Climate Change, Inequality, and Expert Knowledge

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In his insightful essay, Doug Kysar offers a powerful critique of the cost-benefit paradigm and argues that it has constrained our imagination on climate change policy over the past fifty years. Built on principles of neoliberal welfare economics, this paradigm has limited policy makers to a narrow focus on human welfare and preference satisfaction, taking for granted existing property rights, income distributions, population sizes, economic trajectories, adaptation capacities, technological innovation pathways and international relations. Policy makers tinker with existing economic models, which allow incremental moves from the status quo but preclude radical change. Given that our current pathway might lead to global disaster in the near future, Kysar argues that we must look beyond narrow questions such as the correct social cost of carbon or discount rate and expand our imagination. He offers two main proposals: a carbon "upset" payment to support movements that disrupt fossil fuel use, and an approach to climate mitigation that sees reducing inequality as a form of climate mitigation.

Kysar's critique is entirely right, and it is appalling that 50 years after Laurence Tribe denounced cost-benefit analysis in environmental law, climate policy is still stuck within the same framework. But I want to distinguish between two different critiques that are not sufficiently distinct in Kysar's essay and argue that his own proposal of reducing inequality as climate mitigation is not

immune from one of them. In the rest of this comment, I will then expand on this second critique and reflect on what we can do to address it.

The first critique squarely targets welfare economics — what it takes for granted, how it conceptualizes human beings and their relationship to the environment, what it counts as a cost and what a benefit, how it devalues things it cannot measure, taking growth as an imperative and valorizing efficiency above all else. These call for a new policy paradigm and a new approach to economics. The question is which strategies can effectively get us there. The second critique is less clearly articulated but farther reaching: it targets expert-driven approaches to policy making as a whole. Kysar criticizes economists and policy makers for burying their values behind modeling assumptions, thus removing them from political contestation. The problem is not just the content of the assumptions — as he points out, different administrations plug in very different numbers into the models and end up with vastly different policies. It is also that this covert politics is conducted by experts within the administrative state, based on models devised by social scientists, shielded from proper public scrutiny and debate. The models and findings of experts drive the conversation on climate change, and the limits of their studies end up being the limits of our collective political imagination.

While this critique is also undoubtedly right, Kysar's own proposal about inequality reduction as climate mitigation is itself susceptible to it. Moreover, it is not clear from Kysar's essay how we would address this problem. Kysar starts from a series of facts that illustrate the severe inequalities in emissions not only between richer and poorer countries but between the rich and poor within each country. As he notes, there is some dispute in the literature about how widely this relationship holds, and we depend on social scientific studies to determine the magnitude and scope of the association. Two early studies on the topic found a negative association between reducing inequality and reducing greenhouse gases, suggesting that there is actually a tradeoff between climate

mitigation and inequality (Heerink et al. 2001; Ravallion et al. 2000). A few studies have found no significant relationship at all (Borghesi 2006; Gassebner et al. 2011). The extent to which findings of a positive relationship between inequality and emissions apply beyond high-income countries is also not clear (Jorgensen et al. 2016). Since reducing inequality in middle- and lower- income countries tends to increase total consumption, it might increase greenhouse gas emissions as well. To make the point actionable, we need more empirical research that establishes the relationship conclusively. But setting aside the difficulties of obtaining the evidence we need, the real challenge only starts with the observation that there is an association between inequality and emissions. Whether reducing inequality will in fact prove an effective climate mitigation strategy depends on which social policies will be adopted to reduce inequality and how these interact with other policies that are or could be adopted to reduce greenhouse gases.

The literature is divided on these points. Three approaches currently dominate the discourse — green growth, Green New Deal, and degrowth — and there is serious disagreement among their advocates. Green growth appears likely to increase inequality by increasing unemployment and the relative demand for high-skilled workers; it does not prioritize inequality reduction (D'Alessandro et al. 2020). But it might turn out to do just as well if not better than more egalitarian policies in terms of emissions reductions, thus potentially revealing a tradeoff between low emissions and low inequality. If we want to focus on inequality reducing policies, the appropriate comparison is between the Green New Deal — which is essentially a more egalitarian green growth — and degrowth. One socialist economist argues that degrowth would create soaring poverty and unemployment, with only modest emissions reductions degrowth (Pollin 2018). By contrast, a recent paper by four ecological economists in *Nature* argues that degrowth will deliver both the greatest gains in terms of reducing inequality and in reducing greenhouse gas emissions – the only thing we would have to give up is growth (D'Alessandro et al. 2020).

The disagreement is hard to resolve because each camp makes different assumptions about key unknowns, and it is impossible for a nonexpert to say whose assumptions are better. For instance, some critics assume that a Green New Deal is likely to run into problems from the increased need for mining for minerals such as copper, nickel, cobalt, and lithium, which they claim will result in both more inequality and more emissions, as well as other forms of ecological damage (McKibben 2023). Defenders of these proposals also disagree on rates of future technological change, for instance on issues such as how fast electric vehicle batteries will improve or cities will be able to clean their electrical grids, and whether technological efficiency gains will have rebound effects that end up increasing emissions in what is known as the Jevons paradox. More foundational disagreements include questions such as whether capitalist growth is compatible with sustainability (Jackson and Victor 2019) and whether large capitalist societies can transition to a steady state without crises of poverty and unemployment (Pollin 2018).

My aim is not to give a comprehensive review of this debate but to draw attention to the role that disagreeing experts play in shaping political debate and the resulting deadlock even among those committed to significant action on climate change. An editorial in *Nature* last year warned that the rift among these research communities had become an impediment to action (*Nature* 2022). It called on researchers to set aside their disagreements, though this is not viable unless the underlying disagreements are resolved first. While the terms of this conversation are surely an improvement over the neoliberal one as far as climate policy is concerned, the dependence on experts is still a constraint on properly democratic discussion and action. What we know about the relationship between emissions reduction and inequality — as well as their relationship to growth, unemployment, ecosystem health and other things we care about — once again depends on models with highly speculative, often self-serving, and contradictory assumptions.

To generalize from these examples, we can say that expertise continues to shape and limits political possibilities on climate policy in two main ways. First, experts' choices about what to study determines the availability of information. We can't intuit the relationship between inequality, carbon emissions and growth; we need evidence. Before the 2000s, social scientists had not paid attention to this relationship. As a result, while there was much emphasis on global inequalities in emissions, domestic inequalities were largely absent from the conversation. A similar story can be told about the relationship between gender inequality and climate change. Conceiving of gender inequality as climate mitigation became possible only once studies showed that improving the status of women reduces emissions (see e.g., Mavisakalyan and Tarverdi 2019). These examples reveal the need to think about how new research agendas are generated, and the importance of opening up this process beyond members of professional fields.

The second problem is with the studies themselves. Ecological economics depends heavily on predictive computer simulation models. Since both the climate and the economy are highly complex systems with many interacting subsystems, these models inevitably involve guesswork. Moreover, because the models rest on assumptions that are strictly false, they cannot be confirmed through empirical testing. A match between predictions and real-world observations can be due to false assumptions canceling each other out. Given how heavily predictions are driven by assumptions, economic models in particular are highly value-laden and subjective.

What can democratic societies do to address the way political imagination is shaped and constrained by dependence on expert knowledge? One response is to argue that certain policies are good or bad, ethical, or unethical, regardless of their consequences. For instance, we might categorically rule out exporting waste to developing countries because it is morally wrong under all circumstances. Versions of the degrowth case veer into categorical moral arguments against consumption or denouncements of capitalist growth and accumulation as inherently incompatible

with an ethical and harmonious relationship to nature (Kallis 2019). This approach can be attractive to some, but its reach is limited. To win over people who are not persuaded by the categorical case, it helps to have arguments about the expected consequences of policies. In general, most policy disputes cannot be settled on a priori grounds. We need not take a narrowly economic view on which variables matter, but we still need to know what consequences to expect and what tradeoffs we will face. It is difficult to avoid dependence on experts on these questions.

Another solution is to find scientists and social scientists who possess a wider imagination. This has implications for the training and selection of academics. We want people with different backgrounds, experiences, values, and viewpoints to become scientists and social scientists. Uniformity of perspectives and background is a serious threat to academic creativity., which in turn limits political possibilities. If everyone in a professional field holds the same values, it will be difficult to challenge scientific paradigms from within. This might be one explanation for the persistence of the neoliberal framework. The move from neoliberal economics to models of socialist proposals show that such a change may already be at work, though many of these challenges have come from outside mainstream economic departments.

The limitation of this approach is that academia trains its members to think differently than nonexperts and converts newcomers to dominant paradigms, whether neoliberal or socialist or something else. This is professionalization. It has its benefits in terms of research productivity and advancing paradigms, but it also creates a gap between academics and laypeople. We can't just expect that a demographically diverse group of experts can be trusted to generate a wide enough range of ideas. We also need to think about how the public can become involved in influencing the direction of academic research.

If democratizing agenda setting is part of the challenge, the other is to submit the assumptions and limitations of economic models to public scrutiny. We want collective deliberation

on their assumptions and more participatory decision making on issues such as whether we want radical or conservative assumptions, how much behavioral change and individual responsibility we should assume, or how much we want to avert certain bad outcomes. These are impossible to verify but opening them up for more participatory engagement can allow us to move away from a policy model of warring experts pushing their own ideological commitments through modeling assumptions, toward one where scholars learn from and apply the perspectives of lay communities, while opening up their own values to public scrutiny.

The degrowth movement offers a promising example since its animating ideas were developed and influenced by a combination of activists, grassroots movements and academic, and it has migrated into more mainstream academic models and policy conversations. Degrowth conferences bring together scientists, policy makers and activists in participatory formats (Kallis et al. 2018) and tend to acknowledge the importance of the input of local communities in producing and questioning knowledge. Regardless of what we conclude about the merits of the proposal, its mode of knowledge production can be a model for other expert-layperson interactions.

References

Borghesi Simone. "Income Inequality and the Environmental Kuznets Curve." In in Environment, Inequality, and Collective Action, edited by Basili Marcello, Franzini Maurizio, Vercelli Alessandro. New York: Routledge, 2006, pp. 33–51.

D'Alessandro, Simone, André Cieplinski, Tiziano Distefano, and Kristofer Dittmer. "Feasible alternatives to green growth." *Nature Sustainability* 3, no. 4 (2020): 329-335.

Gassebner, Martin, Michael J. Lamla, and Jan-Egbert Sturm. "Determinants of Pollution: What Do We Really Know?" *Oxford Economic Papers*, 63, no. 3 (2011): 568–595.

Heerink, Nico, Abay Mulatu, and Erwin Bulte. "Income Inequality and the Environment: Aggregation Bias in Environmental Kuznets Curves." *Ecological Economics* 38: 3 (2001): 359–367.

Jackson, Tim, and Peter A. Victor. "Unraveling the claims for (and against) green growth." *Science* 366, no. 6468 (2019): 950-951.

Jorgenson, Andrew K, Juliet B Schor, Kyle W Knight, and Xiaorui Huang. "Domestic Inequality and Carbon Emissions in Comparative Perspective." *Sociological Forum*, 31, no. S1 (2016): 770-786.

Kallis, Giorgos. Limits: Why Malthus Was Wrong and Why Environmentalists Should Care. *Stanford University Press,* 2019.

Kallis, Giorgos, Vasilis Kostakis, Steffen Lange, Barbara Muraca, Susan Paulson, and Matthias Schmelzer. "Research on degrowth." *Annual Review of Environment and Resources* 43 (2018): 291-316.

Mavisakalyan, Astghik, and Yashar Tarverdi. "Gender and climate change: Do female parliamentarians make difference?" *European Journal of Political Economy* 56 (2019): 151-164.

McKibben, Bill. "To Save the Planet, Should We Really Be Moving Slower?" *The New Yorker,* 5 July 2023.

Nature "Are there limits to economic growth? It's time to call time on a 50-year argument." *Nature* 603, 361 (2022).

Pollin, Robert. "De-growth vs a green new deal." *New Left Review* 112 (2018): 5-25.

Ravallion, Martin, Mark Heil, and Jyotsna Jalan. "Carbon emissions and income inequality." *Oxford Economic Papers* 52, no. 4 (2000): 651-669.