Ensia

How to steer clear of the looming climate shock

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Stick it to carbon, not the man.

Editor's note: The following is excerpted from Climate Shock (2015) by Gernot Wagner and Martin L. Weitzman. Published here with permission from Princeton University Press.

Two quick questions:

Do you think climate change is an urgent problem?

Do you think getting the world off fossil fuels is difficult?

If you answered "Yes" to both of these questions, welcome. You'll nod along, occasionally even cheer,

while reading on. You'll feel reaffirmed.

You are also in the minority. The vast majority of people answer "Yes" to one or the other question, but not both.

If you answered "Yes" *only* to the first question, you probably think of yourself as a committed environmentalist. You may think climate change is *the* issue facing society. It's bad. It's worse than most of us think. It's hitting home already, and it will strike us with full force. We should be pulling out all the stops: solar panels, bike lanes, the whole lot.

You're right, in part. Climate change is an urgent problem. But you're fooling yourself if you think getting off fossil fuels will be simple. It will be one of the most difficult challenges modern civilization has ever faced, and it will require the most sustained, well-managed, globally cooperative effort the human species has ever mounted.

If you answered "Yes" *only* to the second question, chances are you don't think climate change is the defining problem of our generation. That doesn't necessarily mean you're a "skeptic" or "denier" of the underlying scientific evidence; you may still think global warming is worthy of our attention. But realism dictates that we can't stop life as we know it to mitigate a problem that'll take decades or centuries to show its full force. Look, some people are suffering right now because of *lack* of energy. And whatever the United States, Europe or other high emitters do to rein in their energy consumption will be nullified by China, India and the rest catching up with the rich world's standard of living. You know there are trade-offs. You also know that solar panels and bike lanes alone won't do.

You, too, are right, but none of that makes climate change any less of a problem. The long lead time for solutions and the complex global web of players are precisely why we must act decisively, today.

What we know is bad, what we don't is worse

If you are an economist, as we are, chances are you answered "Yes" to the second question. Standard economic treatments all but prescribe the stance of the "realist." After all, economists live and breathe trade-offs. Your love for your children may go beyond anything in this world, but as economists we are obligated to say that, strictly speaking, it's not infinite. As a parent, you may invest enormous sums of money and time into your children, but you, too, face trade-offs: between doing your day job and reading bedtime stories, between indulging now and teaching for later.

Trade-offs are particularly relevant on an average, national or global level. And they are perhaps nowhere more apparent on the planetary scale than in the case of climate change. It's the ultimate battle of growth versus the environment. Stronger climate policy now implies higher, immediate economic costs. Coal-fired power plants will become obsolete sooner or won't be built in the first place. That comes with costs, for coal plant owners and electricity consumers alike. The big trade-off question, then, is how these costs compare with the benefits of action, both because of lower carbon pollution and because of economic returns from investing in cleaner, leaner technologies today.

Economists often cast themselves as the rational arbiters in the middle of the debate. Our air is worse now than it was during the Stone Age, but life expectancy is a lot higher, too. Sea levels are rising, threatening hundreds of millions of lives and livelihoods, but societies have moved cities before. Getting off fossil fuels will be tough, but human ingenuity — technological change — will surely save the day once again. Life will be different, but who's to say it will be worse? Markets have given us longer lives and untold riches. Let properly guided market forces do their magic.

There's a lot to be said for that logic. But the operative words are "properly guided." What, precisely, are the costs of unabated climate change? What's known, what's unknown, what's unknowable? And where does what we don't know lead us?

That last question is *the* key one: Most everything we know tells us climate change is bad. Most everything we don't know tells us it's probably much worse.

Stick it to carbon

"Bad" or "worse" doesn't mean hopeless. In fact, no prediction of climate outcomes or damages can stand without being prefaced by a version of the words *unless we act*. We don't venture predictions only to see them become true. We talk about where unfettered economic forces may lead in order to guide them in a more productive, better direction. And guide we can.

Increasingly intense hurricanes, more floods, more droughts, not to say anything of rising temperatures and rising seas are *what we know is happening and will continue to happen*. Tallying those effects — at least the bits we can put a dollar figure on — results in a minimum cost of $40 per ton of carbon dioxide we pump into the atmosphere today. But on average, the world isn't considering anything close to these costs. The average global price is closer to *negative* $15 per ton, considering the massive fossil fuel subsidies in many countries.

None of that yet includes the truly frightening low-probability events. There's a huge difference between a likely sea-level rise of 0.3 to 1 meters (1 to 3 feet) by the end of this century and eventual possible extremes of 20 meters (66 feet) or more in future centuries. And it's debatable whether we can describe any of these extreme scenarios as "unlikely" or "low probability" to begin with. By our own, conservative calculations, there's about a 1-in-10 chance of eventual global average warming in excess of 6 C (11 F), something that can be described only as "catastrophic" for society as we know it.

It would be easy to conclude that capitalism is *the* problem. Capitalism is indeed at the core of the problem. Or rather: misguided market forces are.

One seeming solution would be to simply change our ways — voluntarily change our behavior to be greener. If only we slowed down, went back to the land, and generally did more with less, climate change would be a thing of the past. Not quite. The math on voluntary action simply doesn't add up. And the calculus of changing capitalism as we know it — however desirable that may be as an independent goal — is daunting, to say the least. It also confuses the issue.

Some, like author Naomi Klein, call for "taxing the rich and filthy." That's a nice turn of phrase. One might agree that we probably should be taxing the rich more. But that's a different problem entirely. First and foremost, we ought to be taxing the filthy. Instead of "sticking it to the man," the point is to *stick it to carbon*.

Far from posing a fundamental problem to capitalism, it's capitalism, with all its innovative and entrepreneurial powers, that is our only hope of steering clear of the looming climate shock.

That's not a call for letting markets run free. *Laissez-faire* may sound good with the right French accent — in theory. But it can't work in a situation in which prices don't reflect the true costs of our actions. Unbridled human drive — erroneously bridled drive, really — is what has gotten us into this current predicament. Properly channeled human drive and ingenuity, guided by a high enough price on carbon to reflect its true cost to society, is our best hope for getting us out.

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