

AFTER THE CATASTROPHE

CLIMATE JUSTICE AS THE POST-TRUMP SLINGSHOT

These are early thoughts. Comments are more than welcome.

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Trump's election was a catastrophe. Coming on top of everything else, it more than justifies pessimism. But at the risk of seeming ridiculous, let me add that our new position is not without its possibilities.

We would not have chosen this path. But if we're both smart and lucky we may be able to slingshot out of it, and into a mobilization that would not otherwise have been possible.

But we're going to have to be brave enough to take justice seriously. Among much else, we're going to have to work out what the pretty phrase "climate justice" actually means.

Among much else.

Before Trump there was Paris, and its celebrated goal of "Holding the increase in the global average temperature to well below 2°C," while pursuing efforts "to limit the temperature increase to 1.5°C above pre-industrial levels." So here's a question: When Dave Roberts, one of America's premier climate bloggers, published a post-election reaction piece called "[Trump's election marks the end of any serious hope of limiting climate change to 2 degrees](#)," was he right?

I don't think so. But I'll grant that, if he's wrong, he's wrong in a complicated way. For one thing, the hope we had before Trump's election was not itself entirely serious.

Here's how Roberts described it:

"The truth is, hitting the 2-degree target (much less 1.5 degrees) was always a long shot. It would require all the world's countries to effectively turn on a dime and send their emissions plunging at never-before-seen rates.

It was implausible, but at least there was a story to tell. That story began with strong U.S. leadership, which brought China to the table, which in turn cleared the way for Paris. The election of Hillary Clinton would have signaled to the world a determination to meet or exceed the targets the U.S. promised in Paris, along with four years of efforts to create bilateral or multilateral partnerships that pushed progress faster.

With steady leadership, the U.S. and China would exceed their short-term goals. Other countries would have their willpower fortified and steadily ratchet up their commitments. All this coordinated action would result in a wave of clean energy innovation, which would push prices down lower, which would accelerate the transition.”

Is this an accurate telling? I think it is, more or less, but it’s also radically incomplete. For one thing, “U.S. leadership” has not been an unambiguous force, and there are many people around the world who would object even to the phrase. More pressing, the “wave of clean energy innovation” that this story depends on was never going to be enough. On this front, see the bit where countries “steadily ratchet up their commitments.” This is a reference to the push for (jargon alert) an “ambition ratchet” or “ambition mechanism.” The two terms are almost interchangeable but the idea is critical, because both the Paris pledges of national action and the post-Paris pledges of international transition support are far too weak to actually achieve Paris’ “well below 2°C” temperature target.

This view – that the Paris pledges are too weak to achieve the Paris targets – is entirely mainstream. All the key studies agree. However, when you push a little farther and ask which countries are most at blame – which countries are doing their “fair share” and which are not – you find that only the reports of the Civil Society Equity Review coalition (full disclosure: I’m one of its authors) even attempts to broach the question.¹ The coalition’s most recent report, [Setting the Path towards 1.5°C](#), offers this simple summary statement:

“even if all the commitments in the current NDCs [national pledge of action] are met — an uncertain prospect, given the lack of financial and technological resources from wealthier countries — they would lead to a warming of about 3°C.”

The baseline truth here is that ambition is a function of equity. Unless we establish cooperative international systems by which the wealthy support the poor with the finance and technology they need to act well and decisively, ambition will remain in short supply. Which is why we’re talking about a possible warming of 3°C, though in truth 3.5°C – an extremely dangerous level of warming – might wind up being closer to the mark.²

Still, the Paris pledges were widely accepted as a first installment. Their weakness, as the story went, was OK, because we'd be able to strengthen them – and properly support “stretch” pledges by countries that can't deliver on them without help – in time to meet the Paris targets. If, after Trump's election, this doesn't happen, or, more precisely, *if this was going to happen but now it doesn't*, then Roberts has called this all correctly; we won't make 1.5°C, or even 2°C, and we'll have this election, and all it's infamies, to blame.

So. Why did many people believe that the world community would strengthen its pledges, enough and in time? And was their confidence justified? The answers to these questions are not at all straightforward. Still, in the end, and despite all skepticism, there were (and still are!) at least two good reasons for optimism.

First, the solar revolution was finally proceeding apace. Clarity here is elusive, because solar, and renewables in general, present us with a classic good news / bad news situation. The good news – and it is very good – is that [unsubsidized solar is now the cheapest form of new electricity, cheaper even than wind](#). The bad news is that electricity isn't the whole story, and that in any case the global renewables buildout is still too slow – far too slow – for renewables to support the Paris targets on their own. For example, according to the [International Renewable Energy Agency \(IRENA\)](#), the global rate of solar photo-voltaic buildout is only a fourth of what's needed if we're to come in “well below” 2°C.³

Second, with Paris, the world's nations had finally broken a long-standing deadlock and struck a global deal, and were beginning to build ambition mechanisms that could eventually empower a common effort to “ratchet up” the pledges. The key word here is “eventually,” because *we don't yet have an ambition ratcheting mechanism that's worthy of the name*. However, and this is important, the agonizing years that ran through Copenhagen and culminated in Paris saw quite a few good ideas put into play. Among the examples:

- 1) a repeating five-year “dynamic cycle” of negotiation and commitment, during which national pledges would be periodically updated,
- 2) a review process, embedded in this dynamic cycle, within which – at least in principle – both the ambition and the fairness of the pledges can be openly and meaningfully assessed,
- 3) an evolving tradition of like-minded [ambition clubs](#): nations (and “sub-nationals” like cities and states) that join together to push for terms they can actually accept, and

4) a process that encourages ambitious “conditional” pledges – strong enough to concentrate minds (and support real planning) but becoming unconditional only when “matched” with agreed levels of support.

Ambition ratcheting is a long story, and you’ll pardon me if I slide quickly past the associated policy debates.⁴ I will say that, if radical skeptics can be forgiven for judging the above mechanisms to be essentially meaningless, then desperate optimists can perhaps also be forgiven for believing that, taken as a cluster, these mechanisms constitute a ratchet that’s strong enough to actually deliver a high-ambition transition.

In fact, both of these groups are wrong. The crucial point is that Paris was only a breakthrough. The really difficult hurdles remain before us. In particular, two decisive and closely related challenges remain to be addressed before we can honestly claim to have a functioning ambition ratcheting mechanism. First, we need a stable climate finance system that’s able to support ambitious action in poor and developing countries. Second, we need at least a rough shared understanding of “the equity problem,” the problem of establishing a climate transition strategy that’s fair enough to actually work.

Nothing about this is simple. For one thing, to “actually work,” a climate transition must succeed not only within poor and emerging countries, but also within wealthy countries (the U.S. being a textbook case) that, despite all their resources, are homes to large numbers of poor, insecure and restlessly angry people. For another, the relatively upbeat storyline that so many of us, before the catastrophe of the American election, thought we were living within – it could have been firmed up under President Hillary Clinton, and turned out to have some real narrative drive. This, certainly, was the common pre-election expectation, which saw the next few years being spent filling out details, planning implementation, and in general muddling forward into a more rational world. Instead, of course, we got Trump, and it’s all we can do to regain our footing, and we’re compelled by honesty to ask if David Roberts’ hard-man realism, his sense that we’ve lost the last “serious hope of limiting climate change to 2 degrees,” is actually justified.

It’s certainly easy enough to make this case.

But I’m trying to make a different case, one in which we admit that Trump didn’t cost us 2°C, because we never had it to lose. And that technology-driven change was never going to deliver the ambition we need. That we also need cooperation, including the international cooperation that would be expressed in radically stronger national pledges of action, and we didn’t had it. That the first round of pledges was radically inadequate, and we weren’t even on track to meeting them, let alone strengthening them. That there’s no evidence, given the deeply-set realities that brought us Trump and all his fellow travelers, that any of this was going to change in time. That Paris didn’t give us a functioning ambition mechanism,

and we weren't likely to get one, because we weren't likely to manage a breakthrough on the finance front. And that now that the old realism has been derailed, we're at least being forced to confront the true realist necessity: the necessity of facing the equity challenge.

The last thing on our minds, at this point, should be a return to the old status quo. To be sure, Clinton's election would have brought progress by small degrees. But for better or for worse, her brand of incrementalism is no longer on offer. Trump's election really was a catastrophe, [in the precise mathematical sense of one dynamic regime having shattered, and another having begun](#). We don't yet know the rules of this new regime, but I'm willing to at least hazard a guess. To wit: We're going to have to think again, and hard, about the limits of incrementalism, and about transformational change, and about the role that transitional justice – aka "equity" – is fated to play as the 21st Century unfolds.

What's my core thesis? That we're falling into a very deep hole, but that we can still *slingshot* out of it, perhaps even at a speed great enough to bring the "well below 2°C" target into reach, but that *we will not do so as a classic, single-issue climate movement, only as a climate-justice movement, and a clever one at that*. That if we're going to escape this hole, then all the tribes in the climate federation – even the realists – are going to have to recognize that daily life on this benighted planet is, for most all people, defined more by inequality and the new class system than by climate disruption or anything like it. Far more.

Trump's people insist that this was "a change election." In fact, Trumpism is among many other things a rebellion against change. It's a strange rebellion to be sure, one that's been much shaped by Exxon, the Kochs, the fossil cartel in general, the ideologies of modern plutocracy. All of which define a first-tier issue, though it's not quite the issue here. What I want to highlight is the underlying insecurity of modern economic life, the daily, structural insecurity that predisposes "the left behinds" to nativism, fear, idealization of the past, idiot rejections of science, self-regarding blocking coalitions, and, ultimately, to what used to be called "counter revolution."

Any meaningful climate transition will be global, will involve change on many levels, and will be extremely disruptive. Given all this, we would be wise to recognize that plenty of people are already feeling quite disrupted enough, thank you. Not that this is a complete explanation for the catastrophe, but it's an essential piece of the puzzle. Change at the necessary speed and scale will only be embraced if we visibly set out to build a fairness-forward world in which insecurity ceases to be the defining reality of daily life.

PARIS AS A BREAKTHROUGH, AND A LINE OF DEFENSE

When Trump's people take control of U.S. climate policy, they will almost certainly move to cancel even America's small contribution to the Paris transition funds. They may in fact do worse, and even in the best cases they will introduce a great deal of noise and uncertainty into the climate talks. What is clear is that the "world community" will have to consider brave and difficult responses. What, exactly, should these be?

And what of us in the U.S. – what, exactly, should we do? What, in particular, should we say of America's responsibilities for the climate crisis? Of its obligations to the world's poor and aspiring people, or indeed its obligations to its own people? And why did we – and here I include the American climate movement, which has had remarkably little to say about international justice – not say these things years ago?

To be sure, we did not expect to be in this storyline, and we would not have chosen it. But as the man said, we do not make history under conditions of our own choosing. The question is if, now, there are new openings for fair and ambitious action, and if we can create more openings still. I believe that there are, and that we can, and that the infamies of the coming years, and the backlashes they will engender, will create political spaces more flexible and adequate than any we've seen in a long, long time. These will not be opportunities for straightforward, climate-centered initiatives, but this is no great surprise. We left that sandbox long ago. [Everybody knows](#) now, or should, that the climate crisis can't be managed on its own. That, like the larger crisis of neoliberal capitalism, the climate crisis is deeply systemic. That the mobilization we need will not come unless we treat climate and inequality as two sides of one coin. That we must act both domestically and globally. That the real challenge, now more than ever, is finding ways to stand together.

This essay is about Trumpism, and about Paris, and about global solidarity in the face of a climate emergency that compels us to act on a massive scale. As such it is also about money – who has it and who doesn't, and what this distribution implies about the way forward. This is, I know, an overwhelming cluster of problems, but I'm not here to add my voice to those who say that the prospect is essentially hopeless, or that Paris was a distraction or a con, or that only the "on the ground" protest wing of the movement can bring us to a turning point.⁵ Just the contrary: I'm here to argue that, just as resistance and protest are crucial, so too is global governance, and that we can't save ourselves without it. I've spent years observing the diplomatic Kabuki of the climate negotiations, and I long ago concluded that they are as necessary as they are infuriating. I believe that the Paris Agreement was a true breakthrough, and that – given a turn in the larger tide – it could catalyze transformational changes. I believe, moreover, that the case for the Paris compromise is now obvious. That, in Paris, we have

something global to defend and to build upon. Something that Trump's people are going to try to delay, or derail, or destroy — whatever they can get away with.

Defense is the most pressing of the post-election imperatives. From the pipeline battlefronts, to the red-state countrysides, to the DC trenches and the climate talks themselves, these next years will be hard and harsh and dangerous. And unlike the pain and suffering on other fronts — immigrant rights, criminal justice, race relations, the Supreme Court, taxation, regulation, medical care — much of the ground lost on the climate front will be lost beyond redemption. When it comes to the climate, delay can be indistinguishable from defeat.

Still, defense can't be the whole of the story. We also need to prepare for 2020, and for the future. And in the optimistic but not unlikely case that Trump is a one-term president, we had best be ready to crank the ambition ratchet fast and hard. To that end, we need a strategy that's grand and bold enough to put us in a position to do so. Finding such a strategy won't be easy, and not least because the withdrawal of U.S. financial support for the Paris transition funds will worsen the already bad odds that the first-round pledges will even be met, let alone strengthened.

The fundamental challenge here is easily stated. Climate stabilization is a global commons problem, one that most of the world's people — beset by personal and national necessities — cannot easily focus upon. Moreover, the global political system, such as it is, was never going to deliver an ideal solution, something like, say, a science- and equity-based global climate mobilization that's explicitly designed to deliver economic and developmental justice for all. Yet Paris did deliver a breakthrough. It gave us a meaningful "second best" global agreement that broke a long demoralizing deadlock, and it delivered a "bottom up" transition framework that the world's nations could actually commit to. This is why Paris was widely judged, [as Jonathan Rauch put it in *The Atlantic*](#), to be "the only policy approach that has a shot at real-world success."

Our priority, now, is to deliver on the promise. The Trump people may "defect" from "the Paris regime," but they must not be allowed to do so without consequences, nor to [lead a herd of petro-states in a mass defection](#), nor to deadlock the negotiations for years. The Paris Agreement, after all, was only possible because it was unfinished, and this means that there's still work to be done, some of it very difficult. The situation is going to require bravery, defensive coalitions, ideas, a great deal of luck, and ambition ratchets that can operate (even if only partially) under Trump's shadow. All of this could go badly of course, but remember, it's not like a decisive short-term breakthrough has been lost. There was no such thing in the Clinton cards.

In any case, the future is unwritten, and anti-Trump backlash of one sort or another is more than likely. It's not impossible that a really new kind of ambition coalition could form. Whatever happens, the goal

has to be a high-ambition mobilization that takes both practicality and justice seriously, and it's important to note that this represents a new possibility. Under the now shattered consensus of the Obama years, any meaningful focus on equity-based strategy was extremely unlikely to win much support, but today, with both the climate movement and the global-governance crowd shaken from their former complacency, there's at least a chance that bold departures will get a proper hearing.

Anju Sharma, a longtime climate / development analyst with deep roots in the equity battle, [has listed some possible next steps towards an equity-based mobilization](#). Civil society, which in the past "rejected discussions on justice, fairness and ethics" as unrealistic, could step forward and define "for their politicians what is absolutely essential for the process." Leadership coalitions from both North and South could step forward, asserting a commitment "to making fairness a basis for the negotiations, providing countries the space to elaborate on what they think is fair, and reaching a shared understanding of equity norms." The EU, which "is experienced in dealing with the equity-related concerns of its members on climate change," could "bring this understanding to bear on the negotiations." Developing "countries like India will have to be much more proactive in defining what they mean by equity and fairness." And, most immediately, "the world will have to deal with the U.S. and other countries that may choose to not participate in the international regime."

The theme here is equity, not as perfect justice, but as a foundation of emergency realism. It's the claim that, if we're to move forward despite a global lurch towards right-wing populism, we must first admit that climate equity, like climate science, bears inconvenient truths that cannot safely be ignored. This is the key. Trump's election had a myriad roots, but its taproot was an angry rejection of an unjust and profoundly dangerous species of capitalist globalization. We're going to have to do much better in the future, and we can, though not if we pretend small tweaks and rhetorical gestures will do. The bottom line here is that any climate stabilization strategy that's not widely seen as fair will work haltingly, if at all, and will eventually be rejected.

THE NEGOTIATIONS, LIKE THE UNITED STATES, COULD GO EITHER WAY

2016's climate summit, in Marrakesh, began on November 7, and America's election day results came one day later. There was no wailing and gnashing of teeth, not exactly, but there was vertiginous shock, and some actual tears, and a somber, irritated mood. And there were encouraging developments. The Chinese [made it clear](#) that they were still on board, and considering leadership moves. The French [proposed](#) trade sanctions against the U.S., if it withdraws from Paris. The Germans braced, and [readied themselves](#) to defend climate multilateralism.

Everything is now uncertain. How will the world's negotiators finish "the Paris rulebook" while Trump's people are trying to deadlock the talks? How will they provision its funds and institutions? How will we (I'm including civil activists in this one) manage any progress at all on the Big Questions — finance, differentiation, equity — that must absolutely be advanced before ambition, on the scale needed, can come within our grasp? How, in particular, will we negotiate 2018, which will see the release of the Intergovernmental Panel on Climate Change's [Special Report on 1.5 Degrees](#), and, in close follow-on, the first formal stocktake of the collected pledges of action, relative to that same very challenging goal? These, please note, were both planned to be big events, and before Trump's election, the push was to make them even bigger. Is this still even in the cards?

Back in 2016, there was widespread hope that, by 2018, with Paris "banked" and the world moving on to "accelerated implementation," we could finally approach the big questions, including the keystone equity questions, in a fresh or at least "solution oriented" manner. We still have to do so. 2018, after all, is only the next milestone. What we're really playing for, now, is our position in 2020 and beyond. And while a lot can change between now and 2020, it's not going to change for the better unless we convincingly assert the now-obvious truth that only an explicitly fair and genuinely inclusive transition strategy can possibly work.

Fortunately, the game is on. In fact, Marrakesh saw a major move, and a good one. On the summit's final day, the "Climate Vulnerable Forum" (CVF) — a group of 47 poor and climate vulnerable countries from around the world — [formally announced](#) that its membership would, "in partnership with and with the support of the international community," update their pledges before 2020, and that their renewed pledges would "strive to meet 100% domestic renewable energy production" by 2050, "while working to end energy poverty and protect water and food security."

The CVF's declaration, coming at the end of the Trump-shock summit, took on a special force. Even more so when the Chinese — after relentless lobbying by a small but determined group of developing-country activists — [made a point of responding, positively and at a very high level](#), saying that the vulnerable countries should consider China a "strong partner" in their drive for transformative development. This unprecedented move clearly signaled the possibility of new alliances, and suggested that, just maybe, we're not doomed to spend the next four years locked in defensive crouches. That the future may rather be marked by real action, creative politics, and at least the chance of a breakthrough on the equity / ambition front.

And if the CVF countries in fact update their pledges in 2018, there's the tantalizing possibility that at least some other countries will join them. I devoutly hope that this takes place, though of course I have no idea of the odds. In any case, the next few years will see a decisive scientific report, a deep and bitter reevaluation of the overall position, and a broad mobilization in which highly-motivated actors and

coalitions are at every level considering significant moves. All of which is in explicit counter-point to the narrow nationalism that has erupted in Donald Trump's America, and in Theresa May's Britain, and in so many other of our now-visibly hobbling democracies.

The CVF – which includes Ethiopia, Haiti, Nepal, Sudan, and Tuvalu, and dozens of other countries on the climate frontlines – does not represent the global elite, but its move nonetheless set a new tone. After all, “the vulnerables” have a certain moral power, and by unilaterally proposing an extremely ambitious transition agenda, they've placed a real challenge before us all. To see this, note that the CVF's new pledges, as suggested by the diplomatic phrase “with the support of the international community,” will define actions that its members cannot possibly make on their own, especially because the CVF nations also explicitly intend “a new era of the pursuit of development, ending poverty, leaving no person behind, and protecting the environment.”

Nor is the CVF's declaration the only challenge on the table. There's also the [African Renewable Energy Initiative \(AREI\)](#), which aims to immediately deliver 10 GW of new and additional renewables, and to scale up to 300 GW by 2030, thus providing one billion people, in less than 15 years, with their first access to steady electricity. Nor is AREI the end of it. Similar initiatives are being spun up on other continents, and that's not all. Now that we've gone through the Paris looking glass, with the focus shifted to on-the-ground action, there are ideas everywhere, and opportunities. They're not yet big enough to stabilize the climate system, but they're not trivial, and in the best case, it will be these initiatives, and not the right populists or the fossil cartel, that sets the mood.

There's just one problem – finance.

CVF and AREI-style initiatives, like so many of the others embodied in the Paris pledges, need support, and if there's to be a stable defensive coalition, this support is going to have to show up soon. And it can't come entirely as private investment. There's a pressing need for public finance, and here the small-bore realism of the pre-Trump finance negotiations has left us a dangerous legacy. Consult Oxfam's [Climate Finance Shadow Report 2016](#), and you'll see that the world's wealthy nations are relying on accounting tricks to meet their initial commitment — made back in Copenhagen in 2009 by then U.S. Secretary of State Hillary Clinton — to provide \$100 billion in international climate finance by 2020. Not that this would be enough money – it wouldn't – but it's not even on offer, which is the point here. All that the wealthy nations actually managed to pledge before Marrakesh (the central estimate) was \$26 billion, of which \$14 billion is for mitigation activities in developing nations, and \$12 billion for adaptation.

The challenge of supporting the Paris pledges, and then stepping up to the much stronger actions required to hold the 2°C line, is not, at its crux, a financial one. But it is a financial challenge nonetheless,

and given that we live and will die within capitalist societies, it's absurd to pretend otherwise. In fact, it's absurd to even talk about national actions in a *global* climate transition without also talking about finance, for the simple reasons that national actions, properly considered, are calculated as sums of direct domestic action and indirect (finance and tech) support for international action.⁶

At the moment, we're staring at serious shortfalls on both the domestic and international sides of the ledger. On the domestic side, the elites have agreed to only very small actions, and even these are not being vigorously pursued. ([According to the Grantham Institute](#), at least six of the G20 countries (Argentina, Australia, Canada, Saudi Arabia, Turkey and the U.S.) are not even backing their domestic mitigation pledges with enabling legislation, which is in any case a pretty low bar when it comes to judging if a pledge is actually serious.) Meanwhile, on the international side, the wealthy countries have committed to very small levels of financial support (the \$100 billion discussed above) and are only pretending to deliver almost all of it. Which is why, even before Trump's election, solid evidence that poor-country pledges ([e.g. Africa's](#)) were not being properly supported was already beginning to surface.

There will be more such grim reports. And there will also be tremendous pressure to pretend, in counterpoint, that the climate transition is already both ongoing and unstoppable. But what if we took another tack? What if we stopped, and took heart from [the renewables revolution](#), and then asked ourselves what else is necessary – *on top of that revolution* – to bring the actual transition into focus? What if we began with the first round of national pledges, which by the way contain all sorts of great initiatives? What if we simply asked how much it would cost to actually support these pledges?

How much would we be talking about?

It's impossible, at the moment, to say with real precision.⁷ But it is possible to go back to the pledges and see what they imply. Here we have [a new report from Germanwatch](#), which offers \$4.5 trillion as a "preliminary estimate" for the finance needed to support the pledges. Again, these are only initial pledges, and they don't take us all the way to 2°C, let alone 1.5°C. But they do, importantly, include at least some estimates of adaptation action, which can be taken as first-cut markers for the broader basket of social and environmental costs. As such, the \$4.5 trillion figure seems a reasonable place to start, particularly because it includes both public and private money, and investments as well as grants.

\$4.5 trillion is a lot of money, but consider. Not only does this figure include private investments, it also reflects today's cost estimates. If the elites were to rouse themselves to purge fossil subsidies from the global economic system, mitigation-side action would get significantly cheaper.⁸ Also – and this is a big one – we live in a time of unprecedented collective wealth. Given the "political will," we could certainly devise "innovative financial mechanisms" to mobilize the necessary finance in fair and efficient ways.⁹

The problem is that, while we as a civilization are rich, much of our commonwealth has been privatized, and a grossly disproportionate fraction of it has been appropriated by the very richest. Indeed, 2016 was the year in which, for the first time in modern history, [the richest one percent of the global population owned half of everything](#). Which is, in a way, the key to this whole story. It's essentially impossible to imagine a successful way forward in which all that money lies safely tucked away in private accounts and tax havens, while the climate-transition bills, whatever they turn out to be, are delivered unto the ordinary people.

All this said, one can also argue that \$4.5 trillion will be nothing compared to the real cost of any plausibly fair global climate transition. This is particularly clear when we lift our eyes from the mitigation challenge to the larger problem. For while in the best case (technology revolution, long-term planning, subsidy reform, [creative destruction](#), resource sharing, and so on) mitigation may turn out to be relatively cheap, this is hardly true of the climate transition challenge as a whole. Keep in mind that this is not just about infrastructure – sea walls, desalinization plants, and all the rest. To really stand for a just climate transition, we have to think in broader terms, including inundated coastal cities, disappearing island nations, desertification on a terrifying scale, massive relocation efforts, livelihood destruction, and all the rest of the disruption and suffering and death that is now so visible on the horizon. It will not be cheap to “adapt” to it all, not if we're speaking in meaningful, morally-defensible terms.

What would all this cost? I will quote the latest report from the *Civil Society Review*:

“The challenge here is still largely unreckoned, and estimates are getting worse. The [2014 Adaptation Finance Gap Report](#) reported additional costs for all developing countries of \$150 billion per year by 2025/2030, and \$250 billion to \$500 billion per year by 2050 (for a scenario of 2°C increase by 2050). Only two years later, these numbers had been superseded by the [2016 Adaptation Finance Gap Report](#), which tells us that by 2030, adaptation costs will reach \$140-300 billion annually, with the potential to be five times greater by 2050. This comes to \$700 billion to \$1.5 trillion, a bracing range. And, of course, if we cross critical tipping points, the costs will quickly become astronomical.”

It's a dark picture, and we all know it. But cooperation is possible, even under conditions of great stress. Perhaps it even becomes more possible. As for monetary sums in the trillions, they are mobilized all the time — during wars, that is — and there are plenty of ways of mobilizing climate finance, or would be, in a world that had well-functioning governance systems. Alas, we have instead the mad radicalism of the U.S. Republican Party. And the anger and alienation that led to Brexit. And the harrowing of Greece before that. And [the austerity now being imposed on the people of Brazil](#). And so on, and so on, and so on. Moreover, these aren't isolated failures that we can put down to Trump or even Trumpism. It's

better to say that they are expressions, world-wide, of the same political failures that led to Trump in the first place. Better to say that these failures are the real problems, and that we're going to have to face them, and there's nowhere better to begin than with the quintessentially global problem of climate stabilization.

TO ACT GLOBALLY, AT SCALE, WE NEED DOMESTIC ECONOMIC JUSTICE

What do we talk about when we talk about climate justice?

Well, we talk about the climate movement, and the critical role that it's fated to play. And about how, to play that role well, it will have to speak for, and stand for, a climate transition that is, simultaneously and visibly, a surge toward economic and developmental justice.

We all know this, right?

But are we clear? If I were to write "This world of ours is brutally unjust, but the climate transition cannot be," would it be obvious what I meant? Would it be obvious to the incidental Trump voters, by which I mean not the "alt right" pro-Trump core but the disaffected working poor, the middle class who fear that their children are bereft of meaningful opportunities, the people who told pollsters they were voting for Trump not because they supported his entire program, nor even because they liked him, but because they thought that he alone would stand up to the elites?

I don't think so.

I think, rather, that the election demonstrated yet again that a fearful people, anxious about narrowing prospects, and furious beyond words at endless indignities, is easy prey to demagoguery and narrow, simple-minded nationalism — just the poisons we don't need if we're to have any real chance of stabilizing the climate system. I think that the climate transition, if we really intend it to occur, has to stand for a world in which there's a place for everyone, a real place, one with at least a modicum of dignity. I think that unless we manage to make it do so, and soon, there isn't a snowball's chance in hell of actually holding the planetary warming to a manageable level.

This challenge is particularly daunting in countries where stark, demoralizing divides between prosperity and poverty have become the defining facts of economic life. The United States is of course among these countries, and this raises a critical challenge for the American climate-justice movement: the challenge of internationalism. For all the glory of the new resistance — Standing Rock was a fine, rare moment in a grim year — there is little talk, within the American climate-justice movement, of *global* climate justice, which challenges us to look far beyond our borders, and to attend to the needs and

aspirations of those we find there. The wrinkle is that it's not enough to speak of community rights and resistance; there are also the structural international challenges of the climate mobilization: Fair shares, progressive transition financing, development rights, and even redistribution, and not just within our national borders.

The core message of the climate movement, the one people think of when they hear words like "climate mobilization," has to be that *we're all in this together*. This recognition is of course baked into today's climate jargon, and is expressed in abstract terms like "just and inclusive transition." The problem is that we rarely get to the challenging specifics, and we almost never put them at the center of our stories. We rarely speak in ways that ring for all. We rarely speak, in particular, to all those who are being left behind by an economy that becomes more brutal with every passing year, an economy beset by techno-economic processes (e.g. the new automation, aka "[the second machine age](#)," which by the way is now arriving in earnest) that are grinding along in parallel with the climate crisis, and not in a particularly soothing manner.

I'm not claiming some new insight here, or that the climate movement is oblivious to the justice imperative. We all got the "[just transition](#)" memo years ago. But, that said, another effort is clearly in order, and rarely is it more important than when we imagine, and speak about, the depth and speed of the transition that is implied by the climate science. This is because there's a strong, inescapable link between the insecurity crisis that's driving right-wing populism and the climate-movement vision of an extremely rapid global transition to a highly distributed energy system and, ideally, a 100% renewables economy. *To wit: when we speak for such a transition, we're inevitably speaking for profound economic and social disruption, yet, until fairly recently, we don't even seem have realized this.* We still don't seem to have seriously considered how our [stories of the future](#) might sound to the many millions of people (i.e. the aging working and middle classes of the developed countries) who feel that the world they once knew is long gone, and that all hope of economic stability, let alone opportunity, has vanished into the air. Who are not in the mood for someone else's idea of their future.

To be sure, the enviros have long spoken, cogently and well, for "green jobs," all the while hoping that the coal miners, and all those who look to the coal miners, would see the future as one of possibility. It hasn't always worked out this way, and no doubt the lavishly funded disinformation campaigns of the fossil cartel had something to do with this. My point is that the scales were always tipped to the side of those who spotlighted the losses rather than the gains. After all, people are generally loss averse, and everything about today's neoliberal order conspires to strengthen this tendency. And anyway, why would you believe that "green jobs" are anything but chimera when you already feel that all jobs have passed you by, and that you have yourself become invisible, or even irrelevant. When you feel in particular that your children are nowhere on anyone's agenda.

It's a tough situation, but we haven't handled it well and it's time to admit it. One key problem is that the mainline of the climate movement has long focused on techno-economic goals (e.g. the challenges of designing, and winning, a distributed and robust low-carbon power sector), and has contented itself to believe that such goals, properly pursued, would of themselves deliver substantial equity benefits. There really has been very little focused attention for the prospective climate-transition losers, and this despite the core reality that ours is a winner-take-all world in which many of these people have already lost again and again. Our tribunes spoke, instead, of side effects and "co-benefits," of equity as a *bonus* of green technical change. Which is true enough, as far as it goes, but not even close to being sufficient, not given the disruption that's already coming over so many. The disruption and the fear.

Just before the election, I attended a strategy meeting in New York. The focus was on the post-Paris "implementation agenda," on "long-term strategy" and "deep decarbonization" planning at the city, state, national level. It was all absolutely essential stuff ¹⁰ – there's no way we're going to make the turn without detailed planning – but not a word was spoken, at least from the stage, about finance or other "means of implementation." Which is to say that, even though Brexit had already delivered its early warning, at least some key climate movement agenda-makers were still affirmatively down-playing the equity challenge. As if, indeed, it wasn't even an issue.

Today, the mood may be shifting. Certainly some hard-core realists have recently joined the ranks of those insisting that the "just transitions" challenge is of more than incidental importance. Moreover, the term is now being understood in broad terms, not as limited transition assistance for displaced coal miners and other discrete groups of fossil-fuel workers, but, [to quote Emmanuel Guérin](#), a key climate foundation officer and a special advisor to the French Climate Ambassador Laurence Tubiana, as a coming-to-grips with "all the social issues related to the transition to a low-carbon economy, a low-carbon society more generally."

This is exactly right, and a perfect opportunity to say that the larger climate justice challenge must be taken in equally capacious terms. It might be helpful, in this regard, to think of the climate justice movement as having three major wings. Call them (I'm grossly simplifying here) the "grassroots resistance," "just transitions," and "fair shares" wings. Note that while we're all more or less familiar with the all-important resistance movement ("[Blockadia](#)"), and with the labor-based just-transitions framing¹¹, the fair-shares problem¹² is virtually unknown in the U.S., in part because mainline American environmentalists have always avoided it like the plague. Which would be understandable, given the realities of political life in America, were this avoidance not disastrous.

My only point, and I hope I've managed to make it clear, is that the climate *justice* movement must understand and acknowledge all sides of the challenge that it's taking on, including the global fair-shares problem. At the end of the day, any viable global climate-transition strategy must offer the world's

people at least rough ways of assessing the global fairness or unfairness of individual national actions. More precisely, any viable global climate-transition strategy will have to provide norms and benchmarks that allow us to consider national pledges in terms of national responsibilities and – even more decisively – national capabilities. And it will have to do so *in ways that take inequality within countries into explicit account*.

If this necessity isn't yet obvious, it's only because we haven't decisively confronted the inadequacy of our collective effort. If and when we do so, we'll soon realize that collective judgements aren't going to be enough. We have to be able to identify both leaders and free riders, and with some meaningful degree of consensus.

JUSTICE AS A SLINGSHOT FORWARD

Was it Al Gore who began the tradition of incessantly quoting Churchill? In any case, "We are entering a period of consequences," and we all know it. A climate movement with an expansive approach to the justice challenge would be far ahead of the game, when it comes to offering a sharp alternative to right-wing populism. It's not, after all, the American working poor who have been shirking their fair shares, but rather the American rich, and the rich everywhere, who have, with only a few exceptions, been doing their very best to cocoon themselves away from the sorrows that now threaten to overcome us all.

There are still good moves to make, lots of them. What's key is that, taken together, they must express not only resistance but solidarity, and begin to break down the walls between the American crisis and the global crisis. It would for example be excellent if at least some U.S. states (California might want to step forward here) went beyond sending delegations to the international talks, and [sent some money as well](#). It wouldn't have to be much, not nearly a true fair share, but direct "solidarity payments" from U.S. states, sent to the very climate funds (e.g. Least Developed Countries Fund) that Trump's people will be trying to defund and suffocate, would send a welcome message.

The global negotiations could go either way, as could the battle for American democracy. But on both fronts, progressivity – as in "progressive tax system" – is an absolutely critical part of the tale, and here climate justice and tax justice are two sides of one coin. Think about the long-term, low-carbon development strategies that, according to the Paris Agreement's Article 4.19, "all countries" are supposed to be working on. Do we imagine that economically-strained developing countries are actually going to plan and commit to such strategies, which, after all, have to be fantastically ambitious if they're to fulfill their mandate, without substantial and predictable channels of finance and technology support? If the answer is no, then how do we imagine such support being provided in the future that's

so clearly suggested by global right-wing populism? If they answer is that we can't, then how do we prevent that future from being locked in?

I've suggested that we must "slingshot" past Trumpism, but what is this beyond strained metaphor? Aren't I just whistling past the graveyard? I don't think I am. I think, rather, that history is moving quickly and erratically, and that its recent dark turn is not its last. That there are possibilities in our new position, and that it falls now to all of us to take full advantage of them. This is true in the negotiations, where major backlashes against Trumpism are all but guaranteed, and where civil society must absolutely shed its gradualist habits and assert bold new agendas. And it is true in all those unlucky countries where right-wing populism has recently taken the stage.

A friend, reviewing an earlier version of this essay, objected that:

"We've been calling for equity and solidarity forever. We've been calling for more finance forever. Why are the conditions riper now? Are you saying that there is more of an opportunity? Or that we need to finally do this? I think if anything that the finance challenge has become so much harder with Trump. And what does solidarity mean here, and why is this made more attainable with Trump?"

These are good questions. Perhaps the desperation of our position will move us to finally answer them. Prior to the U.S. election, the fight for Paris was a fight for a better place to stand. We won that place, and now we must defend it, and to do so we'll have to raise our sights.

We can, in particular, go beyond "calling for equity and solidarity" to demanding the particular kinds of equity and solidarity that will be needed if we're to deliver on the Paris promise, and this means progress on the Big Questions: finance, differentiation, equity. How can we make such progress, even as the Trumpists try to suck all the oxygen from the room? I don't know, not yet, but I do know that the question has been posed, and that lots of people are concluding that *an expansive approach to the just transitions problem* is a big part of the answer. That equity is on the agenda. That it has to be.

We need two things if we're to save ourselves: a technology revolution and a high-cooperation world. The first is in motion, and it's time to focus on the second. Which is to say on *the necessity of progressive transition-support systems at every level, from the local to the national to the global*. Here we have to think big, and carefully. Take global transition support; what does it demand? The answer has to go beyond support for the African Renewable Energy Initiative, to include support for renewable alliances on all continents, and adaptation support, and loss & damage too, at meaningful levels. Similarly, domestic transition support has to go beyond "classic" just-transition ideas like temporary wage support and re-training assistance for displaced fossil-fuel workers. It's not enough, and frankly it's not even

trying to be. And again, don't forget that both economic and cultural anxiety are going to get very high as the next wave of automation picks up steam. Universal health care, and the [Universal Basic Income](#); let these stand, if just for a moment, as markers for the kinds of society-wide programs we'll need if we're to have any real chance at the cultural reversal we need, the one in which a majority of the population comes to actually welcome the disruption and possibility that will be the 21st century.

My point, I suppose, is that the best defense is a good offense. And a good offense, at this point, is one that speaks for the grand agenda. The key is to seize this enormously contested moment, to open possibilities even as the right populists seek to close them, to build a defensive coalition with an ambition that goes far beyond defense. It should be possible to do so, now after the catastrophe, for the stakes are abundantly clear, and so is the necessity. What we need are crystallization nuclei, key points that define and clarify. What's essential is that they embody the central idea common to all justice movements: that the future belongs to us all.

Thomas Piketty, the author of 2014's surprise best-seller [Capital in the Twenty-First Century](#), began [a piece](#) on Trump's election with the flat statement that "Trump's victory is primarily due to the explosion in economic and geographic inequality in the United States over several decades and the inability of successive governments to deal with this," and went on to immediately make the global connection: "The main challenges of our times are the rise in inequality and global warming. We must therefore implement international treaties enabling us to respond to these challenges and to promote a model for fair and sustainable development."

Indeed we must, and we haven't got much time. And we haven't got a chance unless we act, as the Paris Agreement assumes we will, in a bottom up, "nationally determined" manner, but with the global challenge always in mind. We haven't got a chance, that is, unless we find our way to internationalism via the realization that internationalism begins at home.

We are not doomed. We have the technology to save ourselves, and the money, if only we can mobilize them. Moreover, it's not enough to know that both the renewables revolution and economic justice are essential – at this point they must be posed together, and on very public display. If this doesn't happen, it will only become easier every year to look into the future and see not renewal and inclusiveness but division and fatal deadlock. Which is to say that the climate agenda, without justice, isn't going to make the difference. Teslas are great, but national health care would be better.

Realism is a very good idea. But realism is not a matter of accepting political limits as we find them. The climate crisis asks us to shift those limits, to imagine substantive cooperation within an engaged, far-sighted citizenry, and to make it so.

This has to be a just transition, or it won't happen at all.

¹ The inadequacy of the pre-Paris “nationally determined contributions” (pledges) was discussed and quantified by the UN Environment Program, the UNFCCC Secretariat, the Civil Society Equity Review coalition, and many others. The [UN Environment Program's 2015 Emissions Gap Report](#) had a lot to say about the collective gap (e.g. “[T]he submitted contributions are far from enough and the emissions gap in both 2025 and 2030 will be very significant.”) but UNEP shied away for evaluating the adequacy or fairness of individual national pledges. The Secretariat's own [Synthesis report on the aggregate effect of the intended nationally determined contributions](#) similarly confined itself to aggregate assessments. (e.g., “The estimated aggregate annual global emission levels resulting from the implementation of the INDCs do not fall within least-cost 2°C scenarios by 2025 and 2030.”). The reports of the Civil Society Equity Review coalition, beginning with the pre-Paris [Fair Shares: A Civil Society Equity Review of the INDCs](#), in contrast, took cuts at the problem of evaluating the fairness and ambition of individual national pledges of action and support.

On the collective ambition itself, note UNEP's numbers. It puts the 2030 gap, for the 1.5°C target, at 15 to 17 Gigatonnes CO₂e. For the weaker 2°C target, it gave the gap as 12 to 14 Gigatonnes CO₂e. These numbers are huge, and the longer we delay a full-blown program of global decarbonization – some would say an “emergency mobilization” – the farther beyond reach they will drift.

² On the 3°C vs. 3.5°C question, see [Setting the Path towards 1.5°C](#), endnote 4.

³ Thanks to Stephan Singer, now at the Climate Action Network International, for current references. (Singer has no responsibility for the way that I've used them!) Note that while annual PV installations rates (new capacity) are projected to increase further, and to amount to between 70 to 120 GW annually between now and 2020, this is not enough to get us onto a 100% renewables path to “well below 2°C.” To do so, solar PV penetration must reach to about 36% of the global power sector by around 2030 (see [IRENA's Roadmap for A Renewable Energy Future, 2016](#), and the summary [here](#)). In effect, and after taking account of the phaseout of traditional bioenergy and the electrification of transport, this means that annual global PV installation rates will have to quadruple. This same factor, more or less, applies to wind power as well.

⁴ A few initial readings if you wish to explore the topic here. Follow further citations. Note that this selection is skewed towards the problem of equity assessment, which is core to the issues here.

“The Global Stocktake Under the Paris Agreement Opportunities and challenges,” Christian Holz and Xolisa Ngwadla. European Capacity Building Initiative, October 2016. See [here](#).

“Making Reviews Relevant: A call for civil-society driven, solutions-oriented approaches to the equity benchmarking of individual national pledges,” Tom Athanasiou, Christian Holz, and Sivan Kartha, Climate Equity Reference Project, June 20, 2016. See [here](#).

“From Contribution Framework to Ambition Mechanism: How to enhance mitigation ambition under the Paris Agreement,” Benito Müller, European Capacity Building Initiative, April 2016. See [here](#).

“Ambition and differentiation in the 2015 Paris agreement: Interpretative possibilities and underlying politics,” Lavanya Rajamani, International and Comparative Law Quarterly, 2016. See [here](#).

⁵ The movement blogs contained quite a lot of strange commentary on Paris. I'll not cite much of it here, though you might see Danny Chivers and Jess Worth's [Paris deal: Epic fail on a planetary scale](#) and Patrick Bond's [Climate Terror From Paris Could Endure for Generations](#)). My absolute favorite bit of useless criticism came on a flyer I was handed in January of 2016, while walking into a UC Berkeley lecture hall to see Princeton's Michael Oppenheimer give his take on Paris. It was from the Revolutionary Communist Party, and it told me that “Even if the capitalist-imperialist leaders of the system sincerely wanted to pull it back from hurtling toward environmental catastrophe, they could not.” Coming after years of pre-Paris work, Paris itself, and a long period of reading Paris post-mortem, I confess that found this one a bit funny. In that “Laugh so you don't cry” kind of way.

PS: There are key issues at stake in the “inside outside” debate. If we ever wanted to discuss them seriously, we might start with the distinction between “institutionalists” and “insurrectionists.” See Christopher Hayes, *Twilight of the Elites: America After Meritocracy* (New York, 2012)

⁶ For more on this, see the Climate Equity Reference Project. [This page](#) is a good place to start.

⁷ In the first place the initial pledges – the “Nationally Determined Contributions” as they are formally known – are not well specified enough. But this is only the first of many reasons why the cost of the transition cannot be well specified. There is also the falling cost of renewables, which renders all mitigation cost estimates provisional, and the continued existence of fossil-fuel subsidies at all levels, which distorts prices at all levels. But even these considerations are only part of the story. The deeper uncertainties have to do with basic and ineffable fact that “just transition” costs are, and always will be, relative to the level of support which we, as citizens, manage to agree are deserving of support. When it comes to mitigation, “price discovery” is at least possible in principle. When it comes to fixing the “cost” of the out-migration from northern Africa that will come with deepening desertification, or the cost of “adapting” to the submergence of small island states, such efforts are absurd on their face. Thus the radically preliminary nature of the numbers – for example \$4.7 trillion in the first pledging period – in this discussion.

⁸ Despite years of promises and some small progress, fossil subsidies remains extremely high. For example, 2015 fossil consumption subsidies alone were at \$325 billion (International Energy Agency, World Energy Outlook, 2015, page 35). During that same year, the International Monetary Fund estimated that *total* fossil subsidies (including “hidden” subsidies like oil depletion allowances and unaccounted externalities) came to an astonishing \$5.3 trillion (IMF, June 2015, see [here](#)) which is a notable 6.5% of global GDP. This \$5.3 trillion can reasonably be considered as public finance, and then compared to the \$150 billion in public subsidies that, according to the IEA, renewables received in 2015. (International Energy Agency, World Energy Outlook, 2015, page 38). Do the math and you’ll see that, calculated in this way, the public 2015 renewables subsidy was about 3 percent of the fossil subsidy.

Even if private investment is your only concern, the situation looks bad. Solar optimists often emphasize that global investment in renewable electricity has overtaken investments in fossil- and nuclear-based electricity, but while this fact is encouraging, but it also misleading. The problem is that renewables investment has only overtaken fossil/nuke investment by a few percent, and that’s only if you use electricity-only figures, which by no means show the whole of the energy picture. Global total figures, which are available from the International Energy Agency, show that if you consider fossil fuel exploration and the heat and transport sectors as well as electricity, total fossil-related investments reached almost \$1.5 trillion in 2015, almost three times as much as went into renewables and energy efficiency combined. (IEA, World Energy Investment 2016, page 22)

All of this is critically important, because, while the renewables revolution might now be unstoppable (as Joe Romm tells us [here](#), [here](#), and [here](#)) this doesn’t by any means imply that it will be fast enough to allow us to power a 100% renewables transition at a rate consistent with the Paris temperature targets.

⁹ The topic here is a sprawling one. Some innovative finance mechanisms are substantively conventional (a good example here would be [green bonds](#)), while some are inching towards the official political agenda (a good example here would be the [financial transaction tax](#)) and some are far outside the boundaries of today’s realism (a good example here would be the [fossil-fuel extraction levy](#)). Some are aimed at “de-risking” private investments, some are use- or consumption levies, some are taxes. Some can and should be implemented at local levels, while others are national or global by definition. They are devices, and can be designed and institutionalized in many different ways. And the details of their design matters, on both the equity and efficiency sides. For example, they can be progressive or regressive or something in between, and this being a world of states, nothing about this question is simple – how, for example, would a progressive global capacity tax work? The point in any case is that, in a world with the political will to solve the climate transition finance problem, there would be a way. Lots of ways, actually, and some of them would be both progressive and efficient.

¹⁰ The specific meeting noted here was associated with the launching of a coordinated long-term climate planning processes at multiple levels: national, sectoral, regional, civic. There are multiple such efforts, all working, in the end, under the sign of the Paris Agreement, which tells us (Article 4, paragraph 19) that “All Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2 taking into account their common but differentiated

responsibilities and respective capabilities, in the light of different national circumstances.” The formally-submitted national long-term strategies are being collected at [this page](#). And see [here](#) for the website of the Low-Emissions Solutions Conference that was held during the Marrakech summit. And see the reports – focused on energy-sector transition – of the [Deep Decarbonization Pathways Project](#), which is in many ways the source and foundation of the efforts here. And note that, while some of these efforts are going to be hobbled by the rise of Trumpism, the movement here large and expansive, as is the support it demands.

¹¹ This is a huge topic, but I will offer only two links. Internationally, see the [Just Transition Centre of the International Trade Union Confederation](#). In the U.S., see the [Labor Network for Sustainability](#).

¹² The global fair shares problem arises from the fact that, finally, the climate crisis is a global commons problem, and commons problem are fundamentally justice-based cooperation problems. In the climate case, the atmosphere is an unregulated “open access resource” that must become a socially regulated commons if we are to avoid a climate catastrophe. But commons problems can only be solved if all parties are seen to be making good faith efforts to do their fair share of the required effort. This is true on pastures (the classic “Tragedy of the Commons” problem) and within countries, and, critically, within the global commons that is the climate system. There’s a lot to say here, because the “fair shares” problem is fundamental to the international climate negotiations, but for the moment note only that, as the IPCC highlighted in its fifth assessment report, an agreement that is “seen as equitable can lead to more effective cooperation.” (*Summary for Policymakers. In Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, <https://www.ipcc.ch/report/ar5/wg3>) These are soft, understated words, but they should be taken dead seriously.