The Ecomodern State & The Pacific Century

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This is a Paper on the Panel Climate Refugees in the Pacific: Harnessing Lessons from Past Relocation Experiences for the Future

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Abstract
Green political theory largely emerged in response to European and North American environmental movements, typically takes the Western liberal state as its implicit reference point, and assumes that our goal must be avert ecological crises, rather than to continuously manage complex environmental challenges. Asia’s economic rise and growing ecological focus, coupled with the steady increase of atmospheric concentrations of carbon dioxide, unsettles each of these assumptions. This paper reconsiders normative theories of the state in the light of these transformations. It argues that the task of ecological stewardship will increasingly require states to reduce ecological impacts through intensification of economic activity, to focus state resources on mission-oriented innovation, and to bring governance of earth systems under multilateral control. The paper illustrates this theoretical argument concerning shifting standards of state legitimacy with examples of emerging practices that suggest this transition is already underway.
Note: The abstract I submitted (see above) extracts an argument from a monograph on the ‘Ecomodernist State’ that I am currently writing. Since the paper I proposed does not relate to refugees or relocation, I’ve instead provided some notes that seek to link the book’s arguments to this panel’s topic: *Climate Refugees in the Pacific: Harnessing Lessons from Past Relocation Experiences for the Future*. The following brief paper uses the case of ‘climate refugees’ to critically examine and extend ecomodernism. I argue that full implementation of ecomodernist principles will necessitate a deepening of cosmopolitan political obligations, including to assist climate displaced people. Parts of the following also draw on an article, currently under review, that is co-authored with Dr. Rasmus Karlsson (Umeå University).

**Introduction**

Ecomodernism is a strand of green political thought that responds to the global ecological trauma of the Anthropocene (Asafu-Adjaye et al. 2015; see also Arias-Maldonado 2013; Robbins & Moore 2013). Primarily associated with the California-based ‘Breakthrough Institute’, ecomodernism combines a moral commitment to restoring an ecologically vibrant planet with humanist Enlightenment values of freedom and equality. Ecomodernists welcome the long-term trend toward global convergence of living standards, and wish to hasten progress toward universal human freedom and prosperity. However, they argue that these goals can only be realised via twin strategies, of state-directed technological *innovation* and intensification of production, particularly in energy, agriculture, and urban form (Lewis 1992; Proctor 2013). Ecomodernism deserves scholarly scrutiny owing to its considerable policy influence; for example, ecomodernist ideas were repeatedly referenced in President Obama’s speeches, and are reflected in the Obama Administration’s aggressive low-carbon innovation policies (ARPA-E domestically and Mission Innovation internationally).

Ecomodernism’s central claim is that breakthrough innovations are needed to address global ecological challenges, and that only the state has the resources, capacity and social mandate to drive this transformation. Ecomodernists’ focus on the state’s role in moderating the social and ecological impacts of capitalism leads me to argue that Ecomodernism is best understood as a *social democratic* response to Anthropocene challenges. While I am broadly sympathetic to ecomodernism, this reading is broadly consistent with that of some thoughtful critics, such as Eileen Crist (2015), who describes Ecomodernism as *humanist*. In this paper I will not consider the various ways in which critical scholars have misrepresented Ecomodernism, other than to note that it is little wonder that Ecomodernists’ support for nuclear power and genetically modified crops has not endeared them to mainstream environmentalists. Nevertheless, those scholars who claim that ecomodernists are neoliberal proponents of free market solutions to environmental challenges (Nyberg and Wright 2015), seem to have entirely misunderstood its commitments to state-directed technological change and universal human flourishing.
While I argue that Ecomodernism aligns with social democratic thinking, there is no doubt that Ecomodernism’s account of Anthropocene social democracy is currently underdeveloped. In this paper I will use discussion of climate refugees to critique and extend ecomodernist thought from a social democratic perspective. Since climate harms will primarily befall those communities who are already vulnerable, Anthropocene conditions commit humanists to a deepening of cosmopolitan political obligations. Despite this, ecomodernist literature has focused almost exclusively on addressing the technological challenges of mitigation. Implementing ecomodernism’s vision of universal human flourishing will, in an era of worsening climate harms, necessitate some form of global social democratic compact that ensures communities impacted by rising sea levels, crop failure and extreme weather events have access to social services, such as health care and education, that allow successful adaptation (Victor 2011, 174-9).

What is ecomodernism?
Ecomodernism emerged in response to the environmental movement’s perceived failure to combat global climate change effectively. In The Death of Environmentalism (2004), Shellenberger and Nordhaus argue that not only are the strategies and tactics acquired during the 1970’s historic victories for environmental protection incapable of addressing planetary challenges such as climate change, they also fail to offer an attractive vision of the future. The increasing dispersion of actions and environmental consequences, across both time and space, has created a paralysing fragmentation of agency. In combination with rapidly rising global demand for energy and goods as billions of people move to cities, these characteristics create challenges for environmental protection and, according to ecomodernists, highlight the need for globally scalable solutions.

Yet, ecomodernism is not merely a pragmatic response to environmental challenges. Instead, its radicalism lies in its commitment to a democratically governed global future in which 7-10 billion people enjoy dignified and prosperous lives. Unlike traditional green thinking, which holds that it is ecologically impossible for all humanity to imitate Western patterns of production and consumption, ecomodernism takes global economic convergence as its starting point. It sees ecological degradation as the unintended side effect of social progress rather than as a reflection of individual flaws. Therefore, instead of trying to impose a global ethic of restraint, ecomodernism aims to use technology consciously to reorganise the material basis of society so that human freedoms no longer cause ecological harm.

Ecomodernism might be contextualised by Dipesh Chakrabarty’s suggestion that, in the Anthropocene, we should understand the human via three registers (2012, 1-2, 14):

‘the universalist-Enlightenment view of the human as potentially the same everywhere, the subject with capacity to bear and exercise rights; the postcolonial-postmodern view of the human as the same but endowed everywhere with what some scholars call ‘anthropological difference’—differences of class, sexuality, gender, history, and so on...[and] the figure of the human in the age of the Anthropocene, the era when humans act as a geological force on the planet, changing its climate for millennia to come’
In seeking a social theory and mitigation strategy that reconciles these contradictory images, ecomodernists begin by recognising the likelihood that most subaltern peoples will seek their equal share of the high-energy lifestyles associated with ‘modernity’. This Enlightenment vision of universally equal political rights suggests international financing of energy projects should not include environmental conditionalities (Moss et al., 2014). However, as prosperity spreads globally the aggregate impact of individual human agency will make humans an even more destructive geological force, unless the technologies utilised prevent ecological impacts. Against those who view unequal capitalist economic relations as the root cause of climate impacts, ecomodernists argue that, radically improved technologies will be needed to make universal human flourishing ecologically viable under any economic system.

Ecomodernists’ vision of a global modernity prompts re-evaluation of both means and ends. Whereas some scholars urge humanity to harmonise with nature and close the ‘metabolic rift’ engendered by globalisation (Clark & Foster 2009; Christoff & Eckersley 2013), ecomodernists argue that this strategy has proved unworkable. The displacement of environmental impacts between places has created the illusion that some affluent communities have achieved greater measures of ‘sustainability’ by transitioning to renewable energy. However, even in the most ecologically conscious European states, ‘Nationally Determined Contributions’ submitted under the Paris agreement are insufficient to avert dangerous warming (Peters et al. 2015). Furthermore, those individuals who are most committed to green lifestyle change tend to have very high emissions as they are atypically affluent; emission reductions in their daily lives are offset by higher aviation emissions (we doubt we are the only green theorists in this category (Higham et al. 2014)).

To its critics, ecomodernism may appear little different from older theories of ecological modernisation (e.g. Jänicke, 2008), given their shared emphasis on systematic eco-innovation. However, ecomodernism marks a philosophical shift from management of nature to liberation of nature. Whereas ecological modernisation theories seek to manage the evolution of coupled human-nature systems, ecomodernists envision that disruptive innovation can make possible planetary-scale rewilding. Ecomodernists argue that separation of humanity from the environment, for example by substituting organic products with synthetic ones, is the most feasible way to preserve habitat and point to evidence that humans have historically only spared nature for which they have no practical use (Blomqvist, Nordhaus & Shellenberger, 2015). Already in 1993, the ecomodernist Martin Lewis suggested that ‘when one considers concrete issues regarding the provisioning of our basic material needs, the separation of the human economy from natural systems turns out to offer profound environmental benefits, while the continued immersion of our apparatus of production into the intricate webs of nature is itself highly threatening to the natural world of nonhuman species’ (1993:779). While post-ecological thinking, which aims to deconstruct the nature-human divide, has found some resonance among ecomodernists (Shellenberger & Nordhaus 2007, 133; Marris, 2013), the Manifesto resolves this uncertainty in favour of ‘decoupling of humanity from nature’ (Asafu-Adjaye et al. 2015).

Ecomodernists emphasise a high-energy future as a fundamental prerequisite for universal human development. Recognising that energy sprawl is currently the largest driver of land
use change in the United States (Fizaine & Court, 2016; Trainor, McDonald & Fargione 2016), ecomodernists envision concentrated forms of energy, advanced nuclear and nuclear fusion in particular, replacing both fossil fuels and land-intensive renewables (Weißbach et al. 2013). In part, this argument reflects the sheer magnitude of the energy and climate challenge (Arto et al. 2016). If opposing trends toward increasing energy access in the developing world and increased energy efficiency were to see consumption eventually converge around, say, Swedish per capita levels, global primary energy consumption would be five times higher than today and in excess of 2000 exajoules annually (assuming world population stabilises at 10 billion). Again, turning much contemporary environmental thinking on its head, ecomodernists do not view access to abundant energy as inherently destructive but rather as a key to achieving broader socio-ecological objectives. For nature, this would mean sparing aquifers and rehabilitating freshwater ecosystems through advanced water treatment plants or desalination. For humans, access to abundant, clean energy would unlock tremendous welfare gains from electrifying cooking, laundry, heating, and refrigeration while enabling global personal mobility, telecommunications, computing and industrialisation.

Beyond intensification of energy, ecomodernism embraces trends towards urban density, walkable living spaces, and mass transit. Against an earlier tendency to ‘see cities as unnatural and rural areas as natural’ (Newman 2006, 277) many environmentalists have come to appreciate dense urban environments and the car-free lifestyles that they enable. Ecomodernists recognise that well-designed cities have the potential to use resources more effectively while leaving more room for nature elsewhere (Meyer 2013). They see the movement from agrarian subsistence farming to off-farm living in cities as crucial both for sparing nature and, via investment in human capital, broadening opportunities.

Ecomodernists promote a social-democratic model in which states intervene in markets to promote ecological flourishing, human progress and other global public goods. Shellenberger and Nordhaus draw on Ronald Inglehart’s (1997) ‘postmaterialist values thesis’ to critique both inequality and Malthusian environmentalism. They argue that ecological values rest ‘upon a foundation of affluence and material consumption that would be considerably threatened by any serious effort to address the ecological crises through substantially downscaling economic activity’ (2011, 10). Yet, they also argue that the ‘insecure affluence’ of post-industrial neoliberal economies threatens ecological values. If people remain insecure while earning high incomes, this may result in high levels of material consumption without any moderation by postmaterialist values.

In all this, ecomodernists seek to use technology reflexively to overcome environmental and geographical determinism and to achieve a more equal global distribution of opportunities. Rather than trying to contain or limit the transformative energy of modernity, ecomodernists see it as their task to amplify and expand our collective global imagination towards a world of more open borders and accelerating flows of people and ideas (Karlsson 2017). Ecomodernists hold up vast historical improvements in human welfare, particularly in

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1 In 2015, Sweden (population 9.8 million) consumed 53 million tonnes oil equivalent of primary energy (= 2.219 exajoules; see British Petroleum, 2016. BP Statistical Review of World Energy, p. 65).
the post WWII era, as evidence that social progress is possible (DeFries 2014); even as they recognise that benefits have remained unequally distributed. After several decades in which ‘Promethean’ thinking has primarily been located on the political right, ecomodernism combines cosmopolitan progressive politics with Promethean and biophilic values (Meyer 2016).

**Climate-displaced people**

The term ‘climate refugees’ is widely used to refer to people who are likely to need to relocate in response to climate change, although ‘climate-displaced people’ may be a more useful term given the large number of people are likely to be displaced within national borders, whose needs may be equally pressing. Climate-displacement may arise for various reasons – in a report for the UNHCR Elizabeth Ferris (2012) identifies the following three situations:

- “people who need to be relocated from areas prone to sudden-onset natural disasters which are increasing in severity and intensity as a result of climate change (e.g. flood areas);
- people who need to be relocated because their livelihoods are threatened by slow onset effects of climate change (e.g. increasing drought frequency, salinisation of water resulting from sea level rise);
- people who need to be relocated because their country or parts of their country face destruction from the effects of climate change (e.g. small island states facing sea level rise.)”

These categories reveal that in many cases relocation will primarily occur as a consequence of the failure of mitigation policies (or that mitigation and relocation may be understood as policy alternatives). The policy-change made by the new government of the Maldives, under President Abdulla Yameen, illustrates this dynamic. Whereas the Maldives made international headlines in 2008 when it announced an intention to buy for the eventual relocation of its entire population of over 300,000, the current government’s strategy utilises land reclamation to keep ahead of the rising waters (Jaschik 2014). Yet, the challenges posed by climate change to the Maldives are multidimensional, and also include threats to tourism, fisheries, health systems, water, food security, and coral reef biodiversity (Sovacol 2012). Rebuilding critical infrastructure and settlements will be crucial to adaption that avoids relocation, but so will upgrading health systems, developing alternative water supplies, managing coral adaptation and other measures. In other cases, as changing weather patterns make farming more capital intensive, climate impacts will likely accelerate long-running processes of urbanisation and the relocation challenges they entail. Just as it has long been recognised that there is little practical difference between climate change ‘adaptation initiatives’ and broader development work (McGray et al., 2007), it seems that the overlap between ‘development’ and avoiding and managing displacement will also be significant.

Of course, there is a significant potential for climate adaptation policies, (like wider development policies) to exacerbate existing inequalities. Case study research illustrates how adaptation project frequently lead to conflict as opportunistic actors seek to to enclose previously public resources, exclude stakeholders from access, encroach on protected areas,
and entrench existing patterns of inequality (gender, social status etc) (Sovacool, Linnér & Goodsite, 2015). Benjamin Sovacool’s research into the Maldives’ “Integrating Climate Change Risks into Resilient Island Planning in the Maldives” Program (ICCR), also illustrates a tension between local preferences and expert international attention. Whereas locals typically preferred ‘harder’ measures such as construction of desalination plants, the international initiative (financed by the Least Developed Countries Fund, Maldivian Government and the United Nations Development Program, promoted softer measures such as enlarging rainfall catchments, replanting mangroves and coastal afforestation. Sovacool comments that these ‘softer’ measures are frequently cheaper and more effective. But the tension between local and international preferences that he points to, poses a significant dilemma. To what extent should international adaptation programs respect the preferences of local people if they appear to be misguided?

Given that current emissions are consistent with warming in the vicinity of three degrees, by the end of the century, the impacts on vulnerable people will clearly be significant. Estimates of the likely number of displaced people vary widely, however estimate that around 1.5 billion people’s water supplies may be adversely impacted by around 2080 (Biermann and Boas I 2008) indicate the vast scale of the threat to the most vulnerable. What follows ask how ecomodernists – as cosmopolitan social democrats – should respond.

Rethinking social democracy for the Anthropocene: Ecomodernist values and climate impacts

Ecomodernists argue that our best path toward a good Anthropocene lies in a more distinctly social democratic response: states must drive innovation of breakthrough technologies that completely transform the technological metabolism of the global economy. Innovations must make clean energy universally abundant, reduce GHG emissions arising from agriculture and transport, find affordable ways to achieve negative emissions, and begin to rectify wider environmental harms. Further, these breakthrough technologies must be so economically and socially attractive that they will be widely adopted even by communities who are not politically committed to climate action. Reflecting on this argument from the perspective of climate displaced people raises two important questions: how would ecomodernists manage the injustices created in the era of worsening climate harms? And is social democracy well suited to this transition?

As Jenny Andersson (2009) has written, social democrats have repeatedly played an active role in bringing new economic configurations into existence. Yet, the earlier iterations of social democratic thought that Andersson describes have all been embedded in national narratives, and have responded to specific national economic and social challenges. Ecomodernism differs in two dimensions. First, its animus is ecological rather than social – ecomodernists recognise the potentially catastrophic threat posed by climate change and seek a way to reconcile climate governance with global human progress. Second, ecomodernists’ vision of the future is global, rather than national. Although they view high-capacity states as the agents of transformation, ecomodernists are primarily concerned with solving global ecological and developmental challenges. They seek to increase the efficiency of global production system, promote universal access to plentiful food and energy, and extend greater freedom of movement to all people, not just first world elites. This
cosmopolitanism begs the question – am I wrong to characterise ecomodernism as social democratic?

Ecomodernists reject the idea that capitalism is either the ultimate source or solution to ecological harms; they instead propose that wealth generated by capitalist economies is needed to finance the necessary transformation of the global economy’s technological basis. Thus, Ecomodernism clearly embraces social democracy’s central insight: that while capitalism is useful for generating prosperity, markets should be collectively managed in order to advance societal goals. So far so good. However, social democracy’s second distinctive element is its democratic communitarianism. Here, ecomodernism’s position is slightly contradictory. Certainly, ecomodernists have emphasised developing countries’ right to choose their own development pathways, even if this means construction of fossil fuel infrastructure that sets back global climate action. However, ecomodernists have also called on affluent democracies to prioritise global ecological goals above narrow national economic interests. Is this consistent with communitarian nationalism? Or is communitarian social-democracy ill-suited to Anthropocene challenges?

The primary dilemma of distributional justice is this. The world’s most vulnerable people – overwhelmingly living in the formerly colonized ‘3rd world’ – are the primary victims of climate change. However, the key actors capable of successfully averting the climate crisis are affluent states who are also the least vulnerable to climate harms. Whereas earlier generations of social democrats used a democratic state to translate communitarian social bonds into policies that assisted the most vulnerable members of national communities, climate-linked inequalities arise internationally, and so are quite unlike those that have previously been resolved by social democracies. Since there are no global democratic political institutions, and only minimal bonds of communal solidarity outside the state, today’s social democrats face profound questions. Can national communities be motivated to prioritise global goals? Can universal human flourishing be secured amid worsening climate harms? Can global ecological governance be brought under democratic control?

I argue that it will only be possible to meet these challenges if a global social democratic compact is combined with ecomodernism’s vision of the future. First, this is because sea-level rise, climate-linked water shortages, crop failures and extreme weather events are already imposing severe hardship on vulnerable populations. Those people whose access to the benefits of modernity is now most tenuous, are at greatest risk of being re-impoverished and displaced by climate harms. If ecomodernism responds only to the technological causes of climate change, without also addressing these climate harms, then its commitment to human freedom is formal rather than substantive. Advancing human freedom in the Anthropocene requires that local communities are able to meet the challenges of mitigation in ways of their own choosing. This is only possible if communities are educated and have the security and resources to plan and implement democratically determined mitigation strategies. This suggests, that mitigation will only be possible if social services, such as health care and education, are provided by the international community when states are unable to do so. Given that climate harms are primarily caused by the lifestyles of the richest 20% of humanity, such assistance is consistent with widely accepted standards of justice. In the language of normative theory, climate change is creating a
'global community of fate’ that generates ‘obligations of justice’ to compensate and assist vulnerable people.

This call for global social democracy is also justified by the new forms of global governance that are already arising in response to climate change. The idea that the future should be democratically chosen, rather than allowed to emerge from unmediated market interactions, has always been a central element of social democracy (Sheri Berman terms this ‘the primacy of politics’ as against ‘the primacy of economics’). But how can this social democratic principle be applied today when many decisions about ecological governance are inherently global, but institutions of global governance are far from legitimate or democratic? The growing literature on ‘earth systems governance’ (a term which refers to efforts to steer societies’ responses to environmental change) shows that the absence of democratic institutions is not necessarily an insurmountable problem; governance may be achieved by networks of non-state actors, through multilateral cooperation, or by ‘nested’ institutions. However, contemporary systems of governance are far from democratically legitimate.

While scholars have shown increasing interest in ideas of ‘progressive globalisation’ (Jacobs Lent and Watkins 2003) ‘global democracy’ and ‘earth systems governance’, these debates have generally not acknowledged the full gravity of the ecological crisis. For example, the dominant discourse within the earth systems governance literature concerns efforts to limit human ecological impacts by controlling greenhouse gas emissions, resource harvesting, nitrogen run-off, habitat destruction etc. The goal of these efforts is commonly understood as being to remain within ecological boundaries that delimit the ‘safe operating space’ for humanity. However, it is now clear, at least in the context of atmospheric concentrations of greenhouse gases, that we have already moved beyond this ‘safe operating space’. Even were all greenhouse gas emissions to cease today, likely warming in coming centuries would exceed 2°C (Hansen et al, 2008). This inconvenient truth has led some scientists to advocate research into geoengineering techniques, such as ocean cloud brightening, that could negate some of the impacts of climate change. However, most environmentalists reject geoengineering as they correctly believe that preventing climate change would be preferable to masking its symptoms.

Unfortunately, anthropogenic warming is now a reality and the choices we face are not between virtuous mitigation, inadequate adaptation and hubristic geoengineering, but between different bundles of harms. Geoengineering, like adaptation, clearly presents complex and vexing choices. For example, were solar radiation management (SRM) implemented today it could halt global temperature increases, slow sea-level rise and reduce the risk of passing planetary tipping points that might set runaway climate change into motion; however, it would also result in changed temperature and rainfall patterns, would allow ocean acidification to proceed unchecked, and once initiated would need to be continued for so long as atmospheric concentrations of carbon dioxide remain elevated. These drawbacks have persuaded most scholars and civil society actors that SRM is too dangerous to consider, even though ocean acidification and changed weather patterns from aerosol pollution and climate change are already a reality (Rotstayn, Collier, and Luo 2015). However, most people, including people in the developing world who are most vulnerable to climate change, have no connection to any political process where deliberations over
global choices are occurring. It is unfortunate that those vulnerable communities who are 'most affected' are almost completely excluded from decision-making. Social democrats are committed to choosing the future through democratic deliberation; if important decisions must now be made about planetary governance, then the whole planet must be enfranchised.

The tension between local preferences and international expert opinion in the Maldives, discussed earlier, points to another dilemma: how should a cosmopolitan social-democratic political theory (i.e. ecomodernism) resolve such disagreements? As social democrats, ecomodernists would no doubt argue that resolving inevitable conflicts requires majoritarian decision-making mechanisms; and they would also defend the right of a national community to collectively choose its own future. In many cases choices between different adaptation measures will reflect situated values; valuing expert opinion over seemingly misguided local opinion, risks further compounding international injustice. If local preferences (for hard

While the pathway to enhancing the democratic legitimacy of global climate governance will doubtless be long, the two elements of a global social democratic compact are likely to be mutually reinforcing. Historically, high levels of social trust have arisen within societies following expansion of social services, rather than the other way around. It thus seems probable that creation of a global social safety net and global investments in education would prompt similar advances in international trust that might be conducive to the deepening of global political institutions. My claims here are obviously speculative and the justice-based arguments are utopian. Further, ecomodernist strategies of innovation and intensification might successfully be utilised to avert the worst impacts of climate change in the absence of a wider social vision – indeed, it would be easy to interpret China’s current development trajectory in this light. However, scientific innovation has historically been most successfully accomplished by open, democratic societies. And an authoritarian ecomodernism, or one that fails to democratise innovation and earth systems governance will fail to achieve ecomodernists’ vision of a universally ‘good Anthropocene’.

References


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