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## **The Left Goes Nuclear**

BY DAN BOSCOV-ELLEN





Image by Frédéric Paulussen.

Debates on the ecosocialist left are raging, from advocates of degrowth to a new crop of ecomodernists. Many in this latter camp have begun to push nuclear power as a potential alternative to fossil fuels that would help us avoid climate catastrophe. But as Joshua Frank explains to Spectre's Dan **Boscov-Ellen**, nuclear remains a false solution with disastrous consequences. Ecosocialists and nuclear, he insists, belong nowhere near each other. Joshua Frank is the managing editor at *CounterPunch*. He is an investigative journalist and author of the recent award-winning book <u>Atomic Days: The</u> Untold Story of the Most Toxic Place in America (Haymarket, 2022). Thank you for speaking with me today. I wanted to start off by asking you a bit about your book Atomic Days. As you detail in the book, the EPA has deemed the Hanford Nuclear Reservation in Washington State the most toxic place in America. It's also the most expensive environmental cleanup in history, nearing in on a trillion dollars at this point. Yet Hanford may not be a household name for many Americans. How did you come to get involved with this story, and what led you to write this book?

I went to college in Oregon and people in the Pacific Northwest sort of tangentially know what Hanford is. So at the time I kind of knew about it, but I didn't really understand what it was or what it used to be or what it was going to one day become. Fast forward about 15 years, I was on the environmental beat for *Seattle Weekly*, and a union lawyer from Hanford gave me a bunch of documents that really opened my eyes, and blew my mind in many ways. I ended up writing a couple of pieces on some of the whistleblowers out of Hanford, and during that couple of years of research I really learned about the complexities of Hanford, the history of Hanford, and the mess that it has become.

It also struck me that a lot of people don't know about what our weapons industry has produced out there. Hanford produced plutonium for hundreds of our atomic weapons for decades – mainly during the height of the Cold War, but it dates back to the Manhattan Project. In the lifespan of that processing, they left billions of gallons of chemical waste out there, and right now there are 54 million gallons of high-level radioactive waste sitting in big, hulking underground tanks. There are 177 of these tanks, and this is a looming danger because the tanks were only supposed to last a couple of decades. Two of those tanks right now are leaking into the groundwater, which is adjacent to the Columbia River. Hanford is located in Eastern Washington in a rural area, but it is upstream from Portland, Oregon. The waters of the Columbia feed tens of thousands of Northwest farmers. There are commercial fisheries on the Columbia River, and so on.

In addition to this leakage, one of the whistleblowers that I talked to was very concerned about a catastrophe in one of these tanks. Some of them are producing hydrogen that they continually have to bleed off so that it doesn't build up. If too much of it builds up and then there's a spark or something ignites that hydrogen, you could see a Chernobyl-like explosion that would spread across the country. As we've seen in the West, and as you're seeing in New York right now, when there are forest fires like the ones burning in Canada it blankets the country; imagine if that was laden with radioactive debris.

So it's a really scary situation. And then on top of that, it's the most expensive environmental cleanup in world history. I think the present price tag that the Government Accountability Office has put on it is about 677 billion dollars. It was around 450 billion dollars just a few years ago. By the end of the decade,

at this pace, we'll be looking at a trillion dollars. So we're paying for this cleanup that hasn't actually made much progress. I use the term "cleanup" a little broadly to mean just getting this thing to a place where it's not a looming catastrophe. As we'll probably discuss in a moment, radioactive debris and contamination isn't something that just goes away. So, it's a really huge problem, and I think that people should be concerned about it.

It sounds like you grew increasingly concerned about this issue as you learned more about it. Were there other ways that your research for this book changed your perspective in some way, or led you to understand these issues differently?

I came to my political awakening in the in the late nineties. I was living in Portland and went up to the WTO protests, and I was around a lot of the older anti-nuclear folks, who are fortunately still around and doing educational work. A lot of the battles that they won are being resurrected. I was never exactly in the pro-nuclear camp, but I was certainly naïve about the threat that it poses today, not only with respect to existing waste but also future proliferation and this new push for atomic energy. I think this is something that a lot of people on the left in my generation aren't really aware of, because these were victories that happened in the past and in some ways, perhaps, we thought that these battles were behind us. But unfortunately they're not, and so I think there is this new reckoning. And it's exacerbated by a lot of the propaganda that's coming out from the pro-nuclear left, as well as the nuclear industry itself.

I'm glad that you brought this up because, as you point out, for a long time the default position on the US left and the US environmental movement was anti-nuclear, both with respect to weapons and nuclear power; or this became the default position as a result of these earlier struggles that you mention. But you also suggest that we've now lost some of that cultural memory, and we now have a new generation of leftists or left-ish thinkers who are challenging this position as a sort of outdated orthodoxy, arguing that we've just sort of taken for granted that nuclear power is bad, but that we're in a situation now, with climate change worsening, where we need to rapidly decarbonize, and so we need to rethink this dogma that we've inherited about the dangers of nuclear power. And you can see why this might be an appealing argument for many people; it feels sort of edgy, while also making an appeal to pragmatic political principles. So over the last few

years, a pro-nuclear position has actually become more or less hegemonic among certain sectors of the socialist left. For example Bhaskar Sunkara, the editorial director of Jacobin, had a pro-nuclear op-ed in the Guardian not too long ago, and Jacobin has consistently published pro-nuclear arguments from folks like Matt Huber, Leigh Phillips, and most recently, Oliver Stone. But you see this also in more radical accelerationist circles, and so on. I wanted to get your thoughts about a few of the common arguments that you're now seeing repeated among these sectors of the left in the US. The first, which I alluded to just now, has to do with the exigencies of decarbonization. Proponents of nuclear energy will point out that shutting down nuclear power plants has generally led to increased uses of fossil fuels. They argue that this is because even if you focus heavily on renewables like wind and solar, the power they generate is intermittent; so unless you have nuclear (or, where it's available, hydro), the gaps have to be - and are being - filled in with fossil fuels. What's your take on this idea that by shutting down nuclear plants or opposing the construction of new ones, we are actually getting in our own way with respect to fighting climate change, compared to which nuclear is the lesser evil?

I've heard the argument many times that the anti-nuclear movement is actually responsible for the increase in coal production around the world, which is total nonsense. In Germany, for example, coal was around way before nuclear technologies. In China and India, they embrace coal not because of the anti-nuclear movement's successes, but because it was cheap and plentiful.

As far as phasing out nuclear causing an increase in reliance on fossil fuels, a couple of things complicate that picture. Mark Jacobson has a great new book out called *No Miracles Needed*, in which he makes a very strong case for why nuclear doesn't need to be a part of the energy solution. Based on my own research and in my own view, this is a complicated question because it really is largely dependent upon local municipalities and governments and how they want to transition.

Germany is a good example, and you can see this complexity. Germany, of course, is shutting down all their nuclear facilities. And the argument is, "Well, they're keeping coal going – why aren't they phasing out coal before they're phasing out nuclear?" Well, they are phasing out coal as well, if too slowly, and no new coal plants have been planned or constructed since 2007 in

Germany. So they are phasing out nuclear and fossil fuels at the same time. Of course, they're still burning coal, they're still burning natural gas, and that's a problem, but they're also decreasing that use over time – I think their latest goal is to reduce all of their emissions by 80% by 2030. It's really the most ambitious of any industrialized country in Europe, or even in the world, that I'm aware of. We'll have to see how that plays out, but there are examples of being able to transition from fossil fuels and also wean yourself off of nuclear technologies.

Another argument that you see often is that modern nuclear plants are much safer than older ones because they use passive safety systems, and therefore concerns about new plants are overblown because they're rooted in these outdated technologies. We hear "nuclear" and immediately think of Chernobyl, and we have this Cold War hangover of fear about nuclear energy, one that's also due to a conflation between nuclear energy and nuclear weapons. So proponents of nuclear power want to draw a sharp distinction between the use of nuclear technology for energy generation and for weapons, and they argue that because we've gotten much better at designing plants, these concerns about meltdowns or large-scale catastrophes are irrational now. What are your thoughts on this? Yes, I think the plants that are being proposed are safer than Chernobyl and Fukushima in some ways. But that doesn't mean that they're safe. The core principles of these technologies have not changed. The fission process still produces waste. You still have to have a way to keep that waste cool. You still need to have a constant stream of water to cool down those reactors. You have to have constant electricity if they are to go offline. It's similar to a cell phone – yes, the iPhone is quite different than it was 15 years ago, but the core technology of how we use a cell phone is pretty much the same. And it's the same with these plants.

The pro-nuclear crowd will say these new plants are safer, that they don't produce as much waste. Well, they still produce waste. They still produce plutonium in many cases. And a lot of these materials can be used in the making of nuclear weapons and materials. So proliferation is also an issue no matter what kind of plant they're talking about, and the separation between nuclear energy and nuclear weapons is less absolute than they like to admit. We need to see proliferation as part of the safety equation as well.

Take Oliver Stone's recent call for producing thousands of new nuclear plants all over the place. Let's ignore for the moment the fact that we don't have a place to put the all of that waste. But the fact is the waste will be produced, and the more plants we have, the more waste there will be. In many cases plutonium is in the spent fuel that comes from the reactor after the fission process, and it can be separated from the rest of the uranium and other chemicals. Once separated, that plutonium can be used in an atomic weapon. The plant has already done most of the work in making it usable. The same goes for the small modular reactors (SMRs) that the industry is now pushing. Proliferation is absolutely a problem, and I think any person who's worried about the future of the planet for the climate should also be worried about the future of the planet with regard to a nuclear catastrophe.

Let's talk a bit more about the waste issue. Another one of the arguments that you see is that the waste problem is actually overblown – that the half-life of most of the reaction byproducts is comparatively short, and so the problem of waste is not nearly as big as it's made out to be.

Well, in the case of plutonium, it sticks around for 250,000 years, which is a fairly long time! Yes, the waste streams for high-level plutonium and for energy production are slightly different, but they are more similar than they are different. And even the waste that's less durable still has to go somewhere, and right now we don't have a permanent repository for high-level waste in this country. Yucca Mountain is obviously on a list of possible sites; Hanford was at one point, but they fought it, saying "Hanford's already contaminated enough, we don't need to add more to the pile."

Existing plants are already producing a large amount of waste, and the SMRs that they're now promoting actually produce more waste than the big commercial reactors per unit; individually they may produce less in absolute terms because they're smaller, but combined they produce even more, and their proponents still don't have an answer for what to do with this waste. Right downstream from Hanford a company called NuScale is planning to build one of these small modular reactors, and their plan is to put that waste closer to the ocean, in an old Trojan facility, a decommissioned nuclear plant in Oregon that still has the waste from that plant. The pro-nuclear people will say it's not a problem. Well, this waste requires cold storage, and they have to put it aboveground. This area is in a seismically active area; off the coast is a subduction zone. So at any moment you could have a very catastrophic

earthquake, which would flood the Columbia River and potentially destroy this waste facility.

There's simply no permanent solution for this stuff, and it's a lingering problem for a long, long time. And that's one of the reasons why I'm really skeptical of a push to produce more of this stuff. There's just no answer as to where to safely site the waste. That's why it's so hard to find a community that says, "We're okay with putting this waste in our community." Because those communities will then be at risk in the future; you're betting on the future for your children and for your community, and that's a risk that I don't think a lot of communities want to take.

Even by the rosiest of estimates, some of the waste is still going to be around for hundreds of years, and who can predict what conditions will be like that long into the future?

Yes, you mentioned the wildfires that have been exacerbated by climate change, and in general we are seeing increasing instability with respect to the global environment, but also politically.

Yes, definitely. We don't know what things will look like in 50 years or 100 years, and all of this is highlighted by current geopolitical affairs as well – take for example the Zaporizhzhia plant in Ukraine, which is front and center in the news right now. We know that these reactors and their waste tanks and spent fuel areas are potential targets of war. And if we have a catastrophe at Zaporizhzhia – if, for instance, the Soviet-era diesel backup generators go down, we could have a meltdown. If somehow the water runs out in the next few months subsequent to the dam being destroyed, this can cause problems because they need that water to continually cool the spent fuel.

There are just so many things that can potentially go wrong. How do we know war won't break out in Taiwan, which has nuclear plants. How are we to say that those plants aren't going to be tools of war? Maybe their most disingenuous proponents will say that that these plants are safe in war zones, but even many pro-nuclear experts are very scared about the potential for a catastrophe in these situations. And I think we all should be.

Staying on the topic of waste for a moment longer, let's say that there is a designated permanent disposal area in the United States; let's just pretend it's Yucca Mountain. Let's pretend also that we have created a hundred new plants across the country; the plan then is to ship most of the waste – anything that can't be recycled on site – to this disposal area. You will have to put that

waste on trains and trucks, bringing it through communities. And as we saw with the recent train derailment in Ohio – or the derailment of the oil train up in Montana, my home state, which dumped its contents into the Yellowstone River – as more and more of this waste is being transported, on rail or by truck, there are more and more chances for accidents to happen. There are also greater chances of intentional attacks or sabotage of some sort, and then instead of "only" a cloud of toxic chemicals, you also have radioactivity. So there are many reasons why the waste stream is problematic.

Let's turn to another common pro-nuclear argument, which is that the nuclear industry is highly unionized and it provides good jobs compared with the renewable sector, which, thus far, is not well-organized. Therefore, the argument goes, in order to build a workable working-class climate politics, the left needs to be pro-nuclear in order to win the support of groups like electrical unions. How would you respond to that?

I think the argument is really used as a cover for socialists to support atomic

I think the argument is really used as a cover for socialists to support atomic energy. There are plenty of industries that are unionized that we don't support. If you look at industries that support the US war machine – weapons development, drones, aircraft manufacture – some of those are unionized. Those are good, high-paying jobs. Are those things that we should be supporting just because they're unionized? I would argue no.

Instead, what this really shows us is that if certain renewable sectors aren't unionized, we should be targeting them to help unionize. In California, there are something like 75,000 people working in the solar industry; there aren't many more people that work in the nuclear industry in the entire country. The renewable industry is exploding nationwide. There is tremendous potential for organization. So focusing solely on unionized jobs in the nuclear industry is not only a strawman argument, but it takes our focus away from unionizing this budding workforce.

On the topic of nuclear versus renewables, I wanted to ask you about the non-renewable character of nuclear power and the path-dependency that building out nuclear capacity would entail. If we were to follow Oliver Stone and just build out as much of this stuff as we can, how much energy would it provide and how long would it last, and would that create problems down the road by locking in with this technology in an effort to quickly decarbonize?

Well, first, I think it's important to note that nuclear technology is not carbon neutral. Mark Jacobson has run the numbers and shows that over a 100-year lifespan – from the mining to the construction of the plants to dealing with the waste – nuclear is only slightly better than natural gas. It is no comparison to wind or solar for example, which are monumentally better.

Uranium mining is not only very carbon-intensive but, as you suggested, the known uranium deposits are running out, so they have to find more uranium and build more mines. The construction of new mines can take decades, as can the construction of commercial nuclear plants historically. So if we are to follow the IPCC's recommendation of cutting our carbon by whatever it is lately – let's say 80% by 2030 – rolling out nuclear plants won't really help us meet those goals, but will require massive investment.

Okay, so building a bunch of new nuclear plants may not make much sense as a decarbonization strategy, but do you think there is any merit to any of these arguments? Is there any kind of necessary or legitimate role for this technology in an ecosocialist transition? For example, do you think that there might be some cases where rather than immediately decommissioning existing plants, we would want to continue to run them? Is there any part of this left case for nuclear that you think is at all reasonable?

I think it's very unreasonable. I think that often things are framed as a false dichotomy between nuclear and fossil fuels. But there is a different path forward, and that's to wean ourselves off of both and to forge forward with renewables.

But that also needs to be coupled with addressing other things that these ecomodernists don't want to address, like continued mass consumption. I think that degrowth is the future whether we like it or not. We're going to have to revamp our cities, the way we get around. We're going to have to look at what kind of food we consume, the goods that we consume. All of that needs to be accounted for, and the pro-nuclear crowd doesn't want to address it. Ultimately they are as pro-consumption as the capitalist class, and I think that that's a real problem. A lot of socialists are being hoodwinked into thinking that we can still live in this pro-consumption Jetsons/Star Trek-type future.

You've already touched a bit on my next question. If the factual basis of these pro-nuclear arguments is shaky – if, as you argue, they're at best a temporary, partial, and needlessly dangerous pseudo-solution to the climate

problem – then what do you think explains the popularity of these ideas, and what's driving the push? Is it just that this kind of left contrarianism gets clicks? Is it an earnest but misguided attempt to take socialism mainstream by abandoning so-called "fringe" left causes and "lifestyle environmentalism"? Is there a deeper ideological motivation here?

I'd like to give some of the people that buy into this argument the benefit of the doubt. I think that many people are very genuinely concerned about climate change, as they ought to be, and when provided an easy answer, it's very attractive. Someone says, "Hey, look, there's a technology that can save the climate and save the world, it's been around for a while, and it's a lot safer than it they make it out to be. Don't worry about Chernobyl or Fukushima or Three Mile Island – that's not going to happen again." I think that's attractive for a lot of people.

Of course, the proponents, particular on the industry side, don't want to talk about proliferation. They don't want to talk about these accidents. They don't want to talk about all the continued problems of nuclear technologies. They don't want to talk about how much this stuff costs because it's profitable for them. Their motivation is clear. But it really is disheartening when we see folks on the left repeating the same talking points that come out of the industry's mouth. I don't know that I can say for sure what's driving it, but I think ultimately they see a future in which technology saves the planet. In the end, they don't really care about biodiversity. In the end, they don't really care about communities that are on the front lines of uranium mining, for example. And that's a problem; it's a problem for the environment, and it's a problem for the left. If we're not concerned about the holistic well-being of the planet into the future – which means protecting biodiversity, trying to reduce mining, backing Indigenous communities that are on the front lines and listening to them and helping them fight these industries – that's a really big problem for the left.

Is this a concern that also applies to renewables? You mentioned the harms of uranium mining, which has a long and terrible colonial history. But if we want massive adoption of wind and solar, along with battery storage to fill in the gaps in production, that will also require tremendous extraction, as well as land and water use. And we've seen an increasing number of Indigenous communities also expressing concerns about these technologies.

## Even afforestation often has a colonial dimension. So I am wondering if it you think it is unfair to single out nuclear power in that regard.

As long as capitalism is underpinning production, we are going to continue to see exploitation of resources no matter what technology we're talking about. So yes, I would agree that lithium mining or copper mining can be just as bad and just as dangerous as uranium mining, especially for biodiversity and for Indigenous communities. This is why what we should be fighting for the democratization of mining and doing our best to reduce impacts. At the same time, the left needs to talk more about how we can restructure our lives in our societies so that we reduce our consumption overall.

I live in LA, where there are millions of private vehicles. Just simply replacing those vehicles with electric vehicles isn't an answer because it's going to involve extraction of lithium for batteries, all these other metals for engine parts, and all of that. But imagine if we instead invested that money into mass transportation and restructuring the way we move around. I think that's the sort of future we should be fighting for, and not simply replacing one technology with another.

Kohei Saito makes a similar argument in Marx in the Anthropocene, suggesting that this kind of substitutionism – this ideological faith in technology – prevents us from tackling the harder task of envisioning a transition to a more just and sustainable society. But he also points out that this vision of the future, where we just substitute electric SUVs for gas-powered ones, is immediately attractive to many people in the Global North. I think this raises two related questions. First, although they're not genuine solutions, these kind of technofixes do seem like an easier sell in many political contexts. And indeed, one of the arguments you see from the pro-nuclear left is that this is part of a more "realistic" or pragmatic political strategy – we're not going to have an immediate worldwide revolution, so we need to work with what we have and meet people where they are. In order to win the support of "normal people" we need to back concrete policies rather than trying completely restructure the way that we live, so let's just build a few more nuclear plants, and so on. So the first part of the question is, do you think that this claim to political realism is plausible? Do you think that, you know, a more radical and genuinely ecological kind of left politics is inherently unpopular? And the second part would be, what would an alternative strategy look like? Obviously that is a

big question that you can't answer in full, but just as a counterpoint to the kind of story that we see in, say, Climate Change as Class War – which argues for a particular kind of electoralism built upon a rather narrow conception of the working class – what would a socialist political strategy that doesn't require appeals to nuclear power look like?

I think it's always easier if you're promoting anything that's just a switch from one technology to another where you don't have to address the broader implications of the capitalist system of consumption. However, I would argue that instead of simply switching from one horrific technology to another horrific technology, we need to invest in things that make real impacts in people's lives on a very basic level.

One of the biggest sources of pollution in California, for instance, is vehicles. I live in a city that has invested heavily in promoting infrastructure to make it safe to bicycle. The climate here is ideal for it. More and more people are bicycling and more and more people are getting out of their vehicles. If we put that money in investment in to a light rail or mass transit, it gets people out of their vehicles and we reduce emissions. These are also easy things to sell to the public that will not only benefit their health but will reduce the number of vehicles on the road. No one in this city likes to sit in their cars. So if we give them other opportunities, they're going to latch onto it. I believe that these are very popular ideas as well. So I think there are many alternative decarbonization strategies that could be much more popular than nuclear that don't pose the same risks.

In California, we also have the Diablo nuclear facility. Governor Gavin Newsom has prolonged its life even though several years ago unions came to the table, the electric utility came to the table, the government came to the table and said, we agree that we need to phase this out. They invested a bunch of money and did a huge study that showed that investing in renewables was much less expensive overall than investing to keep the plant open. But after pressure from the nuclear industry, Newsom backtracked and instead of investing in rooftop solar for people's homes and in efficiency technologies, they're keeping a plant open that is sitting on a fault line on the ocean. That's a potential catastrophe waiting to happen. So more than public opinion, we're up against government pushback. The industry has a lot of power. The Department of Energy is pouring billions into small modular reactors and these new technologies.

So, the realistic thing is as socialists we need to continue to fight for a more democratic future —one that's free of nuclear technologies and free of fossil fuels — and if those calls are ridiculed for being outlandish by conservative forces on the right or the left, so be it. I think it's our duty on the left to think bigger and to push for radical change.

I think this brings us back to the question of a just transition. If we concede that a global revolution doesn't appear to be imminent, but we still want to be moving in the right direction, are there "non-reformist reforms" that would help us to do that? Does building out nuclear foreclose certain possibilities? Is the wide adoption of renewables necessarily good, or could that also in some respects lock us into existing patterns that we want to escape? Does it depend on the context?

One of the things that I think we get locked into is solely focusing on climate change. And it ends up becoming a problem because we ignore all of the externalities that come along with that transition, whether it be lithium mining or uranium mining or blanketing the Mojave Desert with solar panels. We end up looking only at greenhouse gases and ignoring sentient beings and wild places and the global environment in general. So I think that's at the heart of the problem and until the left embraces a true environmental ethic, one that is beyond simply worrying about the climate and considers the impacts that we have on nature, we aren't going to come up with a just transition – one that reduces our impacts on on lands, on water, on Indigenous peoples. We're missing the bigger picture because ultimately, in my view, this is really about the future of the planet. And if we are destroying the planet to preserve the climate, that's not a solution in my view.

Our movement should be grounded in that commitment first and foremost. From there, I think we can discuss how to move forward and what to attack first. Of course we have to transition from fossil fuels. How can we do that most equitably? And I think those are conversations we have to have at sort of an academic and policy level. But we also really need to listen to those people on the ground. People that are impacted by these projects. And I think from there we can form better, more radical ideas of how we can transition. But we're not there yet, and this debate about nuclear technologies only muddies the water. Because by only focusing on nuclear technologies as part of this answer, we're missing the bigger picture, which is that we're promoting an industry that might not have high carbon emissions in the energy process itself

but which has carbon emissions all along the way, and is leaving a legacy of poison that future generations will have to deal with. And in my view, that's no solution at all.

Yes, solar panels and batteries pose some of the same problems in many ways. But I don't think that any of them pose the same risks that atomic energy does. None of them can be used as tools of war in the same way. So I think we have to do risk assessments of which technologies have the least impact. But at the basis, I think the left needs to embrace a true environmental ethic because without that, the climate is ultimately doomed anyway.

I agree. So just to follow up on that, I'd like to ask you one last question. What you think are the impediments to adopting a more holistic view of an environmentally sustainable and just future on the left? Setting aside the way capitalism has its hooks in all of us, do you think there are roots of environmental crisis within the socialist movement itself that we need to try to pull up? Whether it's hard anthropocentrism, a faith in technical rationality, or whatever – are there aspects of left thought that are not conducive to the task at hand?

I think probably the biggest impediment is our lack of real world connection to what things look like on the ground. I think it's easy for us to kind of talk about this stuff intellectually. But I think it's more important for the left to listen to Indigenous people, for example, in New Mexico that are on the frontlines of these uranium mining operations. I think it's important for us to listen to those voices in the environmental movement and Indigenous folks that are fighting lithium projects up in the Sierra Nevada area in California near Lake Tahoe. If we ignore those voices, we're ignoring what I would argue is the front line of the war, which is ultimately a class war. In listening to those voices, I think the left will have to broaden its perspective on what that means. I think they'll broaden their perspective of what biodiversity means. I think they'll start appreciating open lands and open space more. And I also think that it's important for the left to really see what kind of destruction this stuff causes. Because these impacts obviously are not just impacts on humans. There are so many factors that are impacting the biodiversity of our planet and I think the left has to extract itself from a historical narrative into one that embraces a more holistic scientific view of planetary health. And again, I think that the gateway to all of that is to listen to these communities on the front lines that are running out of water, who arent able to

hunt and fish because of impacts. I think those interactions are the kind of things that will enlighten the parts of the left that are stuck in this mindset that technology is going to save us.

Another one of the arguments that you see on the ecomodernist left is degrowth and more ecological arguments in general are elitist in some way, that they're all coming from the Ivory Tower or the PMC. But you're suggesting here that actually they are only able to make these arguments because they don't have to actually face up to what the consequences are for people on the ground.

Yes, and I think it's also about promoting the positive things that are happening in our own communities that are showing us a different path. For example, there was a recent victory in for a community garden in Compton — there was a historic Black community garden that the landowner was going to sell, but there was a huge fundraising campaign and the community garden organization was able to purchase the land and keep it at community garden. I think it's important for us to look at those kinds of victories too, because it can inspire us to imagine bigger fights for a different and better way of life.

I think that's a great place to end. Thank you so much for your time. This piece first appeared in <a href="Spectre Journal">Spectre Journal</a>.

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