

Are Economists Blocking Progress on Climate Change?

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After Over Three Decades, Rebel Economist Breaks Through to Washington. Here's How He Did It. Article By Lynn Parramore Jul 1, 2019

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By promoting unrealistic models, economists have become part of the problem rather than the solution

Dutch economist Servaas Storm, co-author of a widely-read 2018 study on climate change, "[Why Green Growth is an Illusion](#)," talks to the Institute for New Economic Thinking about where we are today.

Lynn Parramore: In 2018, you and your colleague Enno Schröder warned that economists promoting "green growth" are fostering illusions. Why can't we have economic growth and development without destroying the planet?

Servaas Storm: In our work, Enno Schröder and I look at the historical record on economic growth around the world, along with human energy use and the resulting CO₂ emissions. Then we construct a growth path for the global economy during the period

2015-2050. Our model path is based on optimistic, but still feasible, assumptions concerning future energy efficiency improvements and reductions in carbon emissions.

To understand what's driving carbon emissions, it's helpful keep a couple of things in mind. First, emissions will tend to grow at the same rate that the economy is growing. Economists call it the "scale" effect. But the more efficient we become at using energy and the better we get at reducing pollution through technology and changing human behavior, the more we can reduce carbon emission growth relative to real GDP growth.

So while the scale effect always raises CO₂ emissions, what we call the "technological-change" effect lowers carbon emissions. That's why economists talk about the goal of "decoupling" economic growth and CO₂ emissions. You want a "technological-change" effect that's bigger than the scale effect.

Disappointingly, we find no evidence so far of decoupling. Despite the 2017 [Paris pledges](#) and good intentions, CO₂ emissions are still rising, not just in China and India, but also in [OECD](#) countries (a coalition of wealthy countries that work together on common eco-social problems).

The energy efficiency improvements and rates of decarbonization aren't yet enough to offset the carbon emission increases originating from the growth of the global economy. So the scale effect still dominates.

LP: What are economists missing when they talk as if decoupling is happening?

SS: There are deep uncertainties concerning the climate system and its interactions with the ecosystem of the Earth and the global economy, and self-reinforcing runaway warming is a real, though highly uncertain, possibility. Unfortunately, economists can't handle any of this. It's their first reflex to assume that it's possible to use something called "optimal control." That's a technique of finding policy instruments that will control outcomes in a system, in this case working out the economically optimal pathways to solving or mitigating climate change in terms of the timing and the extent of CO₂ emission reduction.

It all reminds me of a story told in Nathan Hill's novel *The Nix*. In Norwegian folklore, the Nix is a ghost that takes on different shapes which it uses to mislead people, exploiting their vices and bad habits. The Nix appears as a beautiful horse which invites a young man to take a ride. Initially in awe and nervous, the young man steps on the horse's back, and he rides – at first very slowly and cautiously, but then faster. The horse accelerates, and in his enthusiasm, the rider loses his awe and begins to feel all-powerful and in control. Surely he is the most talented horseman in the world. At exactly this point, the horse jumps off a cliff at full speed– and the young man gets killed on the rocky beach.

Economists suffer from similar self-deception when they believe their optimal control analyses of the costs and benefits of climate mitigation policies can inform climate policymaking in any meaningful manner. They can only become part of the solution once they realize that they are not engineers. The point is not to endlessly debate, for

example, the optimal social cost of carbon, acting like the medieval scholars arguing about how many angels can sit on the head of a pin. Efficiency is not the issue. What matters is how effective the climate change policy is going to be.

The future has to be radically different from the past. Small tweaks and tinkering won't cut it. We need structurally lower energy use and radically lower carbon emissions.

LP: What are some of the concerns with existing and well-known economic models?

SS: Climate economists, like economists in general, tend to forget that the policy conclusions drawn from their models are only as good, robust and realistic as the assumptions underlying the models they use – and this is precisely the problem: these assumptions are often flimsy, debatable and/or unrealistic. Let me mention three.

First, most well-known models fail to adequately capture small-probability but high-impact (catastrophic) outcomes associated with runaway global warming. Most models ignore that global warming may become an unstoppable self-reinforcing process once certain temperature thresholds are crossed.

Second, models estimate the societal net benefits of money spent on climate action and then compare these benefits to the returns which humanity could have made by investing the money not on some other, low-risk financial instrument, like government bonds. Such exercises imply that climate economists believe that government bonds will continue to yield rates of return of 3 – 3.5% each year even under deteriorating climate conditions. That's a bit of a stretch.

Finally, most models assume that to finance the needed investments so as to have higher welfare in future, we must restrain our consumption today and raise savings. This logic is powerful. It appeals to the Calvinist notion of delayed gratification, which, according to Max Weber, was crucial to the Protestant Ethic and the rise of entrepreneurial capitalism. But it is wrong. Our economies are "monetary economies" in which commercial banks can create new money to finance investment and we don't need to raise savings first. This means there is no trade-off between consumption now versus consumption in the future, as erroneously assumed in climate economics.

LP: What if we could achieve a radical break with the past? Could we then grow the global economy while reducing global CO2 emissions?

SS: Many scientists agree that the planet warming by more than 2 degrees Celsius above preindustrial levels will be catastrophic. So it's useful to think of trying to stay within a range of 1.5 degrees warmer or less.

Let's say we have some amazing technological breakthroughs and we reduce emissions by 85% by 2050, which some optimistic scientists think would allow us to avoid that limit. Alas, we find that even in that perhaps overly-optimistic scenario, the global per capita income growth still has to be very low. Pretty close to zero. Is that even possible?

“Green growth” is a very tough goal. I think it’s the wrong thing to emphasize. It may be better to focus on radically decarbonizing our economies. If we do this, and it turns out that our economies can still grow, then that’s great. But if getting the carbon emissions down means that we can’t also have global economic growth, then we’ve got to accept that.

LP: But does that mean we can’t have economic progress? No hope for people’s economic lives to improve?

SS: Not at all. Economic growth and economic progress are not the same thing. If we were to say that rich OECD countries should aim to avoid increasing the amount of stuff they produce, they could still have goals of economic progress. They could aim instead for more and better jobs, greater access to education, health, public transportation, lower pollution burdens, and clean energy sources. Things that would be great for the majority of the population.

The issue is one of better distributing our economic resources, possibly as part of some Green New Deal.

LP: You’ve noted in the past that President Obama was not realistic in arguing that the U.S. economy could keep growing without increasing CO2 emissions thanks to the rollout of renewable energy technologies. How do you assess the situation now under Trump? What about Europe and China? Is anyone being more realistic today?

SS: The outlook is not good. The Trump administration is not the only government announcing its withdrawal from the voluntarist Paris agreement. (I call it voluntarist, because the agreement concerns official pledges by countries to reduce CO2 emissions, but lacks enforcement mechanisms). The Bolsonaro government in Brazil, the new government in Australia, part of the Italian government, and more are threatening to do the same.

China has made huge advances in energy efficiency and has also started to decarbonize, but the scale factor of China’s economic growth is still more than offsetting the drastic improvements in energy and carbon technologies.

The European Union (EU) is not delivering and policies are often counterproductive. Look at the ‘Yellow Vests’ protests in France. French President Macron proposed a consumer carbon tax on (car) fuels, which will hit the incomes of people who aren’t wealthy and who already have to cope with all kinds of economic insecurities and downward mobility. The outcome is not just a populist revolt, but a major discrediting of climate change mitigation policies.

In the Netherlands, the center-right government proposed a carbon tax on consumers but not on major polluting corporations. In March 2019, voters revolted. The government parties lost the provincial elections to a new rightwing populist party, which says that climate change is just a Marxist plot!

The EU has to come up with climate policies which protect the lower- and middle-income groups as much as is possible from the costs of adjustments, while taxing carbon emissions at their source. That means taxing the 100 global corporations which together are responsible for around 70% of cumulative CO2 emissions. It means taxing the rich to bring about a more fair and politically acceptable burden of adjustment.

LP: Is there any new political momentum on climate change that could help? What about the Green New Deal embraced by many Democrats in the U.S.?

SS: The recent electoral successes of the Green Parties in Germany, the Netherlands, Finland and France do appear to suggest that there is a growing political momentum on climate change in the EU. But there is more than meets the eye.

The growing support for the Greens within the EU has come from voters abandoning the established center-left parties, like the social democrats. At the same time, there's more support for populist center- or far-right parties, which deny or trivialize climate change and rally around a false dichotomy of "jobs" versus "the environment." These politicians claim that they prioritize jobs, supposedly in contrast to the Greens.

Overall, the political landscape is becoming fragmented and polarized exactly at a time when we need collective, coordinated climate action. Attempts by President Macron and other governments to raise taxes on carbon-intensive consumption have seriously weakened popular support for climate mitigation. That gives the populist right a golden opportunity to beat the drum of climate change denialism. Scary stories about an impending end to life on Earth drive working-class people, many of whom have been facing existential economic insecurities for decades, into denial, and from there into the arms of the populist far-right.

The Greens have not yet convinced potential voters that there is no conflict between saving the environment and having good jobs, decent income, and high standards of living.

This is where the Green New Deal is crucial, if by it we mean a comprehensive program to green our economy and to replace private with public investment and consumption in order to adapt social and economic life to a changed environment. A Green New Deal of this kind should create good jobs and benefits rather than burden the lower- and middle-income classes. And it has to involve progressive, redistributive taxation to fund high-quality, zero-carbon, and accessible public transportation rather than expensive individual Tesla cars, accessible high-quality education and so on.

LP: You've observed that even good solutions won't work within a socioeconomic system founded on ideas like letting markets "decide" who gets what and allowing big corporations to operate with little regulation. How do we have to shift our basic thinking in order to avoid climate catastrophe?

SS: As a society, we've given deregulated financial markets the task of maintaining the stability of the social and political order. Corporations are supposed to behave themselves in the proper way through pressure from shareholders and the stock market. Individuals are disciplined by engaging in labor markets and through debts. Governments, arguably, are being disciplined by bond markets. Market forces are supposed to keep everything and everyone working together the best way.

Economists call this "social efficiency." They've swallowed the idea so completely that it's hard for them to think about any alternative social order. Within this system, the only way you get behavioral change, like reducing CO2 emissions, is to use price incentives. You put a price on carbon, and eventually costs and prices will motivate self-interested firms and consumers to change their decisions and cut carbon emissions. The same price incentives are supposed to focus the minds of innovators and engineers on developing new zero-carbon (energy) technologies and products.

This is a fantasy. Slowing global warming requires deep transformational change, a process which in turn needs long-term steady directional thrust (in investment and technology development), which short-termist financial markets have never been able to provide in history and can't provide by their very nature. Why? Because vested interests in the fossil-fuel economy will try to block or delay needed structural change. Plus, self-interested market behavior by individual producers and consumers does not automatically or necessarily add up to a better outcomes for society.

Progress on climate change demands collective action, both between nations and within nations. Questions of who is paying the cost and who is getting the benefits are critical.

We need coordination, direct steering and guidance of investment, research and development, along with innovation and mechanisms for burden sharing.

The effort can only work if it is inclusive, democratic and fair: the strongest shoulders must carry the largest burden. Bottom line: we have to think about alternative ways to ensure social and political order. I know that all this seems far-fetched and well beyond what is politically possible today. But I am old enough to agree with Jan Tinbergen, the first Nobel laureate in economics (jointly with Ragnar Frisch), that the "idealists of today often turn out to be the realists of tomorrow."

LP: What do you say to people who dismiss you as an alarmist?

SS: That they are wrong. Ignoring the cumulative evidence on global warming is behaving like an ostrich. I try to be a realist, staying away from the often naive "can-do" engineering attitudes of techno-optimists (which ignore or underestimate major practical social and political obstacles standing in their way) and steering clear from the fatalist pessimism.

Slowing down climate change is technically and economically possible, but we need immediate and radical actions, most of which go against the vested interests of fossil-fuel corporations as well as against the established ideas and interests of most

economists working on climate, who wrongly think that the problem can be solved in an economic-engineering fashion. Establishment economics should become part of the solution instead of the problem.

There is also ample scope to raise corporate taxes on Big Oil corporations and carbon-intensive (chemical) companies, many of which successfully engage in massive tax evasion and shifting. We also have to fix the problem of political money by finding ways to inoculate our politics from corporate billionaire power. And if central banks are able to use unconventional monetary policy instruments to fight a global financial crisis and rescue banks, then they clearly should be able to do the same when fighting a looming climate disaster. There are grounds for optimism.



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