

Discount rates are how economists measure the importance of the future versus the present. If the discount rate is low, we care a lot about the future; the reverse is true if the rate is high. It turns out that one of the key factors driving the discount rate — maybe *the* key factor — is whether we expect to get richer in the future.* Small changes in discounts are important in carcinogens due to the 20-30 year latency period between exposure and illness. They are even more important for climate change, which will have effects far into the future.

Suppose, just for the sake of argument, that we have a hypothetical country where part of the population (call them the “elite” just for convenience) will experience rapid income growth and part of the population (call them the 47%) will have stagnant income. That’s a fairly accurate picture of America since for the past 30-40 years. Given these entirely hypothetical facts, the elite will have a high discount rate, while the 47% will have a low discount rate, so climate change will matter more to them.

Now think of climate change mitigation as an investment. This is an investment that would have high value for the 47% because they have a low discount rate, and almost no value to the elite because their discount rate is so high. It would seem like society should add these two values in order to decide on the value of the investment. Current approaches to discounting use the GDP per capita, essentially pretending that society consists of a single “average” income earner, but this could be quite misleading if there’s major and growing inequality.**

*For the nerds among you, growth is the g factor in the Ramsey formula, $r = \rho + \theta g$. ρ is an impatience factor, which is relatively small, θ tell us how much personal welfare results from the growth.

**For example, I *think* that using the growth per capita GDP rate to set the discount rate fails to correct this problem. Here’s a heuristic argument, which is the best I can do.

Suppose that the elite are half the population and that they will have essentially infinite wealth by the end of the time period and thus a zero discount rate. If we look at per capita income at the end of the period, it will be half of infinity and therefore the discount rate will still be zero. So when we discount the environmental harm, using per capita GDP growth gives us the same result as only looking at the elite, leaving the interests of the 47% completely out of consideration. That seems wrong. Of course, “infinite” here is just a heuristic, but “extremely large” would work just as well.

And yes, I do know that it’s ridiculous to have footnotes in a blog post. I just couldn’t resist.

