

1. Metapolicy and global climate policy

In December 2015, a Paris Agreement on climate change was reached by the Parties to the Framework Convention on Climate Change (FCCC) which for the first time committed all nations to make common cause to make efforts to combat climate change and assist adaptation to its effects. The Parties agreed to the goal of keeping a global temperature rise in the 21st century ‘well below’ 2°C above pre-industrial levels and to pursue further efforts to limit the temperature increase to 1.5°C. The Agreement sought enhanced transparency of action through a more robust transparency framework than under the FCCC. This included requirements that all Parties report regularly on their emissions and on their implementation efforts.

The Agreement requires all Parties to make their best efforts to mitigate the emission of greenhouse gases (GHGs) by stating their commitments to ‘nationally determined contributions’ (NDCs), and to then increase these contributions in the years ahead. In 2018, Parties will review the collective efforts in achieving progress towards the goal set in the Paris Agreement and this review will inform the preparation of future NDCs, with a ‘global stocktake’ every five years to assess progress. The Agreement entered into force on 4 November 2016, thirty days after the date on which at least 55 Parties to the FCCC accounting for at least an estimated 55% of the total global greenhouse gas emissions had deposited their instruments of ratification, acceptance, approval or accession (the same mechanism for entry into force that featured in the Kyoto Protocol).

The Paris Agreement was a tacit acknowledgement that the previous approach to global climate policy – the FCCC followed by the Kyoto Protocol in 1997 – had failed. Many (Boehmer-Christiansen and Kellow, 2003; Victor, 2004; Prins and Rayner, 2007) had pointed to the fact that it was failing as early as almost a decade and a-half earlier, but its champions found it difficult to acknowledge this, and thus policy learning was impeded. Given that learning inherently involves the detection and correction of error, the refusal to acknowledge the mistakes of FCCC/ Kyoto inhibited learning. Prins and Rayner (2007) suggested that persisting with Kyoto represented a prolonged wasted opportunity by following

the wrong process. In policy studies this is referred to as an error of 'metapolicy' (Dror, 1968) – the wrong policy about how to make policy.

Kyoto failed both horizontally and vertically. Horizontally, it failed to secure ratification by the United States, the largest single emitter of GHGs at the time it was concluded (having now been overtaken by China), having already exempted developing countries (including China) from any binding commitments, under the principle of 'common but differentiated responsibilities' embedded in the FCCC in Article 3, paragraph 1 and Article 4, paragraph 1. The absence of obligations for China as it underwent rapid industrialization weakened the effectiveness of Kyoto in restraining emissions growth from 1997, but the failure of the Kyoto negotiations to extract any binding obligations by developing countries was also one of the main factors in the US refusing to ratify. Vice-President Al Gore was an enthusiast for the Protocol, making a personal attendance to secure the deal at Kyoto, but he did so well in advance of what was in effect a negotiating mandate defined in part by the US Senate, which would have to ratify the Protocol, and which had adopted (by a 95–0 vote) what became known as the Byrd-Hagel Resolution (United States Senate, 1997), stating that the Senate would not ratify any binding treaty that did not contain binding commitments by developing countries. Unsurprisingly, Gore could not convince President Bill Clinton to submit Kyoto for ratification before he left office three years later. Subsequently, parties that had acceded to Kyoto either quit the Protocol (Canada), or declined to specify a target for its Second Commitment Period after 2012 (Japan, Russia and New Zealand).

Vertically, its impact was questionable. As we shall see later, the architecture of Kyoto meant that some parties had to do very little to meet their goals, as they had already reduced emissions substantially before 1997, while others faced greater challenges. Yet the results on the ground were mixed, and underscored the limited effectiveness of Kyoto. One observer noted that the reductions in emissions after 1997 were actually higher among those that did not rush to ratify Kyoto than among those that had ratified (Hoven, 2007). Moreover, the US (which never ratified) eventually met its Kyoto target, not by means of carbon taxes or emissions trading schemes, but because the technological advance of 'fracking' increased gas supplies, drove down prices, and resulted in massive switching from coal-fired electricity to natural gas, which in a combined cycle gas turbine plant results in an approximately 60% reduction in GHG emissions.

Paris was an attempt to reboot the global policy process on climate change, and it contained a number of marked differences from the Kyoto Process. Significantly, it was not a binding treaty, meaning that it did not

have to be submitted to the US Senate, where a two-thirds majority is required for ratification. There was little prospect for ratification after two decades of not just partisan division, but substantial opposition in both political parties.

President Barack Obama, in entering into the Paris Agreement, made use of a constitutional provision that allows the US to enter into international agreements by way of executive agreements that do not require ratification by the Senate. While Congressional executive agreements can be passed as a regular law by a majority of both houses of Congress, the President alone can enter into agreements without Congressional approval if the agreement is within the President's constitutional powers, with the force of an executive order. But the problem with this executive 'workaround' the problem of ratification is that *any* executive order can be revoked unilaterally by a future President.

Given that Paris was very light on any binding obligations, it is tempting to think that the Paris Agreement had little value, and that might turn out to be the case, as President Donald J. Trump's inauguration in January 2017 posed a very real threat to the Paris Agreement because, as Kyoto showed, any agreement that did not include the US (until recently the largest single national emitter) was hardly a success. One of the greatest boosters for strong action on climate change did, in fact, yield to this temptation. James Hansen, until 2013 head of the Goddard Institute of Space Studies in New York, who had been pushing for action for more than 30 years, dismissed the Paris Agreement as a 'fraud' and a 'fake'. Oliver Milman (2015) reported his views in the *Guardian* thus:

It's a fraud really, a fake. ... It's just bullshit for them to say: 'We'll have a 2C warming target and then try to do a little better every five years.' It's just worthless words. There is no action, just promises. As long as fossil fuels appear to be the cheapest fuels out there, they will be continued to be burned.

Certainly, Paris does not make the same binding demands as did Kyoto, but Hansen rather missed the point that Kyoto failed, and that a fresh approach was needed if a more effective global policy instrument were to be developed. And there were aspects of Paris that indicated that it was a promising beginning. The problem for critics like Hansen was that they considered that time was short and action was urgent, but it was just that sense of urgency that lay behind what is widely regarded as a premature rush to targets and timetables that, *inter alia*, doomed Kyoto. Kyoto was a perfect example of the old proverb 'More haste, less speed.'

Arild Underdal, in two separate analyses (1979, 1980), highlighted the difficulties in trying to develop multilateral agreements, especially

because (despite the occasional claims of some international lawyers) treaties and conventions can only effectively place obligations upon those that agree to be bound by them. His concept of the ‘vertical disintegration of policy’ (Underdal, 1979) draws attention to compliance and implementation. With his ‘Law of the Least Ambitious Program’, Underdal (1980) captures the ‘lowest common denominator’ logic of negotiations – that what can be agreed will be that which is least offensive to any of the parties. Peter Sand (1990) made a similar point, though referring to the pace of negotiations, in likening international negotiations to a convoy – limited to progressing at the speed of the slowest boat. Difficult enough when negotiations involve a small number of parties, any truly global negotiation involving all 193 member states is likely to find it is slowed as if it were embedded in treacle – a point captured by an aphorism attributed to former diplomat George F. Kennan that the unlikelihood of a negotiation reaching agreement grows by the square of the number of parties taking part.

There is a strong case to be made, however, that the international response should have begun with something like the Paris Agreement, but that the rush to targets and timetables rather poisoned the well for the prospect of rebooting the global policy process on climate change. There is a strong argument to be mounted that a more productive path towards an effective multilateral agreement lay in a less specific, less threatening, more voluntaristic approach such as Paris embodies. As Geoffrey Brennan and James Buchanan (1985: 29–30) put it in relation to such negotiations, ‘As both the generality and the permanence of rules are increased, the individual who faces choice alternatives becomes more uncertain about the effects of alternatives on his own position.’ Specifically in relation to climate change and similar issues, Oran Young (1989: 366–7) built on this point to argue (before the global policy process for climate change was confirmed) that:

Those engaged in efforts to form international regimes experience incentives to approach this process as a problem-solving exercise aimed at reaching agreement on the terms of a social contract when the absence of a fully specified zone of agreement encourages integrative bargaining and the presence of imperfect information ensures that a veil of uncertainty prevails. In situations governed by unanimity rules, a contractarian environment of this sort is necessary to avoid the positional deadlocks that commonly arise in connection with distributive bargaining.

Young (1989: 362) argued, convincingly, in my view, that the difficulties in devising ‘mutually acceptable arrangements’ to deal with acid rain, biological diversity, or global warming were hampered because ‘the key

players find it easier to see through the veil of uncertainty in these cases than in a number of other areas ...'. With acid rain in North America, not only could the emitters and the victims readily identify themselves quite clearly from the outset, but there was not much overlap between the memberships of the two groups. With climate change, Young (1989: 367) quite accurately predicted that there would almost certainly be winners and losers who were comparatively easy to differentiate. This marked asymmetry was therefore a core problem that had to be dealt with; other contractarian negotiations in the absence of a sovereign authority, even in federal systems, suffer the same problem, and success often emerges when parties that previously saw themselves as causative agents begin to regard themselves also as victims, at least in part (see, for example, Kellow, 1992 for an example of changing dynamics in an Australian river Basin, the Murray-Darling system).

Young (1989: 368) notes that those who negotiate the terms of international regimes must be focused on considerations of equity because 'institutional bargaining' in international society 'can be successful only when all of the major parties and interest groups come away with a sense that their primary concerns have been treated fairly'. This perception of fairness is crucial to avoiding vertical disintegration, because fairness is key to producing a 'pull to compliance' (Frank, 1988: 705) that is key to ensuring positive outcomes. As we shall see later in this book, Kyoto did not achieve this 'sense of fairness' because it impacted differently on different parties, and the parties themselves – arguably the best judges of their own interests – could readily see the uneven outcomes that would result (especially differentiating Europe from much of the remainder of the developed world). And the parties themselves, especially the US, were not simple actors; they had to play two level games if Kyoto was to be ratified and given effect at the level of the nation state, as is necessary for the regulatory instruments of 'low politics', so the asymmetry institutionalized in Kyoto sowed the seeds for a vertical disintegration of policy. Moreover, by assuming that a strong consensus on climate science could drive parties to agree to targets and timetables, the IPCC probably impacted the Kyoto process *negatively* by making the asymmetries clear and reducing the veil of uncertainty, and (ironically) a vague, non-binding regime that established broad principles and contained only voluntaristic commitments the parties themselves thought fair – in the absence of excessive knowledge – might have been a more productive approach.

As it was, the choice of process was decided before there was clear scientific evidence of a problem, but it institutionalized the place of science, and the global metapolicy process was influenced, not by

insights such as those of Young (above), but by a sense of desperation that arose from the negotiation of the Law of the Sea Convention, and a misunderstanding of the factors underpinning the development of a regime to respond to ozone depletion that gave rise to a false hope that what was thought to have succeeded for ozone could be replicated for climate change. It is to these cases that I now turn.

A TALE OF TWO TREATIES

The United Nations Convention on the Law of the Sea (UNCLOS) was negotiated between 1973 and 1982 as an outcome from the third UN Conference of the Law of the Sea (UNCLOS III) which continued for those nine years. UNCLOS did not enter into force until 1994, a year after Guyana became the 60th nation to ratify the treaty. By June 2016, 167 countries and the European Union had acceded to the Convention. UNCLOS replaced four treaties that had been concluded in 1958, after the United Nations held its first Conference on the Law of the Sea (UNCLOS I) at Geneva in 1956. UNCLOS II in 1960 failed to resolve remaining outstanding issues, with the six-week Geneva conference mired in Cold War politics. Having taken 21 years from the commencement of UNCLOS III to enter into force, UNCLOS (the Convention) failed to secure the participation of the United States, which was concerned over some provisions of the Convention, but nevertheless subsequently gave effect to many of its provisions through the adoption of domestic legislation.

In contrast, The Montreal Protocol on Substances that Deplete the Ozone Layer (a protocol to the Vienna Convention for the Protection of the Ozone Layer) was agreed to on 26 August 1987, and entered into force on 26 August 1989, followed by eight revisions that tightened and added detail. The Vienna Convention for the Protection of the Ozone Layer had been agreed to only in 1985 and entered into force in 1988 – after Montreal had been concluded. It has been ratified by 197 states (all United Nations members).

The trajectories of the development of these two multilateral agreements provided two models of how such agreements might be developed. If a convention on climate change were to be developed, it was seemingly quite clear which provided the more promising model. It was by no means clear in 1987 that such a convention was necessary, although anthropologist Margaret Mead, when President of the American Association for the Advancement of Science (AAAS) in 1975, a decade earlier, had already proposed that a ‘law of the atmosphere’ might follow

the development of the law of the sea (Mead and Kellogg, 1977). Some concerns over climate change had by this stage emerged, though they primarily related to the prospect that the favourably warm interglacial period of 10,000 years or so was due to end, and might end and plunge the earth into an ice age so suddenly as to cause catastrophic climate change.

Concerns over a plunge into an ice age quickly morphed into concerns over global warming, though the fears of global cooling re-emerged briefly between the two with the theory of 'nuclear winter'. Very early (two dimensional) models of the atmosphere suggested that a major exchange of nuclear weapons would kick up so much dust into the atmosphere that there would be a rapid cooling of the atmosphere, with devastating effects on agricultural and ecological productivity and thus life on earth (Martin, 1988). The focus shifted to a concern over global warming essentially because of concerns over the response of some scientists to the Carter Administration's response to the energy crisis in 1973 in the form of the National Energy Plan announced on 8 November 1977, reinforced by the second energy crisis triggered by the Iranian Revolution in January–February 1979, and leading to adoption of the *Energy Security Act 1980* (introduced in April 1979), which included a substantial expansion of the utilization of US coal resources in seeking energy security. While the 1973 crisis was precipitated by the boycott and production cuts engineered by the Organization of Arab Petroleum Exporting Countries (OAPEC), it should be noted that the US had ceased to be self-sufficient in oil under the latter years of the Nixon Administration, prompting diplomatic activity by Secretary of State Henry Kissinger that led, inter alia, to the establishment of the International Energy Agency. The nuclear accident (a partial meltdown) at Three Mile Island on 28 March 1979 impacted the view of the nuclear alternative, further increasing the attractiveness of coal. The emergence of energy security as a policy issue thus led to the embrace of coal as a substitute, and then concerns over the impact of the increase on emissions of CO₂.

The emergence of scientific concern over emission of CO₂ is discussed in greater detail in Chapter 3. As will be shown there, there was enthusiasm in several quarters for an international policy response to the prospect of increasing CO₂, along the lines suggested by Margaret Mead, and this came well before the First Assessment Report of the Intergovernmental Panel on Climate Change in 1990. One enthusiast for a convention was the Executive Director of the UN Environment Program (UNEP) from 1974 to 1992, Mostafa Kamal Tolba. Tolba oversaw the success of the Montreal Protocol, and it was an obvious route for him to

follow the model of Montreal rather than UNCLOS in developing a climate change convention.

Indeed, Tolba was an early enthusiast for action on climate change. When addressing the First World Climate Conference in 1979, he referred to climate change as the process of carrying out an uncontrolled experiment in the earth's atmosphere and assured his audience that UNEP was ready to assess the environmental impacts of increased levels of carbon dioxide (Tolba, 1989). Climate change had been on the agenda for UNEP from the outset, when it existed purely in theory. The founding executive director of UNEP, Maurice Strong, announced at the opening session of its Governing Council his intention to take steps to engage the world scientific community in investigating the 'outer limits' to changes resulting from man's activities, giving the examples of those affecting ozone, the health of the oceans, direct atmospheric warming and, specifically, increasing carbon dioxide (Strong, 1973). Mustafa Tolba then took up the issue of carbon dioxide after a strong direction to do so at the first World Climate Conference in 1979, after which the UNEP Governing Council asked Tolba to develop an action plan for carbon dioxide in collaboration with World Climate Program partners, the World Meteorological Organization (WMO) and the International Council of Scientific Unions (ICSU) (UNEP, 1979).

Bernie Lewin (2017: 136–7) has summed up Tolba's enthusiasm running ahead of the science by pointing out that

at least until 1985, the peak body representing the heads of national meteorological services agreed with those scientists coordinating its World Climate Research Programme that the development of climate science [remained] totally inadequate to a proper assessment of the carbon dioxide threat. By 1985 this was not the view of the Environment Programme Executive Director. By then, Tolba was already convinced that the level of threat was sufficient to proceed immediately towards a globally coordinated policy response.

The Montreal experience led Tony Brenton (1994: 252–9) to identify four forces encouraging international cohesion in international environmental politics: the use of 'toe in the door' (or 'thin end of the wedge') negotiating processes; reliance upon science and epistemic communities; the influence of environmental non-governmental organizations (ENGOS); and what he termed 'environmental altruism', or responding to rhetorical justifications which are difficult to resist. The first of these has been neatly described by David Feldman (1995) as 'iterative functionalism', and was in evidence with the ozone regime's framework (Vienna) convention, followed by the Montreal Protocol and subsequent protocols that provided more definition

and extended the earlier iterations, though a key was that the Vienna Convention was largely bereft of content and required (as did Montreal) ratification by only 20 states to enter into force. The remaining three of Brenton's 'forces for cohesion' are elements of a constructivist view of international politics, and were common to constructivist accounts of Montreal (see, for example, Litfin, 1994). As Peter Haas (1982, 1992, 1992a) pointed out, scientific or causal knowledge and normative ideas combine to produce an 'epistemic consensus' among an 'epistemic community' that helps drive agreement.

Tolba (1989) saw the 'step-by-step' approach of Montreal to be the appropriate model for climate change, and he was an enthusiastic booster for global action from at least the time of the first Villach meeting of scientists in 1985. As Richard Benedick pointed out, Tolba stated that 'the mechanisms we design for the Protocol will – very likely – become the blueprint for the institutional apparatus designed to control greenhouse gases and adaptation to climate change' (Benedick, 1998: 7).

Haas (1990) also concluded – correctly, I would argue – that consensus among an epistemic community would not be sufficient to drive the push towards a climate regime, principally because there were significant interests standing in the way of the development of a consensus, but also because the science of climate change was much less certain and more indeterminate than that relating to ozone depletion. In particular, the threat of global warming (as it was more commonly called at that time) involved not some chemicals of relatively minor economic significance for which there were available substitutes, but matters of energy competitiveness and security that went to the heart of industrial economies.

However, Haas, Tolba and others underestimated the significance of interests in the successful conclusion of the Montreal Protocol, and (similarly) the significant interests that were already behind national and international action to act on climate change, and which helped sculpt the regime that developed. Crucial to the successful conclusion of Montreal was the fact that the US had regulated CFCs domestically in the 1970s and its chemical industry had developed alternative products for which they owned the patents. Industry stood to gain, rather than lose, because global restrictions on CFCs would help create markets for substitutes for which it held intellectual property (in a 'race to the top' described by David Vogel, 1997), and the negotiating positions of the US and then the United Kingdom became more supportive after lobbying by business (Sprinz and Vaahtoranta, 1994). As we shall see in the next chapter, a global response to global warming provided the opportunity for some states and some energy sectors to secure relative gains – in particular Canada, the United Kingdom and Germany, and (thanks to a European

Burden Sharing Agreement) the relative advantage of the latter two could be shared among the members of the European Union. International relations theorists tell us that relative gains are of considerable importance (Powell, 1991).

This is not to suggest that scientific knowledge is without importance, nor that normative arguments are without influence, but that – as Henry Shue put it – the important questions surround not whether norms or interests prevail, but what happens when they are in conflict and when they coincide. Bruce Yandle (1983) captured this phenomenon in his ‘Bootlegger and Baptist’ theory of regulatory politics, which he has also applied specifically to the politics of climate change (Yandle and Buck, 2002). While norms and interests are often in conflict, they form the basis for powerful coalitions when they coincide, and the lesson from Montreal is that such a coalition played a significant but largely overlooked role in the development of the Protocol. Unfortunately, normatively-based actions can also harm the chances of successful negotiation, and language such as calling US President George Bush a ‘climate criminal’ for privileging US interests was a significant factor in the failure of Kyoto. It is the development of shared norms that are regarded as central to the development of successful regimes (Young, 1994). Such shared norms usually develop over time as parties work together to develop shared understandings of the nature of problems and possible solutions, but accusations of ‘climate criminal’ can hardly be seen as contributing to their development.

A broad, non-binding (and therefore non-threatening) agreement like Paris in the mid-1990s might have allowed the greater emergence of shared norms, just as a more open scientific process to develop a consensus than occurred in the IPCC (see Chapter 3) might have brought parties together. Unfortunately, the advocates of climate science appear to have operated under the belief that there is a linear relationship between science and public policy, which Roger Pielke Jr (2007) has shown is mistaken. (Climate science, for example, cannot tell us that we should mitigate rather than adapt, nor what mixture of the two we should follow.) Iain Boal (1995) has suggested that particular technologies possess a ‘value slope’ that favours certain outcomes, and it may be that the reliance of climate science on computer modelling favours catastrophic projections inherently, but that kind of outcome certainly seems to have been produced by the combination of climate models and environmental values, seemingly in the belief that governments and the public are more likely to support action to mitigate GHGs the more alarming the prognostication.

The process modelled on Montreal followed by Tolba, therefore, failed to appreciate the significance of interests in that successful negotiation, as well as the comparative uncertainties inherent in climate science seeking to model a non-linear, chaotic, coupled ocean-atmosphere system. Moreover, whereas both the Vienna Convention and its Montreal Protocol each entered into force after ratification by only 20 states, such a small number could not serve as the realistic basis of success for a climate change convention, as the omission of significant emitters of GHGs such as the United States or China, which had already begun its path to rapid industrialization, would diminish seriously its credibility.

Tolba sought to institutionalize climate science into the global policy process, but he rather lost control of the process by which the convention was to be developed. After two international conferences on climate science, Tolba established an Advisory Group on Greenhouse Gases, which was replaced by the Intergovernmental Panel on Climate Change, largely at the instigation of the United States, which was concerned about a lack of government control over the many 'activist scientists' in the AGGG, who seemed intent on a convention being developed. (A small technical group had assisted Tolba with Montreal, and he was following that model.) Tolba had also seen the IPCC as the venue in which a convention would be negotiated, but a rebellion by the Group of 77 developing countries (G77) and China at the meeting charged with finalization of the first IPCC assessment in August 1990 in Sundsvall, saw the issue moved to the UN General Assembly, where G77 could exercise control, and the UNGA established an Intergovernmental Negotiating Committee in December 1990.

The assertion of control by G77 and China ensured that another feature of Montreal was embedded in the basic architecture of the convention being developed: a 'double standards' provision under the lexicon of 'common but differentiated responsibilities' which set the scene for the exemption of developing countries from any binding commitments and the establishment of funds to be contributed to by developed countries that would assist in adaptation. While there was a justification for exempting the poor from the burdens of responding to the risks of climate change, this meant that the emissions of China quickly overtook those of the US as the largest, while quite affluent individuals and states, from the Sultan of Brunei to the state of Singapore were also exempted, with Singapore's refining and petrochemical sectors making it one of the largest per capita emitters. Moreover, as I show in Chapter 2, by treating the GHG problem as one of flows, rather than stocks, the FCCC embedded advantage for those (such as the United Kingdom and Germany) which had industrialized using coal first when compared with later

industrializers such as the US and Japan. (CO₂ is estimated to have a residence time in the atmosphere of a century or so, so the largest emitter in 1990 was not necessarily responsible for most of the accumulated CO₂ and therefore most of the threat of climate change.)

The IPCC's First Assessment Report (FAR) was not concluded until the end of August 1990 and it did little more than raise the possibility of future climate change, rather than reflect a consensus that global warming had been observed, but the push was already on for a convention to be developed. It was very much a case of 'sentence first, verdict later'. UNEP, the WMO and the Canadian government had earlier organized a World Conference on the Changing Atmosphere: Implications for Global Security in Toronto on 27–30 June 1988 which called for both a convention and reduction in GHG emissions of 20% by 2005. This conference was not an official intergovernmental meeting, and most of the participants were scientists, so its declaration carried no official meaning, but it was followed quickly by a smaller meeting of legal and policy experts in Ottawa on from 20 to 22 February, 1989, to begin developing an international accord for the protection of the atmosphere. The 80 participants recommended that one or more international conventions such as a 'Law of the Atmosphere' originally proposed by Margaret Mead in 1975 and a narrower 'Climate Change Convention' followed by later protocols were urgently needed, but the Law of the Atmosphere approach was dismissed as being less realistic than a narrower Climate Change Convention and was largely ignored subsequently. Then followed in October 1989 a ministerial climate change conference arranged by the Netherlands government and attended by delegations from 67 countries in the city of Noordwijk which produced a 'Noordwijk Declaration', with a goal of stabilization of the concentration of greenhouse gases. The USA, USSR and Japan succeeded in blocking moves towards binding emissions targets to achieve this goal.

All this came before the IPCC had reported, and when the UN Framework Convention on Climate Change was agreed in the INC in May 1992 and then opened for signature at the UN Conference on Environment and Development in Rio it contained a commitment (in Article 4.2(d) and Article 5) to undertake further action in the light of further scientific evidence. This effectively created an incentive, for those who wished for further action, to produce evidence – creating the possibility of 'policy-based evidence' by applying a 'value slope' across the field of climate science (see Chapter 3).

While it was an INC established by the UNGA, rather than the IPCC or AGGG (as Tolba intended), that initiated the negotiation of the FCCC, Tolba essentially had his way with the rest of his intentions for a

convention. Although the jury was not yet in on climate change being an actual, as opposed to a theoretical problem, progress by the IPCC on science before the FCCC negotiations had concluded did much to remove the 'veil of ambiguity' which might have made Young's 'institutional bargaining' a possibility, and reliance on the Montreal model was reflected in what followed. Something resembling Paris would have constituted a much more promising base on which to develop more effective global policy architecture to respond to the tasks of climate change.

THE PLAN OF THE BOOK

The reasons why the chosen path for developing a global policy instrument on climate change was not appropriate were apparent at the time the metapolicy governing the climate change negotiations was decided. The critique of the process developed here (by design) relies primarily on scholarship that was available in real time at the time of the FCCC negotiation. This book seeks to detail what I consider to be some of the features of this 'Kyoto Process' that condemned Kyoto to failure. It does not seek to be anything approaching a detailed, comprehensive history of climate change negotiations, but rather it seeks out the 'pathologies' that contributed as possible causes of death. There are numerous micro-level studies of negotiations along the way, but these (like the participants) operate within a paradigm accepting the validity of Tolba's chosen path, and so do not step back to examine that paradigm.

I commence by examining the largely neglected importance of interests in Chapter 2, which (as I have already indicated) had a significant impact upon both the vertical and horizontal failure of Kyoto. Chapter 3 examines some key features of science as it affected climate negotiations, pointing out that, while there is no linear relationship between science and public policy, the belief that more convincingly alarmist scientific findings would help drive agreement impacted on the quality of scientific findings so that those with an interest-based reason to contest 'The Science' could continue to resist taking policy action. Chapter 4 shows that, rather than providing some moral suasion sufficient to build consensus around an effective global policy process, ENGOs tended to simply support those interests advantaged by the negotiations and help corrupt the scientific process. Then Chapter 5 examines the resistance to the use of multiple policy arenas that might have assisted in the development of more effective global policy (and did play a positive role in the Paris process). Indeed, as that chapter shows, there was extensive

use made of multiple arenas, right from the commencement of the negotiation process, and a greater use of arenas with characteristics more conducive to overcoming the ‘Law of the Least Ambitious Program’. Finally, Chapter Six makes some concluding remarks about the state of climate negotiations at the time of writing.

A decade after Kyoto was agreed, Prins and Rayner (2007, 2007a) concluded that it was the wrong model, likening it to a magical pair of trousers in a Wallace and Gromit cartoon that could take the wearer to all sorts of places – but not necessarily to places they wanted to go. The participants in the global policy process developing a response to the issue of climate change were reluctant to admit to the error, and thus slow to learn and develop from the bottom up a more voluntaristic agreement at Paris in 2015 – perhaps where they should have started, and about as close to ‘institutional bargaining’ as was by then possible. By the time they had learned the lessons of Kyoto, related domestic policies in the United States contributed significantly to the election of Donald Trump, a president who decided to withdraw the US from the Paris Agreement. I conclude that all might not be lost in the longer term, and that the perturbation that is Trump might assist in a more complete learning of the importance of metapolicy for global policy – not just on climate, but on other complex issues.

I turn first, therefore, to the significance of interests in the Kyoto Process and the ways in which they contributed to its failure.