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Climate Change and the Re-imagination of State Sovereignty

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The state is an awkward reference point as the primary actor in analysis of climate change as an international relations problem. States are social constructions that are intangible in a natural realm that is indivisible in terms of state sovereignty. In a sovereign state, we assume the existence of a central governing entity exercising authority within a specified geographic territory, whose authority is recognised as legitimate by other states (Griffiths, O'Callaghan, & Roach, 2002). The characteristics of a sovereign state under international law are codified in Article 1 of the Montevideo Convention on the Rights and Duties of States (1933) to include a permanent population, a defined territory, a government, and the capacity to enter into relations with other states. This view, however, disregards the fact that this anarchic system is itself housed within the wider structure of the Earth's biosphere.

Greenhouse gas emissions, regardless of where they are generated, are dispersed through the atmosphere and exert influence on the global climate as a whole (Gardiner, 2008, p. 27). For example, greenhouse gases emitted in Melbourne will diffuse through the atmosphere to affect global climatic perturbations not only in the Melbourne area but over the entire planet. In fact the chain of causality for climate change is distinctly non-linear, incorporating the policy choices of governments as well as the past and present activities of millions of business entities and the past and present behavioural choices of billions of people, interacting with natural processes that accelerate the release of carbon in the atmosphere in positive feedback loops.

Anthropogenic climate change is a global commons problem because its causes and it impacts on human societies are distributed across the boundaries and jurisdictions of individual states (Keohane, Haas, & Levy, 1994, p. 9) (Vogler, 2011, p. 14). Causality is therefore difficult to pin down because there are multiple, non-linear paths of responsibility for the problem that cannot be assigned to any one state. In this context, it is also not clear how state sovereignty is the appropriate frame of reference for climate change when there are a host of actors within and across state boundaries that share responsibility for the problem. If those actors are important to the story it means that states are not monolithic units but rather complex entities comprised of many smaller integrated systems, as well as constituent units in larger systems beyond the realm of international politics (Kavalski, 2007, 2011).

Therefore, from an ecological and systems perspective, changes to the natural world caused by climate change will inevitably necessitate a re-imagination of the norm of state sovereignty (Habib, 2015). International cooperation to combat climate change, centred on the United Nations Framework Convention on Climate Change, is likely to prompt a gradual delegation of the sovereign responsibilities of states to institutional regimes in an effort to govern planet-wide ecological processes. For low-lying island states, rising sea levels threaten to completely inundate their land territories and extinguish their sovereign rights as states, under the current interpretation of the sovereignty norm in international law.

Sovereignty Diffused

Climate change presents a complicated challenge because of the diffuse nature of both causal responsibility for greenhouse gas pollution and the distribution of climate change impacts. If the object in this equation is the state, identifying the subjects of the exercise of sovereignty is deeply problematic. Extreme weather events such as

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Typhoon Haiyan illustrate this point; developing countries like the Philippines are disproportionately more vulnerable to climate change impacts, despite their relatively tiny contribution to the atmospheric greenhouse gas concentrations that have resulted in these damaging climate change impacts (Burgmann & Baer, 2012). Causality for any climate change impact is therefore difficult to pin down because of multiple, non-linear paths of responsibility for the problem that cannot be assigned to any one state (Luterbacher & Sprinz, 2001). Regardless of how responsibility for greenhouse gas emissions is ultimately apportioned, it is obvious that the atmosphere itself cannot be divided according to arbitrarily defined sovereign borders. Once in the atmosphere, greenhouse gases contribute to a series of global climate processes that result in a variable suite of climate change impacts that manifest across the world.

As such, climate change has the capacity to prompt states to redefine their core interests, thereby altering the possibilities for the convergence of interests that is pivotal to regime formation. Egoistic self-interest arises as a variable in regime formation as a function of the anarchic international system, where no supreme authority exists to adjudicate the relations between states. States are thus left to help themselves and maximise their own interests through the application of national power, in all its forms. Stein argues that regimes arise when state self-interest favours coordinated over independent decision-making in order to address dilemmas of *common interests* and *common aversions* (Stein, 1982). Here, international regimes owe their existence to the convergence of interests that occurs around solving these dilemmas, where the rational course of action lies in cooperation with other states whose interests coincide.

Dilemmas of common aversions arise when actors identify a common interest in avoiding a particular outcome, even where there is disagreement over preferred outcomes and strategies of action (Munslow & O'Dempsey, 2010). Regimes dealing with dilemmas of common aversions need only facilitate coordination of action and do not tend to be concerned with ensuring particular outcomes. Regimes devoted to solving dilemmas of common aversions are generally devoted to specific coordinated outcomes such as standardisation of regulations. Climate change precipitates more complex *dilemmas of common interests* around which international cooperation is more difficult to mobilise. The essence of the dilemma of common interests lies in the incentive for mutual defection from a mutually beneficial cooperative outcome when the prize for defection is greater than the gain made from mutual cooperation (Stein, 1982). In this case, individual defection is the rational choice that ultimately ends up costing all players.

Anthropogenic climate change is a global commons problem because its causes and its impacts on human societies are distributed across the boundaries of individual states. All actors have an interest in limiting greenhouse gas emissions, however, out of rational self-interest, all actors also have an interest in its despoliation, because of the link between economic development and greenhouse gas emissions. There is a clear correlation between gross domestic product, energy usage and greenhouse gas pollution. Economic activity necessarily consumes resources and produces a carbon footprint. In modern industrial economies powered by fossil fuels, this points to a clear correlation between economic activity increase, then necessarily, the level of greenhouse gas emissions will also increase, as China's rapid economic development over the past three decades attests. Efforts to de-carbonise electricity generation systems through adoption of renewable energy technologies notwithstanding, it is incredibly difficult to completely wean industrial economies away from fossil fuels because these energy sources are integral at key points across production chains (Yábar Sterling, 2010).

As the struggle of states participating in the UNFCCC conference of parties negotiations attest, the payoff from maximising economic growth and increasing emissions in the short term is greater than the payoff from mutual cooperation to limit greenhouse gas emissions, providing a greater incentive for actors to defect from the common objective of limiting emissions. A state may eschew cooperation—the *relative gains* phenomenon—if it perceives its gains from cooperation to be less than those of its cooperation partners (Vezirgiannidou, 2008). Relative gains concerns will be particularly acute under certain conditions: one, when disproportionate gains are likely to accumulate through ongoing rounds of cooperation such that the relative disparity in gains between cooperation partners increases over time; when the number of cooperating parties is small and the risk of relative losses is greater; when potential cooperation partners are strategic adversaries rather than allies; when cooperation is focussed on security issues; and when the power differential between potential cooperation partners is small (Matthews, 1996). The common interest lies in sharing sovereignty through coordinated action to ensure the Pareto-

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optimal outcome and blunt the incentive for defection.

Rights to development present a significant incentive for defection from the UN Framework Convention on Climate Change negotiating process. For example, members of the Group of 77 negotiating bloc claim that because the developed powers of the Global North have been pursuing industrial development for over 200 years, the overwhelming majority of greenhouse gases emitted into the atmosphere over that period originated from developed states (Pickering, Vanderheiden, & Miller, 2012). The historic emissions burden of the Global North has created two major points of contention. First, Global South countries argue that developed nations should take the lead and bear a majority of the costs in the global effort to reduce emissions. They argue that because the Global North had a long head start in industrialisation, in any global climate mitigation agreement the countries of the South should be given time to develop their economies (and therefore increase their carbon emissions) before they are bound by the same reduction targets as developed countries. In addition, because Global North countries have had a head start in industrial development, they also possess the financial capacity and technical expertise to help Global South countries to reduce their emissions. The Global South's under-development is a key factor undermining the ability of these countries to adapt to climate change impacts. This view is enshrined within the United Nations Framework Convention on Climate Change (Article 3.1) and other international environmental treaties through the concept of common but differentiated responsibilities as a means of diffusing sovereignty through cooperation between states which have manifestly unequal capabilities.

Sovereignty Imperilled

In a world where the global land surface is carved up into discrete territorial entities, it is relatively easy to stake out state boundaries on land, using all manner of fences, walls, border posts and military installations. However states can also claim sovereignty over parts of the ocean. Here, in the maritime environment, it is more difficult to delineate boundaries, and these boundaries are often hotly contested and subject to dispute (Brilmayer & Klein, 2000-2001, p. 705).

Oceanic territorial claims are governed by an international treaty called the United Nations Convention on the Law of the Sea, or UNCLOS. Under UNCLOS, there are four different levels of sovereignty that states can exercise over their adjacent seas. The first 12 nautical miles from the coastline are a state's *territorial waters*, in which it can exercise full sovereignty, where the state has full control over resource exploitation. All national laws apply, as they would on land. There are other forms of maritime claim once we progress further than 12 nautical miles out to sea. The sea area from 12 to 24 nautical miles from the coast is called the *contiguous zone*, where states relinquish full sovereignty but where domestic regulations in customs, taxation, immigration and pollution remain in force. From 24 nautical miles out to sea, UNCLOS includes two competing means of claiming maritime sovereignty. A state can claim an *exclusive economic zone*—or EEZ—up to 200 nautical miles from its shoreline where it can claim addition, a state can also claim rights over its *continental shelf*, to the end of the continental margin where the shelf drops off into deep ocean. A continental shelf claim can extend to either 200 nautical miles off-shore or to wherever the shelf ends, whichever is greater. In contrast to an EEZ, a continental shelf claim entitles a state to exploit resources on the sea bed and under the sea floor, but not in the water column itself.

Global mean sea level has risen by 3.4 millimetres per year on average since 1992 and is likely to continue rising for many centuries (Houghton, Vafeidis, Neumann, & Proelss, 2010, p. 813). This doesn't seem like much, but over time is likely to have an increasingly significant effect on ecosystems and human development located in coastal areas (Strauss, Kulp, & Levermann, 2015). Most importantly in terms of state sovereignty, impacts associated with sea level rise will increasingly re-shape the coastlines. Maritime boundary claims are measured from a baseline that conforms more or less to the geographic contours of the coastline. If rising sea level changes the contours of the coastline then inevitably the associated maritime boundaries have to change as well (Lusthaus, 2010, p. 114). Because of the strategic and economic potential of undersea resources, maritime territorial claims often take decades to negotiate, with many contested claims remain locked in dispute. Countries often press their respective claims through hostile posturing and displays of military power, which can develop into armed conflicts if any of the disputing parties miscalculate (Lusthaus, 2010, p. 115). So by altering maritime boundaries, sea level rise has the

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potential to complicate the politics of existing disputes and re-open existing territorial and resources sharing agreements to renegotiation, because realigning the boundaries means redistributing potential resource gains (Houghton et al., 2010, p. 815).

For many low-lying island states, however, the threat of rising sea levels is far more severe.

The well-publicised underwater Cabinet meeting conducted by the Maldives government in 2009, in the lead-up to the COP15 conference in Copenhagen, helped to illustrate that for low-lying island states, climate change-driven sea level rise is an existential threat, a challenge to their very survival as a state. If low-lying states are completely inundated, are they still entitled to claim the rights and responsibilities of statehood? Will they retain recognition as states by other countries, which is the basis of statehood under international law? Will they retain voting rights in the United Nations and other associated international bodies? What happens to their treaty obligations under international law? Do the citizens of these countries maintain citizenship rights, or do they effectively become stateless persons? These questions do not have concrete answers yet because there is no precedent for this in modern international relations. These questions also suggest that international relations is entering a new legal and political era in which norms of international law are re-imagined to adjust to the dynamic circumstances of climate change mitigation and adaptation. Burkett (Burkett, 2011), for example, has proposed a new category of statehood under international law—the *Nation Ex-Situ*—which would provide for the continued practice of sovereign rights in perpetuity for island countries whose land is submerged by rising seas. Such a de-territorialised government would exercise political control over people who are forced to relocate from such countries and establish residence in other states.

Sovereignty Re-imagined

The state is an awkward and arbitrary reference point in a dynamic Earth system. States are social constructions that are intangible in a natural realm that is indivisible in terms of state sovereignty, which presents an inherent challenge to the normative foundation upon which sovereignty is based. In the case of climate change, this will require not only a reorientation of regional states' perceptions of each other, but also a new understanding of the place of human societies as a wholly-owned subsidiary of the natural world. The Earth can no longer be ignored as a given in at the ontological level of international relations. It is therefore both the stage on which the performance of international relations takes place, as well as an actor in that performance because it is changing and therefore influencing the interactions of the other players.

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