- It is monetary exchange in the formal economy (does not include things such as housework, child care or elder care at home, unpaid labor or services provided voluntarily, or environmental degradation)

<https://pluralist.com/how-elder-care-will-change-in-the-next-decade/>

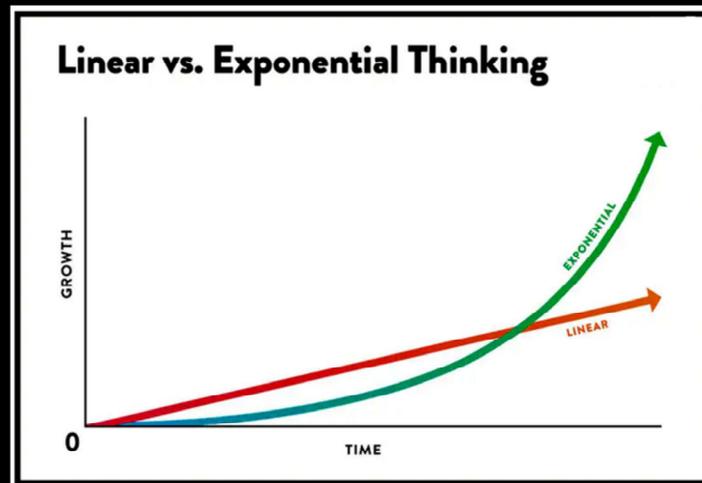


<https://www.worldatlas.com/articles/what-is-environmental-degradation.html>

- Second, it does not include many things that people consider important but for which no money is exchanged, such as elder care or environmental degradation.

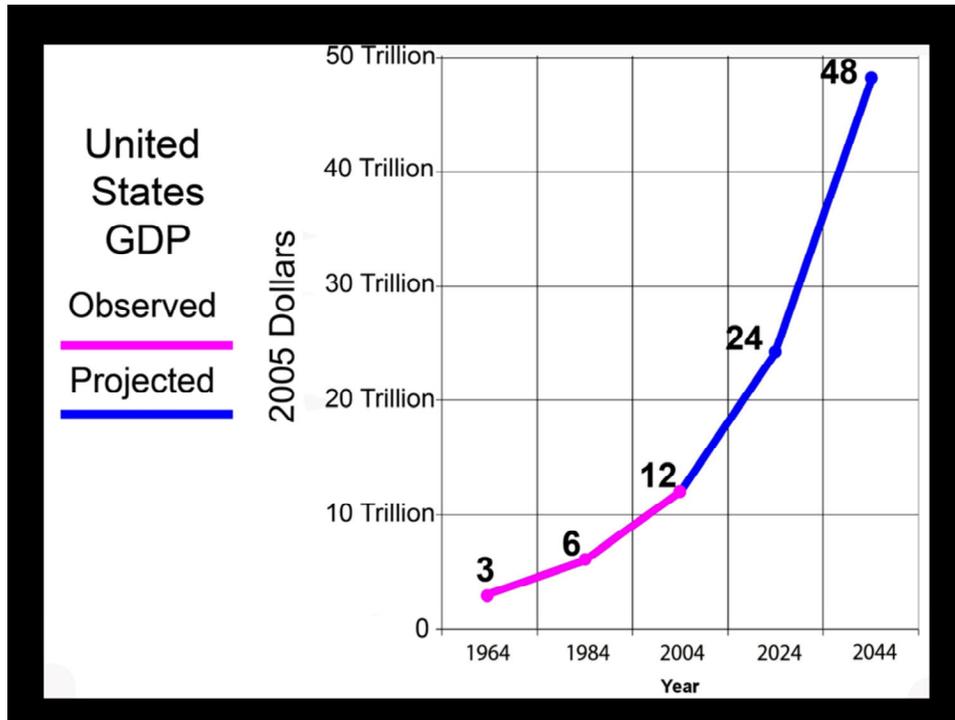
Crucial Point:

It is an exponential measure (not linear)



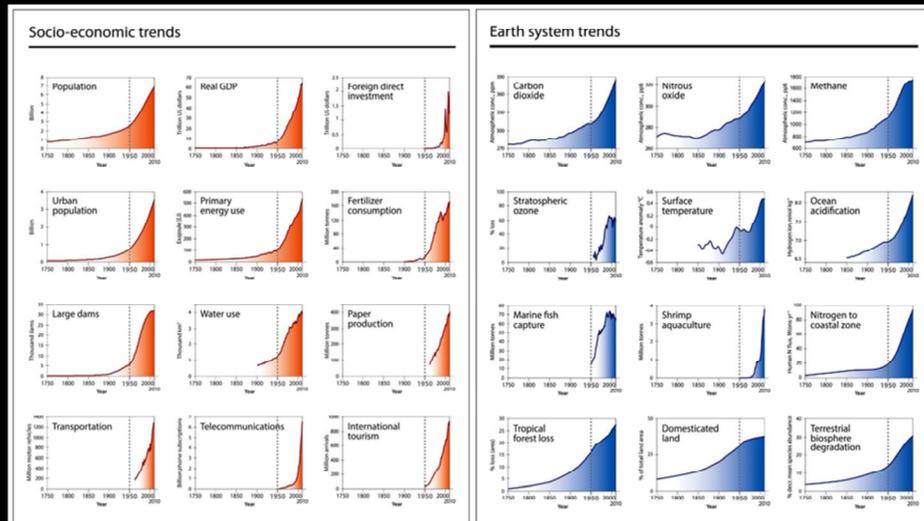
<https://wealthfit.com/articles/exponential-thinking-mindset/>

- The crucial point is that economic growth is measured on an exponential scale, not linear.
- “Growth results when the number or size of something increases.” Things grow in at least two ways.
- First is linear thinking. “Put \$1 a day in a savings jar for 30 days, and you’ll accumulate \$30.”
- It’s “logical, incremental, the results are steady and can be easily predicted and seen. . . It draws a straight line from here to there. Society teaches us to think linearly.”
- “But when you think linearly, you underestimate what’s actually possible with time.”
- “Exponential growth is different. It occurs when the increase in quantity or size, is at a **constant growth rate**. The results accelerate over time and are often unfathomable at first glance.”
- <https://wealthfit.com/articles/exponential-thinking-mindset/>
- Exponential growth takes time to start, but then catches everyone by surprise.
- Exponential growth is exactly what is occurring in the economy of today.



- This is the example of the United States' economic growth. It is using constant, inflation adjusted, 2005 dollars.
- The economy of the US grew at an average rate of a little over 3% from 1964 to 2004. At this rate, the economy doubled in size every 20 years, from 3 trillion dollars in 1964 to 6 trillion in 1984 and to 12 trillion in 2004.
- There is no doubt about this. At a rate of 3% per year, the economy will double in size every 20 years.
- Consequently, at an average rate of 3%, the size of the US economy can reliably be projected forward, to 24 trillion dollars in 2024 and 48 trillion dollars in 2044.
- That is an exponential rate, and it's taking us by surprise.
- For reference, the size of the economy of the whole world was only a little less than 48 trillion dollars in 2005.

Why should we think about this?



Steffen et. al, 2015. The trajectory of the Anthropocene: The Great Acceleration.
The Anthropocene Review 2(1): 81-98

- Why should we think about this?
- Because many other indicators are on an exponential trajectory as well, indicators that measure components of our world that are important to us and are affected by economic growth.
- These graphs show the trends of socio-economic and earth system indicators.
- Economic growth may be taken-for-granted but it is producing exponential change in all these indicators.
- This is simply not sustainable. We cannot afford another doubling.

“The overarching priority of economic growth was easily the most important idea of the twentieth century.”

McNeil, J. R. 2000. *Something New Under the Sun: An Environmental History of the Twentieth Century World*. New York: W. W. Norton and Company, Inc. Pp. 335-336.

- As McNeil stated, “The overarching priority of economic growth was easily the most important idea of the twentieth century.”
- It has certainly produced some impressive results, and I’m sure that we would not want to return to the world of 1900.
- But it has created problems that are reaching crisis point in today’s world.
- Economic growth is very taken-for-granted in our world. The annual growth rate is watched by many people – economists, policymakers, and the general public.
- And yet, few realize that this is an exponential curve, and it is a surprise to many.



- This image is taken-for-granted. The Earth hanging in the blackness of space.
- So too, economic growth is taken-for-granted.
- And yet, it is on an exponential scale that is not sustainable.