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Discussions about Energy and Our Future

I Dream of GINI - Wealth (In)equality after Resource Depletion

Posted by [nate hagens](#) on April 12, 2009 - 8:54am in [The Oil Drum: Campfire](#)

Topic: [Sociology/Psychology](#)

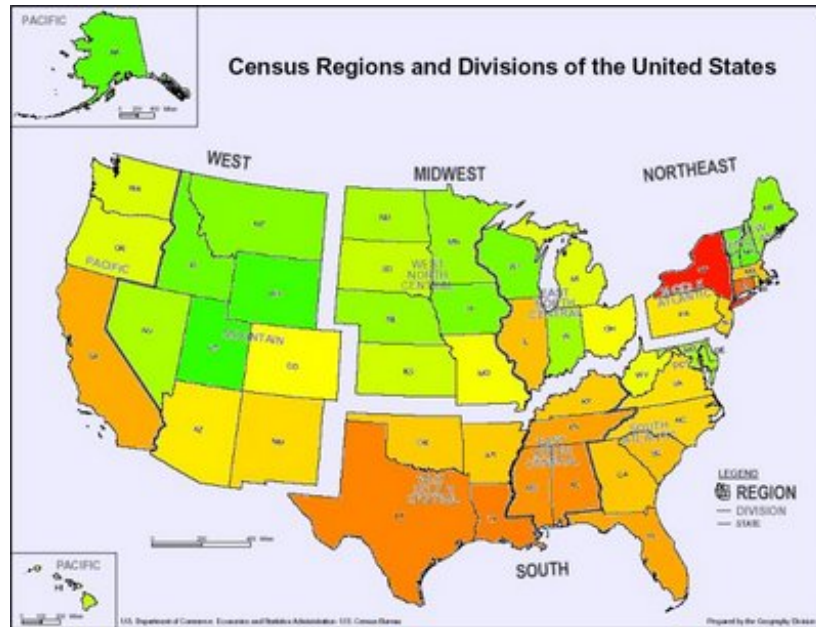
Tags: [competition](#), [demand](#), [gini coefficient](#), [income](#), [inequality](#), [original](#) [[list all tags](#)]

Increasingly, I think social limits to growth are occurring before strict resource limits will ever be realized (though the beginning of the latter had an influence on the former). As better data comes to light it is becoming apparent that we've been squeezing extra resources from the system via extended use of and confidence in, abstract financial instruments, thus further decoupling our situation from longer term physical reality. Cheap energy has subsidized many things in human society; technology, leisure, peace, art, food, lifespans, spatial distribution, etc. But not often mentioned is its impact on social equality. I plan to write a more empirical, evidence based post in the future on this topic - tonight's *Campfire* questions will revolve around whether the future will bring more equality between and among human groups, or less.



The [GINI coefficient](#) is one measure of inequality, typically relating to income, applied to a particular spatial population. A GINI coefficient of zero implies that everyone in the sample earns the same amount - there is no inequality. A GINI of 1, means that 1 person earns all the income - the population therefore has extreme inequality. There are all sorts of GINI sub-indices for counties, states, countries, etc. It is not a perfect science, as it leaves out debt, purchasing power, saved wealth, etc. It also completely ignores real capital measures of wealth and focuses on

Let's first look at the USA.



([Source](#) US Census Bureau)

Pure green shows a Gini coefficient of 0.40.
Pure yellow shows a Gini coefficient of 0.45.
Pure red shows a Gini coefficient of 0.50.

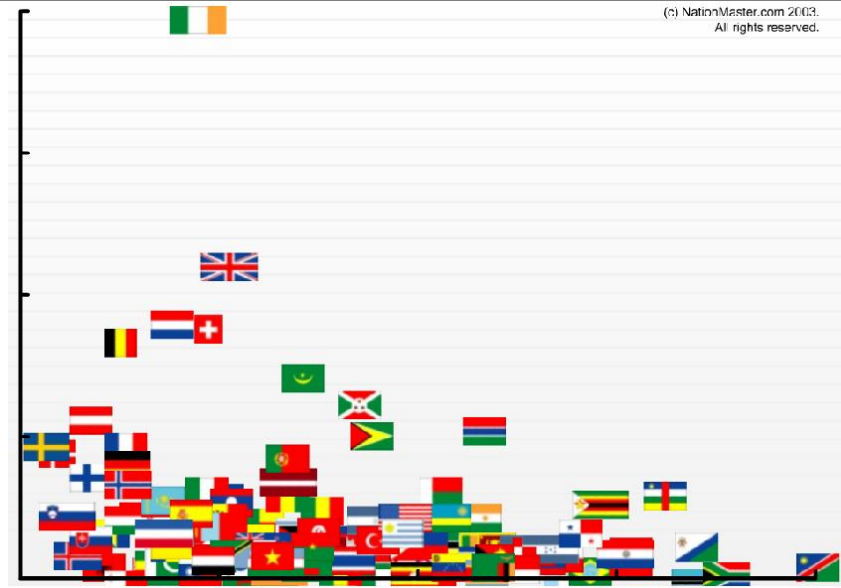
The higher the coefficient, the greater the income inequality. Some states (New York) have much higher inequality than others (Vermont). (though much of this is probably explained by different cities/counties within each state)

Here is a graphic showing the GINI of 133 countries, plotted against external (public and private) debt per capita. The red line shows the median GINI coefficient in the sample of .39 (66 countries above, 66 countries below). Those countries to the left of the red line have more equality, at least in income, than those to the right. (Click on 'source' to see original data)

([Source](#))

(Y-Axis - External debt per capita, X-Axis, GINI coefficient (0=total equality, 1=total inequality))

Here is the same graph showing flags as opposed to population circles. Many of the European/Scandinavian countries are in the upper left area on the graph. (The website, nationmaster.com has really great tools to play around with various indices/relationships)



(Source: Nationmaster.com)

(Y-Axis - External debt per capita, X-Axis, GINI coefficient (0=total equality, 1=total inequality))

According to these stats which in aggregate are 2 years old, it is interesting to note that 18 of the top 20, and 27 of the top 30 indebted nations globally, are countries that have below median disparities in income. (the 3 out of 30 on right side are the very small countries Burundi, Guyana and Gambia). One might hypothesize that if cheap energy powered the expansion of global growth, that cheap/available debt allowed positional conspicuous consumption to continue without the inequality that would naturally arise in a free market system. The above graph is one small piece of the puzzle, but one has to question what impact debt, credit and cheap energy have had on social equality within and between countries. (I wonder what these GINI numbers look like in 2009, midway through quant easing...)

Why is this relevant?

Many long time readers here know I received my early exposure to the broader concepts of resource depletion from reading Jay Hanson at dieoff.org, (which has now morphed into www.warsocialism.com). One of the longer standing contentions between Jay and I was where human behaviour would likely fall on the spectrum between competition/violence, and cooperation/sharing in the face of Peak Oil. The resurgence of multi-level selection in the biological literature suggests that many organisms, including humans, likely evolved in manners not completely reducible to the level of the gene. And especially in humans, not everything can neatly be parsed between 'genes' and 'environment', due to the potential of culture to change our behavior in emergent, unpredictable ways. Humans evolved with many different social adaptations, [recently summarized](#) by D.S and E.O. Wilson as "*Selfishness beats altruism within groups. Altruistic groups beat selfish groups. Everything else is commentary*". The main thrust of this and other recent work on gene/culture co-evolution is that culture can be a tremendous force towards positive behavioral change. But what is often left unsaid by those in the 'culture can trump genes' camp, is that there exists another side of the cultural coin. Using the same instinctual mechanisms we experience when cooperating, culture has an ability to exert negative influences on aggregate behaviour, as the combination of resource shortages with defined 'out-groups' was actually a primary driver of cooperation in our ancestral environment - we cooperated in order to vanquish other tribes. We usually presume that a move away from a culture based on conspicuous consumption will be a societal improvement. It is an open question whether the awareness (and ultimate reality) of wide boundary energy and resource limits will

CAMPFIRE DISCUSSION

There are many complex issues surrounding the global peaking of cheap resources. Energy, environmental, social, health, and psychological related questions will all be necessary to address. But increasingly relevant will be the question of equality (and its cousin, population). The recent broad social reaction to banker bonuses and government concentration of taxpayer bailout money in the financial sector may be a prelude to wider demands for more equality. I think on average, those that are well above the median wealth/income will naturally resist sharing their wealth, and, just as naturally, those below the median will be vocal about the necessity to narrow our equity gap. These types of questions have been asked for millenia. Plato suggested humankind would be most fulfilled in a society where the maximum wealth disparity between highest and lowest was 4:1. Aristotle suggested 5:1.

My former-and-decreasing-in-number wall st. friends are still of the opinion that money will save them from resource depletion. My sense is they are forgetting the social equity piece of the puzzle. What good are solar panels if someone not invited to the party throws rocks at them? What fun is heli-skiing if your car gets pelted with rocks en route to the ski hill, etc.? Gated communities and guards is not my idea of successfully navigating resource depletion. We evolved to compete and cooperate, context and resource dependent. How to find the sweetspot on this spectrum is a question of increasing importance.

With that backdrop, here are some questions for tonight's discussion:

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1. *What sort of social equity disparity fits us best, and for how many?*
 2. *Would we be happier with everyone roughly at equivalent wealth levels, or a very few having most of the wealth, so long as basic social and physical needs are met for the masses?*
 3. *Will all this sort itself out naturally, or by war(s), or be 'chosen' democratically?*
 4. *If a paradigm shift arrives, and those previously in the 'have-not' category displace the previous 'haves', will this just reset the social timer on when such an inflection will happen again, in reverse?*
 5. *What happens to US politics/economic system when middle class can no longer act as buffer between rich and poor?*
 6. **Bonus question:** *If we find reasonable answers to the above, how would they apply, if at all, to inter-generational equity or inter-species equity?*



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