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CARBON POLICY

Why We Don't Care About Saving Our Grandchildren From Climate Change

A new study shows that human beings are too selfish to endure present pain to avert future climate change. That's why we need win-win solutions now

By Bryan Walsh @bryanrwalsh | Oct. 21, 2013 | 28 Comments

Attila Kisbenedek / AFP / Getty Images

Some 30,000 people demonstrate in the center of Copenhagen on Dec. 12, 2009 to turn up the heat on world leaders debating global warming at the U.N. climate conference

You want to know what the biggest obstacle to dealing with climate change is? Simple: time. It will take decades before the carbon dioxide we emit now begins to have its full effect on the planet's climate. And by the same token, it will take decades before we are able to enjoy the positive climate effects of reducing carbon-dioxide emissions now. (Even if we could stop emitting all CO_2 today, there's already future warming that's been baked into the system, thanks to past emission.) But we will feel the economic effects of either emitting or restricting CO_2 right now, in real time. While we can argue about the relative cost of reducing CO_2 emissions now — just as we can argue about the economic effects of climate change in the future — it should be clear that any attempt to restrict CO_2 emissions enough to make a dent in future climate change will cause some present-day economic pain. The global economy is still so dependent on relatively inexpensive fossil fuels that a quick transition to renewable sources would likely be costly in the short term. (See Naomi Klein's 2011 piece in *The Nation* for a fairly clear-eyed view of what truly radical climate policy would mean.)

What that means, in effect, is that climate policy asks the present to sacrifice for the future.
Human beings tend not to be very good at that kind of planning, even when their own future selves stand to benefit — a study this year found that just 10% of Americans have saved enough in a 401(k) or individual retirement account to put themselves on a track to retire. When it comes to climate change, the worst effects will be felt years after many people today are long gone. From a self-centered perspective, that makes strict climate policy like saving for a retirement you know you'll never live to see.

So it shouldn't be surprising that a new study in *Nature Climate Change* confirms the fact that the kind of long-term cooperation demanded by effective climate policy is going to be even more challenging than we thought.

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American and German researchers led by Jennifer Jacquet of New York University put together a collective-risk group experiment that

is centered around climate change. Here's how it worked. Each subject in groups with six participants was given a $55 operating fund. The experiment went 10 rounds, and during each round, they were allowed to choose one of three options: invest $0, $2.75 or $5.50

into a climate account. The participants were told that the total amount contributed would go to fund an advertisement on climate change in a German newspaper. If at the end of the 10 rounds, the group reached a target of $165 — or about $27 per person — they were considered to have successfully averted climate change, and each participant was given an additional $60 dollars. (If the numbers seem rough, it's because I'm converting from euros — the currency used in the experiment — and rounding off.) If the group failed to reach the $165 target, there was a 90% probability that they wouldn't get the additional payout. As a group, members would be better off if they collectively invested enough to reach that $165 target — otherwise they wouldn't get the payout — but individually, members could benefit by keeping their money to themselves while hoping the rest of the group would pay enough to reach the target. (That's the so-called free-rider phenomenon, and it's a major challenge for climate policy.)

Here's the twist, though: that $60 dollar endowment was paid out on three different time horizons. In one treatment, the cash was given to the groups the next day. In the second treatment, it was given seven weeks later. And in the third treatment, the cash was instead invested in planting oak trees that would sequester carbon — but since those trees wouldn't be fully grown for years, all the benefit would accrue to future generations, not the current players in the experiment. The difference between that third treatment and the first and second is what's known as "intergenerational discounting," which happens when the benefits of an action in the present are highly diluted and mostly spread among many people in the future. Which, as it happens, is pretty much how climate policy would work.

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Unsurprisingly, the more delayed the payout was, the less likely the experimental groups would put enough money away to meet the goal to stop climate change. Even among those who knew they'd get the payout the next day, only seven of 10 groups invested sufficient funds, while none of the 11 groups who knew their endowment would be invested in planting trees gave enough money to "stop" climate change. While this is just one experiment, the results do not bode well for humanity's ability to come together to stop climate change. As the authors write:

> Applying our results to international climate-change negotiations paints a sobering picture. Owing to intergenerational discounting, cooperation will be greatly undermined if, as in our setting, short-term gains can arise only from defection. This suggests the necessity of introducing powerful short-term incentives to cooperate, such as punishment, reward or reputation, in experimental research as well as in international endeavors to mitigate climate change.

Fortunately, short-term incentives for fighting climate change do exist. It takes decades to benefit from reductions in carbon-dioxide emissions, but phasing out fossil fuels like coal and oil can bring immediate improvements in air pollution. And air pollution has turned out to be even more dangerous than experts thought, with the World Health Organization last week declaring that bad air is a leading environmental cause of cancer, comparable to secondhand smoke.

The *Nature Climate Change* study also underscores why "win-win" climate policies — like innovation investments that can lead directly to cheap clean energy, rather than policies that make dirty energy more expensive — are likely to be the most effective ones. Barring a species-wide personality change, few of us will be willing to endure present pain so that our grandchildren won't have to endure an unlivable climate. We're likely better off tailoring solutions that work with our selfishness and brief attention span, rather than hoping we suddenly become better, more farsighted people.

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