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Preventive Justice, the Precautionary Principle and the Rule of Law

Jocelyn Stacey¹

Modern public environmental law is a field largely premised on prevention. From the 1970s onward international and domestic environmental law has been shaped by the recognition that strictly remedial approaches to environmental issues are not adequate for deterring environmental harm and stemming serious environmental degradation.² The 1992 Rio Declaration on Environment and Development helped to solidify four guiding principles for public environmental law: polluter pays, sustainable development, prevention and precaution.³ Of these four principles, only polluter pays—the idea that she who causes the pollution should bear its costs—is retributive. Sustainable development, an emerging and complex body of international law, has a significant preventive component.⁴ It captures the idea that the present generation has an obligation to future generations not to push the Earth’s ecological capabilities to their limits. Prevention is the idea that we should take steps to prevent or mitigate foreseeable harm to the environment. It is often implemented through the requirement of conducting an environmental impact assessment prior to undertaking any regulatory activity. The fourth—and the focus of this chapter—is the precautionary principle, which posits that a lack of scientific

¹ Assistant Professor, Allard Hall School of Law, University of British Columbia. Many thanks to the comments and questions posed by participants in the Regulating Preventive Justice Workshop at the University of Queensland in April 2015. Special thanks to Tamara Tulich and an anonymous peer reviewer for their helpful suggestions and to Alexandra Catchpole for her research assistance.

² The 1972 United Nations Stockholm Conference on the Human Environment was the first global conference on environmental issues and was followed by the creation of the United Nations Environment Programme. Environmental assessment legislation proliferated around the world during this period, beginning with the United States National Environmental Protection Act in 1969. Countries around the world began to enact preventive environmental legislation: *Canadian Environmental Protection Act*, RSC 1988, c C-22; *Control of Pollution Act 1974* (UK) c 40; *Environmental Assessment and Planning Act 1979* (NSW); *Fisheries Management Act 1991* (Cth); *Clean Air Act 1972*, No 31 (NZ); *Environment Act 1986* (NZ).

³ These principles can be found in the *Declaration of the United Nations Conference on the Human Environment*, adopted 1 January 1973, Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972, UN Doc A/CONF.48/14/Rev.1, ch 1, reprinted (1972) 11 ILM 1416 and the United Nations Conference on Environment and Development, *Rio Declaration on Environment and Development*, UN Doc A/CONF.151/26 (vol I); 31 ILM 874 (1992). See also: Philippe Sands et al, *Principles of International Environmental Law*, (Cambridge University Press, 3rd ed, 2012); A Dan Tarlock, ‘Is There a There There in Environmental Law’ (2003) 19 *Journal of Land Use & Environmental Law* 213, 219.

⁴ See, e.g. Marie-Claire Cordonier Segger & Ashfaq Khalfan, *Sustainable Development Law: Principles, Practices, & Prospects* (Oxford University Press, 2004).

certainty should not prevent state action in the face of serious or irreversible threats to the environment.

Despite its largely preventive orientation, environmental law has, with one exception, remained distinct from the burgeoning field of preventive justice. The exception is the precautionary principle, which has become a subject of interest and frequent skepticism amongst preventive justice scholars. The precautionary principle is a central principle in environmental law. Its centrality arises from the pervasiveness of scientific uncertainty in environmental regulation; that is, our inability to reliably predict the consequences of our policy choices on environmental and human health.⁵ The precautionary principle squarely addresses the question of how we ought to proceed in the face of unavoidable uncertainty.

Preventive justice scholars have noted the temptation, particularly in the national security context, to rely on a kind of “precautionary logic”⁶ by which extreme measures are taken in an effort to avoid future, but uncertain, security threats. Counter-terrorism strategies that include anticipatory or pre-emptive military strikes, civil control orders, and indefinite detention all aimed at preventing future terrorist attacks have been characterized as part of a precautionary approach to counter-terrorism.⁷ While no government has outright attempted to adopt the precautionary principle as a basis for security measures, public officials have relied on precautionary rhetoric. In the environmental context, the precautionary principle operates to justify state action even in the face of uncertainty. Preventive justice scholars thus worry that, in the security context, the precautionary principle would justify severe liberty-infringing measures.

⁵ For my own take on uncertainty in environmental law see: Jocelyn Stacey, ‘The Environmental Emergency and the Legality of Discretion in Environmental Law’ (2015) 52 *Osgoode Hall Law Journal* (forthcoming) (arguing this uncertainty requires us to approach environmental issues as an ongoing emergency).

⁶ Andrew Goldsmith, ‘The Governance of Terror: Precautionary Logic and Counterterrorist Law Reform After September 11’ (2008) 30 *Law and Policy* 141; Lucia Zedner, *Security* (Routledge, 2009), 84-5.

⁷ Tamara Tulich, ‘A View Inside the Preventive State’ (2012) 21 *Griffith Law Review* 209, 211; Jessica Stern and Jonathan B Wiener, ‘Precaution Against Terrorism’ (2006) 9 *Journal of Risk Research* 393, 394-5; Simon Bronitt, ‘Balancing Security and Liberty: Critical Perspectives on Terrorism Law Reform’ in Miriam Gani, Penelope Matthews (eds), *Fresh Perspectives on the ‘War on Terror’* (Australia National University ePress, 2008) 65. Cf Alan Patterson and Craig McLean, ‘Misleading and Dangerous: The Use of the Precautionary Principle in Foreign Policy Debates’ (2010) 26 *Medicine, Conflict and Survival* 48 (on the need to rescue the precautionary principle from its misuse in the counter-terrorism context).

This chapter explores the connection between the precautionary principle in environmental law and preventive justice scholarship. It is written from the perspective of environmental law. It has two aims. First, the chapter traces the claims about the precautionary principle in the preventive justice literature back to their environmental roots. In doing so, it situates the precautionary principle within broader environmental law debates about how the principle ought to operate. Second, the chapter argues that the precautionary principle and principles of preventive justice ought to be understood as part of the same rule-of-law project, that is, the project of ensuring that all public decisions are publicly justified on the basis of core constitutional principles.⁸ Understood in this way, both the precautionary principle and principles of preventive justice seek to respect and enable the autonomy of individuals, understood as their capacity to reason with the law. It is thus a mistake to think that the precautionary principle can be transposed from the environmental context to the national security context. What the rule of law requires in each context is distinct and these respective principles ought to be understood as attempts to maintain our commitment to the rule of law even under the challenging conditions in which we face uncertain future harm.

This chapter proceeds in three parts. The first part introduces the characterization of the precautionary principle portrayed in the preventive justice scholarship. It argues that preventive justice scholars view the precautionary principle as a particularly potent decision-making logic with serious, negative consequences for the security context. The second part situates this partial characterization of the precautionary principle within its environmental context. Drawing on examples from Australia and Canada, it argues that, while there is some support for this characterization, the principle's influence has been far tamer in environmental law than is represented by preventive justice scholars. The third and final part argues that the connection between the precautionary principle and preventive justice comes at the foundational level of a commitment to democratic governance under the rule of law. What this foundational commitment requires in practice is necessarily context-dependent, such that both the precautionary principle and principles articulated by preventive justice scholars should be

⁸ David Dyzenhaus, 'Preventive Justice and the Rule-of-Law Project' in Andrew Ashworth, Lucia Zedner and Patrick Tomlin (eds), *Prevention and the Limits of the Criminal Law* (Oxford University Press, 2013) 91.

understood as complementary, but not transferrable, attempts to maintain our commitment to the rule of law even under conditions of uncertainty.

Part I. Precaution⁹ and Preventive Justice

Preventive justice scholars have noted the rhetorical parallels between the precautionary principle in environmental law and the explanations that government officials have offered for sweeping counter-terrorism measures.¹⁰ It is therefore understandable that preventive justice scholars approach the precautionary principle with deep skepticism. They have come to characterize the precautionary principle in the security context in particularly strong and monolithic terms. For example, Carol Steiker writes,

‘the precautionary principle’, which holds that if an action or policy *might* cause severe and irreversible harm to the public or the environment, the proponents of the action should bear the burden of proof of no harm, in the absence of a scientific consensus that the harm will *not* occur. The implications of widespread adherence to an analogous principle in the preventive detention context are sobering: we should expect to see large numbers of low-level terrorist suspects detained, coupled with surveillance and/or detention of large numbers of people who are simply members of ethnic or religious groups or organizations from whom terrorists are commonly recruited.¹¹

Similarly Ashworth and Zedner write,

The benefit of [the precautionary] approach is that it licenses officials to take preventive measures, particularly in cases where the potential harm is life-threatening or gravely damaging to human safety or health. The problem is that the precautionary principle may

⁹ “Precaution,” “the precautionary principle” and “precautionary approach” are used synonymously in this chapter. On the semantics of precaution, see Jacqueline Peel, ‘Precaution – A Matter of Principle, Approach or Process?’ (2004) 5 *Melbourne Journal of International Law* 483.

¹⁰ Stern and Weiner above n 7, 398-401; Tulich above n 7, 212-215.

¹¹ Carol S Steiker, ‘Proportionality as a Limit on Preventive Justice’ in Andrew Ashworth, Lucia Zedner and Patrick Tomlin (eds), *Prevention and the Limits of the Criminal Law* (Oxford University Press, 2013) 194, 208 (citations omitted).

license arbitrary and unfounded decision-making with serious adverse consequences for individual liberties.¹²

Steiker, Ashworth and Zedner identify three potentially problematic aspects of the precautionary principle: *threat*, *command*, and *measures*. First, they are concerned about the nature of the *threat* that will trigger state action. Steiker highlights the necessarily speculative nature of the future harm. And while Ashworth and Zedner focus on grave threats, others worry that the precautionary principle will be invoked against trivial threats, far below the threshold of serious and irreversible harm that is required in the environmental context.¹³ Elsewhere Zedner worries about the indiscriminate application of precaution, stating that, unlike risk assessment, precaution “treats all as possible sources of suspicion or threat.”¹⁴ Steiker rightly notes the discriminatory ramifications of implementing sweeping counter-terror measures ostensibly based on a precautionary approach.

Preventive justice scholars also emphasize the *command* imposed on the decision-maker. They are especially concerned that the precautionary principle seems to compel or “license” the decision-maker to take preventive action.¹⁵ For Steiker, the decision-maker discharges her obligations by reversing the burden of proof; that is, by requiring the affected party to show the absence of harm, rather than requiring the government to show the possibility of harm.¹⁶ If the burden is not met, then the decision-maker, on this view, has no option but to take action by, *e.g.*, implementing heightened surveillance or increased detention practices.

This attention to the obligatory nature of the precautionary principle leads to further concerns about the *measures* that follow from its implementation. Preventive justice scholars are

¹² Andrew Ashworth & Lucia Zedner, *Preventive Justice* (Oxford University Press, 2014), 120.

¹³ François Ewald, ‘The Return of Descartes’s Malicious Demon: An Outline of a Philosophy of Precaution’ in Tom Baker and Jonathan Simon (eds), *Embracing Risk: The Changing Culture of Insurance and Responsibility* (University Of Chicago Press, 2002) 273, 283-4 (writing on our new “security era” and the problems with extending the precautionary principle beyond the environmental context); Tulich above n 7, 215 (adopting Ewald’s concern); Zedner, *Security*, above n 6, 84.

¹⁴ Zedner, *Security*, above n 6, 84. See also Stern and Wiener, above n 7, 396; Genevieve Lennon, ‘Precautionary Tales: Suspicionless Counter-Terrorism Stop and Search’ (2015) 15 *Criminology and Criminal Justice* 44, 48 (specifically on suspicionless stop and search procedures).

¹⁵ See also: Stern and Wiener, above n 7, 397; Zedner, *Security*, above n 6, 84.

¹⁶ Stern and Wiener, above n 7, 400-1.

rightly concerned about “serious adverse consequences for individual liberties.” Measures are analysed and criticized on the basis of their proximity to the perceived threat or their epistemological basis.¹⁷ Having determined that certain measures are precautionary—and thus dubious—the next task for many preventive justice scholars is to determine whether such measures can be justified on the basis of their effectiveness.¹⁸ Some preventive justice scholars worry that precautionary measures are “arbitrary and unfounded”¹⁹ or “error prone.”²⁰ Others note the internal contradiction that the absence of evidence of effectiveness can serve as justification for further and more invasive precautionary measures.²¹

Preventive justice scholars present the precautionary principle as a linear, compulsory decision-making tool, one with striking ramifications in the national security context. As we shall now see, this characterization has some basis in environmental law, but the principle’s implementation and its potential are far more nuanced.

Part II. The Practice and Potential of Precaution in Environmental Law

In the environmental context, uncertainty about future environmental harm is often used as an excuse for maintaining the status quo. By eliminating uncertainty as a legitimate basis for inaction, the precautionary principle promises to help overcome a lack of political will to protect the environment.²² In the security context, by stark contrast, there is seemingly no such lack of political will. It is thus understandable that preventive justice scholars approach the precautionary principle with serious reservations. At the same time, however, the precautionary principle has generated a vast and rich environmental jurisprudence and scholarship that is not represented in the preventive justice literature. The aim of this part is to trace the preventive

¹⁷ Stern and Wiener, above n 7, 397 and 403-4; Lennon, above n 14, 48-50; Tulich, above n 7, 232.

¹⁸ Stern and Wiener, above n 7, 415 ff.

¹⁹ Ashworth and Zedner, above n 12.

²⁰ Tulich, above n 7, 231.

²¹ Rebecca Ananian-Welsh *infra*; Zedner, *Security*, above n 6, 84-5; Goldsmith, above n 6, 159.

²² In the original German context, the precautionary principle was a justification for interventionist state action: Timothy O’Riordan and James Cameron, ‘The History and Contemporary Significance of the Precautionary Principle’ in Timothy O’Riordan and James Cameron (eds), *Interpreting the Precautionary Principle* (Earthscan Publications, 1994) 12, 16.

justice characterization of the precautionary principle back to its environmental law origins, to better understand the debates that the principle has generated and to set the stage for the argument that the precautionary principle is fundamentally connected to the rule of law.

The most widely accepted version²³ of the precautionary principle is that contained in the Rio Declaration:

Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.²⁴

In this formulation the precautionary principle simply requires that decision-makers attend to the scientific uncertainty inherent in their regulatory decisions. Consistent with the preventive justice characterization, the Rio Declaration requires a *threat* of serious or irreversible harm for the principle to apply.²⁵ Notably, however, the *command* imposed by the Rio Declaration version of precaution is that decision-makers not use uncertainty as a basis for inaction.²⁶ Far from the strong, compulsory version of precaution articulated by preventive justice scholars, the Rio Declaration version of the precautionary principle does not compel decision-makers to take any action. It is simply an admonition to attend to the unavoidable limits of our ability to predict the effects of actions on the environment. Nor does the Rio Declaration mention any connection to reversing the burden of proof. Finally, the Rio Declaration notes the need for cost-effective *measures*, though it is silent on the details. Indeed, a huge range of measures can flow from the precautionary principle: e.g. delaying a decision to allow potentially environmentally harmful actions in order for more study or monitoring to occur, requiring certain mitigation measures on activities, or prohibiting certain activities or pollutants.

²³ Sands and Peel, above n 3, 228; Daniel Bodansky, 'Deconstructing the Precautionary Principle' in David D Caron, Harry N Scheiber (eds), *Bringing New Law to Ocean Waters* (Martinus Nijhoff Publishers, 2004) 381, 381 (one of the ten commandments of environmental law).

²⁴ *Rio Declaration*, above n 3.

²⁵ There are some versions of the precautionary principle that set a lower threat, e.g. *Convention on the Ban of the Import of Hazardous Wastes into Africa and on the Control of their Transboundary Movements within Africa*, opened for signature 30 January 1991, 30 ILM 773 (entered into force 22 April 1998) art 3(f), but these are rare.

²⁶ Again, there are some variations that impose stronger requirements on decision-makers, e.g. *Convention for the Protection of the Marine Environment of the Baltic Sea Area*, opened for signature 22 September 1992, 32 ILM 1069 (entered into force 17 January 2000) art 2(2)(a), but these are less common than the Rio Declaration version.

It is the Rio Declaration version of the precautionary principle that has been widely incorporated into domestic law around the world.²⁷ This chapter cannot offer a comprehensive account of the vast practice and implementation of the precautionary principle worldwide. What it can do, however, is use two example countries—Australia and Canada—as snapshots for the practice and academic debates over the potential for the precautionary principle.²⁸ In both Canada and Australia, the Rio Declaration version of the precautionary principle has been incorporated into environmental law and policy. The countries provide useful comparator examples: on the one hand, the precautionary principle in Australia has generated sustained jurisprudential and academic engagement.²⁹ By way of contrast, there is a strong sense that the principle has yet to do any meaningful work in shaping environmental law in Canada.³⁰

Canada

The Canadian legal perspective demonstrates the temptation to view the precautionary principle in black-and-white, all-or-nothing terms. On the one hand, some Canadian courts take a similar view to that of preventive justice scholars; that is, they think that the precautionary principle compels particular action. In the context of judicial review of environmental assessment decisions, for example, the Canadian Federal Court and Federal Court of Appeal repeatedly state that the precautionary principle would have “paralyzing effects” because it

²⁷ Jacqueline Peel, *The Precautionary Principle in Practice* (The Federation Press, 2005) 17 (on the Rio Declaration as marking the “arrival” of the precautionary principle); Elizabeth Fisher, ‘Review: Laws of Fear: Beyond the Precautionary Principle’ (2006) *Modern L Rev* 288, 289-90 (on the widespread incorporation of the Rio Declaration of the principle).

²⁸ Australia and Canada both present hard cases for environmental law and policy in that they have similar frontier mentalities where wilderness protection and natural resource exploitation often clash.

²⁹ See *Inter-governmental Agreement on the Environment* (IGAE), 1 May 1992 and ESD Steering Committee, *National Strategy for Ecologically Sustainable Development* (Australian Government Publishing Service, Canberra, 1992).; Environmental Protection Act 1970 (Vic); *Gene Technology Act*, 2000 (Cth); *Protection of the Environment Administration Act* 1991 (NSW); *Ozone Protection Act*, 1989 (Cth). For academic commentary on the extensive engagement with the principle in Australia see: Elizabeth Fisher, *Risk Regulation and Administrative Constitutionalism* (Hart Publishing, 2007), ch 4.

³⁰ This is despite an early and strong statement by the Supreme Court of Canada that the precautionary principle, as approaching a principle of customary international law, is a background norm for interpreting domestic environmental law: *114957 Canada Ltée (Spraytech, Société d’arrosage) v Hudson (Town)* 2001 SCC 40. Chris Tollefson, ‘A Precautionary Tale: Trials and Tribulations of the Precautionary Principle’, (A Symposium on Environment in the Courtroom: Key Environmental Concepts and the Unique Nature of Environmental Damage), *Canadian Institute of Resources Law*, 2012), 17. Fisher notes related concerns about the justiciability of the principle in the United Kingdom courts: Elizabeth Fisher, ‘Is the Precautionary Principle Justiciable?’ (2001) 13(3) *Journal of Environmental Law* 315.

would require prohibiting development.³¹ This claim is not supported by the Rio Declaration,³² the language of Canadian environmental assessment legislation,³³ nor any sophisticated scholarship on the precautionary principle.³⁴ By assuming a “compulsory” or a strong version of precaution and refusing to invoke it, the Canadian federal courts have stifled the judicial development of the principle.

At the same time, Canadian courts have also assumed the opposite interpretation of the precautionary principle: that the principle is simply the application of common sense.³⁵ For example, in *Morton v Minister of Fisheries and Oceans and Marine Harvest Canada*,³⁶ a concerned scientist sought judicial review of a license that permitted the transfer of potentially diseased salmon from a hatchery to a fish farm located in coastal waters. The scientific uncertainty pertained to the causal relationship between a particular disease agent, for which the transferred salmon tested positive, and a well-documented fatal disease in western Canada’s iconic wild salmon populations. The Federal Court noted the scientific debate over the issue, but argued that the relevant Regulation’s prohibition on activities that “may be harmful” to wild fish populations should be interpreted generously, in line with the precautionary principle.³⁷ The Court held that the condition of the license that allowed the transfer of “low risk” fish was inconsistent with the Regulation and, by issuing the license, the Minister “did not err on the side of caution.”³⁸ While the decision is precautionary in the ordinary sense of the word, it is far from obvious that the precautionary principle itself did any distinctive work in the decision. Ordinary principles of statutory interpretation would seem to have led the Court to reach the same

³¹ *Canadian Parks and Wilderness Society v. Canada (Minister of Canadian Heritage)*, [2003] FCJ 703, [24]; *Pembina Institute for Appropriate Development v Canada (Attorney General)*, [2008] FCJ No 324, [32]; *Greenpeace Canada v Canada (Attorney General)*, [2014] FCJ No 515, [83] (repeating the quote, although the Court in this case actually does properly apply the precautionary principle despite its reluctance to name it as such). The decision, however, is overturned on appeal with no reference to the precautionary principle: *Ontario Power Generation Inc. v. Greenpeace Canada*, 2015 FCA 186.

³² Above n 24.

³³ *Canadian Environmental Assessment Act, 2012*, SC 2012, c 19, s 52, s 4.

³⁴ Influential regulatory scholar Cass Sunstein has perpetuated this characterization of the principle, but it is a caricature. See Cass R Sunstein, *Laws of Fear* (Cambridge: Cambridge University Press, 2005) at 457 and Jaye Ellis, ‘Overexploitation of a Valuable Resource? New Literature on the Precautionary Principle’ (2006) 17 *European Journal of International Law* 445; Fisher, above n 27.

³⁵ This understanding of the precautionary principle persists in the Australian context as well: e.g. *Leatch v National Parks and Wildlife Service and Shoalhaven City Council*, (1993) 81 LGERA 270.

³⁶ 2015 FC 575.

³⁷ *Ibid* [97].

³⁸ *Ibid* [46].

conclusion that a low-risk transfer “may be harmful.” Moreover, it is noteworthy that the Court invoked the precautionary principle to help adjudicate known scientific risks. The issue about the causal connection between the disease agent and disease was known, documented and supported, if not conclusively, by scientific evidence. In other words, though a precautionary success story, *Morton* is remarkably tame.

Australia

The lack of serious Canadian judicial development of the principle has led environmental law scholars to turn abroad to Australia where the courts have contemplated a distinctive role for the principle.³⁹ The key Australian decision on the precautionary principle is *Telstra v Hornsby Shire Council*, a decision by Chief Justice Preston of the New South Wales Land and Environment Court.⁴⁰ *Telstra* was a review on the merits of a local council’s refusal to grant Telstra a development approval to install mobile phone antennae on a building. Concerns were raised before the local council about the possible public health effects of radiofrequency and electromagnetic energy from the proposed mobile phone towers. Preston CJ attempted to synthesize precautionary principle jurisprudence and articulate a specific and comprehensive test for applying the precautionary principle in the domestic context.⁴¹

In his view, the precautionary principle requires the application of a three-part test. The first step, set out in the decision, is to determine whether two threshold criteria are met for the principle to be invoked: (i) the existence of a threat and (ii) the existence of scientific uncertainty about such a threat.⁴² While Preston CJ set out broad-ranging considerations for the determination of the existence of a threat, he maintained that “[t]he threat of environmental damage must be adequately sustained by scientific evidence.”⁴³ Similarly, Preston CJ stated that the scientific uncertainty must be grounded in “reasonable scientific plausibility.”⁴⁴ Once the

³⁹ See, in particular, Chris Tollefson and Jamie Thornback, ‘Litigating the Precautionary Principle in Domestic Courts’ (2008) 19 *Journal of Environmental Law and Practice* 33.

⁴⁰ [2006] NSWLEC 133

⁴¹ For detailed analysis of this case, see: Fisher above n 29, 155-160 and Jacqueline Peel, ‘When (Scientific) Rationality Rules: (Mis)Application of the Precautionary Principle in Australian Mobile Phone Tower Cases *Telstra Corporation Limited v Hornsby Shire Council*’ (2007) 19(1) *Journal of Environmental Law* 103.

⁴² *Telstra* above n 40 [128].

⁴³ *Ibid* [134].

⁴⁴ *Ibid* [148], relying on Nicolas de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules*, Oxford University Press, 2005.

threshold is met, Preston CJ reasoned, the burden shifts to the proponent of the activity to demonstrate that the threat does not exist or is negligible. Assuming the proponent cannot discharge this burden, the final step is for the judge to treat the threat as a reality and determine the appropriate precautionary measures through a proportionality analysis.⁴⁵ He held that, in this case, the requirement of serious or irreversible environmental damage was not met and thus there was no basis for applying the precautionary principle.⁴⁶

These brief snapshots of the precautionary principle in practice in Canada and Australia confirm that many of the claims of preventive justice scholars are grounded in environmental law. The principle is often portrayed as *commanding* specific and severe precautionary *measures*: e.g. a ban on development. The *Telstra* framework commands a reversed burden of proof that, should it not be met, requires precautionary action.⁴⁷ At the same time, however, the decisions reflect a narrow understanding of *threat* and uncertainty. Far from the vast world of unknown threats that can arise in both environmental and security contexts, the influence of the precautionary principle in environmental law has focused on filling relatively narrow existing gaps within science.⁴⁸ The precautionary principle, as applied, does not currently operate to challenge the limits of scientific expertise, introduce different worldviews or sources of knowledge, or take seriously the possibility of unknown-unknowns.

The “tame”⁴⁹ version of the precautionary principle articulated in *Telstra* gives rise to two questions about the limits and potential for the precautionary principle in environmental law. The first is a question about the principle’s apparent requirement of reversing the burden of proof, and the second is a question about the relationship between the precautionary principle and risk

⁴⁵ *Telstra* above n 40, [150].

⁴⁶ *Ibid* [184-5].

⁴⁷ The consensus amongst Canadian legal academics is that the principle requires a reversed burden of proof: Jamie Benidickson *et al*, *Practicing Precaution and Adaptive Management: Legal, Institutional and Procedural Dimensions of Scientific Uncertainty Final Report* (Ottawa: Institute of the Environment, University of Ottawa, 2005) [unpublished]; Nathalie Chalifour, ‘A (Pre) Cautionary Tale About the Kearsy Oil Sands Decision: The Significance of *Pembina Institute for Appropriate Development, et al. v. Canada (Attorney-General)* for the Future of Environmental Assessment’ (2009) 5 *McGill International Journal of Sustainable Development Law and Policy* 251; David L VanderZwaag, ‘The Precautionary Principle in Environmental Law and Policy: Elusive Rhetoric and First Embraces’ (1998) 8 *Journal of Environmental Law and Practice* 355.

⁴⁸ Above n 27, 219.

⁴⁹ Tollefson and Thornback above n 39, 38; John S. Applegate, ‘The Taming of the Precautionary Principle,’ (2002-2003) 27 *William & Mary Environmental Law & Policy Review* 13.

assessment. As we shall now see, environmental law scholars have argued that the precautionary principle has the potential to be much more than either a reversed burden of proof or a modification to risk assessment. Perhaps it is this potential that is the source of anxiety for preventive justice scholars.

Burden of Proof

The idea that the precautionary principle can be operationalized by reversing the burden of proof reflects a judicial or quasi-judicial understanding of the principle. Yet front-line environmental decisions are generally implemented in an administrative or regulatory context that is quite unlike a criminal trial with a comparatively clear onus and standard of proof.⁵⁰ In an administrative context various ‘burdens’ arise with respect to providing specific information and conducting analyses. It may be that in some cases, the precautionary principle will operate to reverse or influence a burden of proof, but whether it does so requires careful attention to the specific regulatory context.⁵¹ The notion that the precautionary principle requires the same thing in every instance does not reflect the enormous range of environmental issues to which the principle is relevant, or the diverse regulatory processes and decisions taken in response to these issues.

Moreover, the reversed-burden-of-proof approach unduly narrows the innovative possibilities for precautionary decision-making. Precautionary principle scholars have argued that “the reversal of the burden of proof ‘abusively associated with the principle of precaution, is more sensational than representative of reality.’”⁵² Most international environmental agreements do not specify a reversed burden of proof,⁵³ nor do many instances of domestic implementation

⁵⁰ Judith Jones and Simon Bronitt, ‘The burden and standard of proof in environmental regulation: the precautionary principle in an Australian administrative context’ in Elizabeth Fisher, Judith Jones (eds), *Implementing the Precautionary Principle: Perspectives and Prospects* (Edward Elgar Pub, 2006) 137.

⁵¹ Peel, above n 27, 154-5. For example *Wier v Canada (Minister of Health)*, 2011 FC 1322 (on the specific requirements of the *Pest Control Products Act*, SC 2002, c 28, s 17 which require the Minister to make a determination of whether there are “reasonable grounds to believe that the health or environmental risks of the product are, or its value is, unacceptable.”); *Environmental Defence Canada v Canada (Minister of Fisheries and Oceans)*, 2009 FC 878 (on the *Species at Risk Act* requirement that government officials act on whatever scientific information is available at the time).

⁵² Ellis, above n 34, 459, including her translation of Julien Cazala, ‘Principe de précaution et procédure devant le juge international’, in *Le principe de précaution*, 151 at 167.

⁵³ *Ibid.*

of the precautionary principle require a strict burden of proof approach.⁵⁴ Some scholars have noted the existence of far more creative institutional design, such as citizens' assemblies and independent public watchdogs, as examples of precautionary measures that bear little relationship to a reversed-burden-of-proof interpretation.⁵⁵ In short, for all its merits in the context of judicial decision-making, it is far from clear that a reversed-burden-of-proof approach reflects the administrative reality of environmental decision-making.

Precaution and Risk

Preventive justice scholars understand the precautionary principle as an exception to the norm of risk assessment. Yet, as we have seen, in many instances the precautionary principle has not supplied a distinctive decision-making framework. Rather, it is viewed as operating within a risk assessment paradigm.⁵⁶ e.g. recognizing a margin of error in risk assessment or “weighting the risk of error in favour of the environment.”⁵⁷ Yet defenders of the precautionary principle argue that it has far greater potential to challenge status quo decision procedures and to challenge dominant assumptions about our capacity to “manage” risk.⁵⁸ Commentators point out that there are multiple sources of uncertainty in environmental decision-making.⁵⁹ Some of these sources can be identified, measured and quantified with actuarial data and probabilistic analysis. But some of these sources are inherent in the scientific process itself. There are questions that we do not yet know to ask and these have particular salience when regulators are confronted with novel innovations and potentially novel risks.⁶⁰ From this perspective, the precautionary principle is an “exception” to risk assessment only in that it focuses us to confront the inevitable incompleteness

⁵⁴ E.g. *Canadian Environmental Assessment Act, 2012* above n 33; *Environment Protection and Biodiversity Conservation Act 1999* (Cth); *Environment Protection Act 1970* (Vic).

⁵⁵ Kerry H Whiteside, *Precautionary Politics: Principle and Practice in Confronting Environmental Risk* (MIT Press, 2006), 132ff; Genevieve Cartier, ‘Le principe de précaution et la déférence judiciaire en droit administratif’ (2002) 43 *Les Cahiers de droit* 79, 99-100.

⁵⁶ Privy Council Office of Canada, *A Framework for the Application of Precaution in Science-Based Decision Making About Risk* (Ottawa: Government of Canada, 2003).

⁵⁷ *Telstra* above n 40, [162]

⁵⁸ Whiteside, above n 55; Ellis, above n 34, 456.

⁵⁹ E.g. Peel above n 27 ch 3; Fisher, above n 30, 317-8.

⁶⁰ Malcolm McGarvin, "Science, Precaution, Facts and Values" in Tim O'Riordan, James Cameron, Andrew Jordan (eds), *Reinterpreting the Precautionary Principle* (Cameron May Ltd, 2001) 35, 42-3 (discussing ignorance and indeterminacy); Peel, above n 27, Chapter 3.

of any attempt to comprehensively quantify perceived risks. The important question, then, is what a decision-maker ought to do with a necessarily partial risk assessment in hand.⁶¹

It is this vision—as a departure from risk assessment—that understandably makes preventive justice scholars nervous about the precautionary principle. But what happens in this gap between risk assessment and ultimate decision is precisely what can link the two projects of preventive justice and the precautionary principle under the much more fundamental project of maintaining the rule of law. In particular, it is the importance of procedure and reason-giving that links the precautionary principle with preventive justice. For example, Fisher and Harding write that the

principle regulates the reasons for a decision and the process by which a decision is made....This is because regulating outcomes (beyond requiring decision makers to pursue broad statutory goals) is logically impossible in cases of scientific uncertainty.⁶²

In other words, the rationale for the precautionary principle does not lie in its substantive legitimacy.⁶³ The very conditions of uncertainty that require the precautionary principle preclude us from evaluating the principle solely on its ability to generate effective outcomes.⁶⁴ It would be difficult, if not impossible to know when an unforeseen catastrophe has been avoided. Instead defenders of the principle look to its potential to instantiate procedures through which a community can collectively decide how to proceed in the face of uncertainty. Most defenders of the precautionary principle therefore argue that it requires a more inclusive decision-making process, which formalizes non-expert citizen participation and collective decision-making.⁶⁵ This enables the consideration of factors that do not fit into the language of risk assessment—factors such as voluntariness, or whether potential risks may affect already marginalized populations—

⁶¹ Ellis above n 34, 453.

⁶² Elizabeth Fisher & Ronnie Harding, "The Precautionary Principle and Administrative Constitutionalism: The Development of Frameworks for Applying the Precautionary Principle" in Elizabeth Fisher, Judith Jones, René von Schomberg (eds), *Implementing the Precautionary Principle: Perspectives and Prospects* (Edward Elgar Pub, 2006) 113, 115.

⁶³ See Whiteside, above n 55, Chapter 5 (in particular at 123) for a notable exception.

⁶⁴ This means that frequent charges against the principle—such as Cass Sunstein's claim that it is irrational—miss the mark: Sunstein, above n 34. Indeed, Sunstein finds the Rio Declaration definition of precaution "unobjectionable" (23) and endorses an "Anti-Catastrophe Principle," which in his view is narrower than precaution but necessary because of worst-case scenario threats whose probability cannot be assessed (109).

⁶⁵ Whiteside, above n 55, 119; Peel, above n 27, 222-7; Fisher, above n 29 at 43 (describing the deliberative constitutive interpretation of the principle).

and it opens up the process of risk assessment to critical analysis from a variety of perspectives. While the specific procedural requirements of the precautionary principle are vastly different from what principles of preventive justice require in situations where serious liberty-infringement is at stake, we shall now see that both ought to be understood as essential to maintaining and enabling the autonomy of individuals. In other words, both are attempts to maintain our fundamental commitment to democratic governance under the rule of law, even when faced with conditions of uncertainty.

Part III. Precaution, Prevention and the Rule-of-Law Project

The rule of law, as is often noted, is an “essentially contested concept.”⁶⁶ The conception of the rule of law advanced here is the idea that public officials must publicly justify their decisions on the basis of core constitutional principles. It is a conception elaborated by David Dyzenhaus, who states that its basic content is that

legislation must be capable of being interpreted in such a way that it can be enforced in accordance with the requirements of due process: the officials who implement it can comply with a duty to act fairly, reasonably and in a fashion that respects the equality of all those who are subject to the law and independent judges are entitled to review the decisions of these officials to check that they do so comply.⁶⁷

On this view, what makes law *law*—and not merely an act of political power—is its compliance with the rule of law. And it is this compliance that creates its own kind of legal legitimacy.⁶⁸ This is why public officials, such as those defending ‘advanced interrogation tactics’ in the aftermath of 9/11, seek to justify their actions by pointing to their prior legal authorization. Dyzenhaus calls this *rule by law*, the notion that an action is governed by law in the formal sense that it is authorized by positive law.⁶⁹ But Dyzenhaus argues that we cannot have rule by law without *rule of law*, such that the failure of public actions to comply with the rule of law calls into question its status as law.

⁶⁶ WB Gallie, ‘Essentially Contested Concepts’ (1955) 56 *Proceedings of the Aristotelian Society* 167, 169.

⁶⁷ David Dyzenhaus, *The Constitution of Law: Legality in a Time of Emergency*, (Cambridge University Press, 2006), 12-3.

⁶⁸ Sarah Murray *infra*.

⁶⁹ Dyzenhaus above n 67, 6 and 206.

Preventive measures, notably in the counter-terrorism context, are often examples of attempts to rule *by* law without the rule *of* law. Individuals facing significant infringements to their liberty are deprived of basic rights of due process: *e.g.* the right to know the case against them, the opportunity to properly contest this case before an independent tribunal.⁷⁰ To the extent these measures fail to comply with the rule of law, they lose their claim to legal legitimacy that comes with the status of law.

Dyzenhaus defends this conception of the rule-of-law project on the basis that it respects underlying values of liberty and equality. While the underlying rationales for the rule of law are much debated, I have argued elsewhere that it respects and enables the autonomy of law's subjects, understood as their rational and self-determining capacity.⁷¹ In other words, law is something worth having, not only because compliance protects individuals from arbitrary public decisions, but also because compliance with the rule of law is what enables legal subjects to reason with the law: to understand it and obey it, or to contest it and thereby participate in further deliberations about what the law is and ought to be. When legislation complies with well-known formal indicia of the rule of law (public, general, prospective, etc), is implemented congruently with the stated rule, and is subject to review by independent judges the autonomy interests of those subject to law are respected.⁷²

However not all issues can be adequately addressed exclusively through legislative provisions that meet these formal criteria. Complex environmental decisions require the exercise of administrative discretion in response to technical and constantly evolving environmental decisions. Public officials may need to move swiftly and decisively to protect individuals and environmental health from pollutants, to halt activities that undermine our ecological support systems, or to respond to an environmental catastrophe. Sound environmental decisions may further require a solid grasp of scientific and ecological knowledge to recognize how environmental issues—and our understanding of them—are constantly evolving. Similarly,

⁷⁰ [Editors: Reference to George Williams' chapter as example of a measure that departs significantly from ordinary requirements of due process].

⁷¹ Jocelyn Stacey, *The Constitution of the Environmental Emergency* (DCL Thesis, McGill University, 2015). See also Hoi Kong, 'Election Law and Deliberative Democracy: Against Deflation' (2015) 9 *Journal of Parliamentary and Political Law* 35 at Part I; Kristen Rundle, *Forms Liberate: Reclaiming the Jurisprudence of Lon L Fuller* (Hart Publishing, 2012).

⁷² Lon Fuller, *The Morality of Law*, rev ed (Yale University Press, 1969); Rundle above n 71.

responding to national security issues requires security expertise, decisive and coordinated action, and often secrecy. All of these features militate against governing exclusively through prospective and general legislative rules. Rather, responding to environmental issues and security issues in order to prevent future harm requires considerable administrative infrastructure that raises further questions about how administrative decision-making can nonetheless comply with the rule of law.⁷³

But when we understand the rule of law as serving the end of autonomy—that is, it protects individuals from arbitrary decisions and allows them to reason with the law—then it is possible to understand how both administrative decisions and emergency response decisions can comply with the rule of law.⁷⁴ When these decisions are publicly justified on the basis of core constitutional principles, i.e. fairness and reasonableness, they will comply with the rule of law.⁷⁵ This conception of the rule of law gives rise to the familiar requirements of due process powerfully defended by preventive justice scholars, but importantly it can only be realized within a deliberative democracy.⁷⁶ While there are many theories of deliberative democracy, all share a fundamental understanding of the individual as a responsible agent capable of reasoning with the law.⁷⁷

It is at this intersection—of the rule of law and deliberative democracy—that the precautionary principle comfortably rests. The precautionary principle, in its best light, ought to be understood as an attempt to preserve this reasoning capacity of legal subjects even under conditions of uncertainty that challenge our ability to make fully informed public decisions. The details of what the precautionary principle will require in order to fulfill the requirement of public justification are necessarily context dependent. In broad strokes, however, they consist of three features. These features better capture the nature of the relationship between the state and

⁷³ Stacey above n 5. The status of administrative law as *law* is a perennial question. See, e.g., E L Rubin 'Law and Legislation in the Administrative State' (1989) 89 *Columbia Law Review* 369; Philip Hamburger, *Is Administrative Law Unlawful* (University of Chicago Press, 2014).

⁷⁴ This is the central argument of Dyzenhaus, above n 67.

⁷⁵ The public justification conception of the rule of law also opens up the possibility of using creative institutional design, such as specialized tribunals, to ensure that especially challenging decisions are nonetheless publicly justified, so long as these tribunals are ultimately subject to review by the court.

⁷⁶ Dyzenhaus hints at this with his 'culture of justification' in Dyzenhaus, above n 8, 114.

⁷⁷ E.g. Amy Gutmann & Dennis Thompson, *Why Deliberative Democracy?* (Princeton University Press, 2004), 3.

legal subject than any attempt to equate the precautionary principle with a reversed-burden-of-proof or any attempt to square the precautionary principle with a risk assessment framework. On this view, the principle requires a decision-making procedure that enables collective reasoning about how to proceed in the face of uncertainty, one that ensures that expert information is exposed to public scrutiny. In other words, the process must be justified on the ground that it promotes democratic deliberation. It requires detailed reasons by the decision-maker that identify sources of uncertainty and the assumptions used to factor that uncertainty into the decision. And it requires proper institutional channels for independent review. The result of these features is that the precautionary principle operates to inform ordinary administrative law requirements of fairness and reasonableness to ensure they reflect the reality of environmental decision-making. These are simple, but demanding, requirements. In many instances they are met. But the examples offered in this chapter demonstrate that public officials often fall short by failing to offer reasons,⁷⁸ or setting an untenable threshold for non-experts with legitimate concerns about uncertain consequences.⁷⁹

While these features might look quite different from what we would expect in the preventive justice context when significant liberty interests are at stake, they nonetheless share the essential characteristics of the rule of law. In their respective contexts, principles of preventive justice and precaution ensure there is an open process in which those affected by the decision have meaningful opportunities to be heard; they ensures affected individuals can contest a decision that is of questionable legality before an independent tribunal. Moreover, these principles operate to make democratic participation is internal to the requirements of the rule of law. This conception respects the legal subject's capacity to reason with the law, i.e. to participate in the ongoing project of articulating and rearticulating the content of the law.

Conclusion

This chapter has explored the connections between the precautionary principle in the preventive justice context and the precautionary principle in environmental law. It traced the

⁷⁸ *Morton v Minister of Fisheries and Oceans and Marine Harvest Canada*, 2015 FC 575.

⁷⁹ *Telstra Corp Ltd v Hornsby Shire Council*, [2006] NSWLEC 133.

roots of the preventive justice characterization of the precautionary principle through its operation in the environmental context. It argued that, at least in Australia and Canada, the reality of the precautionary principle is somewhat tamer than that imagined by preventive justice scholars. The precautionary principle has not operated to address instances of true uncertainty in the environmental context, it has not operated to displace a risk assessment paradigm, and it does not typically compel any particular course of preventive action. At the same time, however, the hopes of environmental law scholars remain high. They argue that the precautionary principle has far more potential than is currently realized.

While a broader, reinvigorated precautionary principle may be a source of anxiety amongst preventive justice scholars, this chapter has sought to assuage these concerns. It has advanced an understanding of the precautionary principle that is wholly consistent with the normative project of preventive justice, a project, as I understand it, of articulating how we can maintain our commitment to the rule of law even under conditions of uncertainty about future harm. It is thus misguided to claim that the precautionary principle can provide a basis for sweeping preventive action in the national security context. The precautionary principle, in its best light, is an essential part of realizing commitment to democratic governance under the rule of law in the environmental context. And in this sense, it and preventive justice are complementary efforts to both protect and enable the autonomy of those subject to the law.