

INTRODUCTION: THE MANY FACETS OF PRECAUTIONARY LOGIC

The collection of contributions to this issue of *Erasmus Law Review* illustrates the breadth of the academic writing on the theme of precaution. Only the article by Trouwborst can be considered to belong to the original domain of the legal discourse on the precautionary principle (PP) as a principle of international environmental law. The rest of the contributions clearly show that other disciplines have become involved as well.

This broadening of academic interest in precaution can be explained by the fact that the application of the PP is often highly contested. The European Union's claim that the PP is a received principle of international environmental law is problematic, at least in the sense that questions of when and how to apply it always give rise to considerable controversy. The PP can therefore be considered a 'contested concept'. It is true that the PP can be found in many international treaties, but it is equally true that all treaties use different words to state the meaning. In fact, many legal scholars deplore this lack of uniformity. The jurisdiction of courts thus far has not improved this state of affairs, as Marchant and Mossman have shown for the EU court.¹

Cases where the application of the PP is suggested are highly controversial in political, moral, and economic terms. The proof of success for legal concepts, principles, and rules is their routinisation. Their meaning becomes standardised and their application a matter of everyday habits. Regardless of the fact that it is carried out by professionals, habitual application is always unreflective. The precondition for this kind of unreflective application of legal concepts is their successful depoliticisation. Only then may concepts become part of our 'mental furniture' and thereby enter 'the world taken for granted', which is populated with routines and habits.

When controversy remains, depoliticisation and therefore routinisation is impossible. The contributions to this issue demonstrate that the PP certainly remains contested in its meaning, in its domains of applicability, and in its mode of application. This is partly the case in all

¹ G.E. Marchant and K.L. Mossman, *Arbitrary & Capricious* (Washington D.C.: The AEI Press 2004).

instances where we try to deal with risks. As Douglas and Wildavsky have stressed previously, risk and morality are strongly connected.² To name a certain risk is to state who is the victim and who is the perpetrator. This positioning depends on decisions about what can be considered damage and who is responsible for preventing it. We also need to decide who suffers the damage and whether they can be considered to be blameless victims deserving of protection and compensation. It is obvious that this kind of question is hard to answer and that the answers will always be contested.

Our societies are proud to be democracies governed by the rule of law. In such a context, political controversy should be – seen to be – resolved by arguments. This need for arguments in the public and political arena explains why precaution is discussed in many diverse disciplines. Much work in the legal domain centres on achieving consensus on the meaning and correct application of the PP. Trouwborst in particular has tried to deduce the ‘true core’ of the PP from an analysis of treaties and jurisprudence.³ In his present contribution, he continues his quest for conceptual clarification by exploring the relation between the PP and ‘the’ principle of prevention. His conclusion that adaptation of the PP renders the principle of prevention obsolete is provocative and will predictably inspire further discussion.

Given the fundamentally controversial nature of precaution, the successful standardisation of the PP is not likely to happen in the near future. However, two Dutch advisory bodies published reports in 2008 that can be seen as attempts to depoliticise the PP. This is especially true for Precaution with Reason by the Health Council of the Netherlands.⁴ The committee that prepared this report was chaired by Charles Vlek, whose personal contribution to this issue reflects a similar attempt. From a decision-theoretical perspective, Vlek offers an elaborate conceptualisation of the PP. In this elaboration, precaution loses its connection with environmental

² M. Douglas and A. Wildavsky, *Risk and culture: an essay on the selection of technological and environmental dangers* (Berkeley: University of California Press 1982). Also see M. Douglas, *Risk and blame: essays in cultural theory* (London: Routledge 2002).

³ A. Trouwborst, *Precautionary rights and duties of states* (Utrecht: Martinus Nijhoff Publishers 2006); A. Trouwborst, ‘The Precautionary Principle in General International Law: Combating the Babylonian Confusion’ (2007) 16 *Recie* 185. Also compare W. Douma, *The Precautionary Principle: its application in international, European and Dutch law* (Groningen: Rijksuniversiteit Groningen 2003).

⁴ Gezondheidsraad, *Voorzorg met rede* (The Hague: Gezondheidsraad 2008) [Health Council of the Netherlands, *Precaution with reason*]; see <<http://www.gr.nl>>. Also see Wetenschappelijke Raad voor het Regeringsbeleid, *Onzekere veiligheid: verantwoordelijkheden rond fysieke veiligheid* (Amsterdam: Amsterdam University Press 2008) [Scientific Council for Government Policy, *Uncertain security: responsibilities concerning physical safety*]; see <www.wrr.nl>.

protection, which according to Trouwborst remains the core of the PP as a principle of international law. In fact, the PP has scarcely any connection to specific material domains in Vlek's conceptualisation, notwithstanding the fact that the Health Council advised specifically on the application of the PP in the domain of public health. Vlek proposes a PP that is mainly of a procedural nature. To act in a precautionary way is to act in a carefully considered fashion that allows all relevant parties and interests to fully participate in the decision-making process. Vlek incorporates much of the criticism that is directed against the PP by stressing that the costs and benefits of all relevant policy options in the case at hand should be considered carefully.

The relevance of discourses concerning the PP for criminal law has become widely accepted since Jessica Stern pointed to the precautionary nature of the way the Bush administration responded to 9/11.⁵ The most elaborate attempt to show this relevance comes perhaps from Richard Ericson, whose *Crime in an Insecure World* inspired this issue on precautionary logic.⁶ Borgers and Van Sliedregt, both professors of criminal law, discuss the PP in this context.⁷ Following Sunstein's criticism of the PP in *Laws of Fear*, they focus especially on his idea of an 'anti-catastrophe principle'.⁸ After describing the counter terrorism measures that several EU countries introduced in their criminal law, they conclude that these 'are all centered around the notion of "prevention".' They agree that such measures may be criticised for being driven too strongly by fear and for introducing risks for the civil rights of citizens. However, they stress that such criticism easily overlooks the importance that citizens attach to safety and security. Their analysis of Sunstein's anti-catastrophe principle in this context results

⁵ J. Stern, 'Fearing evil' (2004) 71 *Social Research* at 1111. She developed her argument further with J.B. Wiener in 'Precaution against terrorism' in P.J. Bracken, I. Bremmer and D. Gordon (eds.), *Managing strategic surprise: lessons from risk management and risk assessment* (Cambridge: Cambridge University Press 2006); this publication is also available on the internet at The Social Science Research Network: <<http://ssrn.com/abstract=902373>>. In 2004 Pat O'Malley discussed the PP in his *Risk, Uncertainty and Government* (London: Glasshouse Press 2004) which mainly concerns criminological topics. Also compare Frank Furedi, who also contributes to this issue, *Invitation to terror: the expanding empire of the unknown* (London: Continuum 2007) and C.R. Sunstein, *Worst-case scenarios* (Cambridge, Massachusetts: Harvard University Press 2007).

⁶ R.V. Ericson, *Crime in an insecure world* (Cambridge: Polity 2007).

⁷ Borgers' inaugural lecture *De vlucht naar voren* (The Hague: Boom Juridische Uitgevers 2007) [*The flight forward*] is the first Dutch contribution to the criminal law discourse on the PP.

⁸ C.R. Sunstein, *Laws of fear: beyond the Precautionary Principle* (Cambridge: Cambridge University Press 2005). Also compare C.R. Sunstein, *Risk and reason: safety, law, and the environment* (Cambridge: Cambridge University Press 2002).

in a proposal that emphasises the need for a decision-making process in which the pros and cons of changes in the criminal code are considered carefully. In this sense, their contribution is similar to Vlek's. It would seem likely that Borgers and Van Sliedregt consider Vlek's proposal promising for application in this context.

As Ericson and O'Malley show, the PP is relevant for analysing developments in criminal law outside the attempts to counter terrorism.⁹ However, this domain remains the clearest example of the application of precautionary logic in the realm of criminal law. Developing his argument from *Invitation to Terror*, Frank Furedi analyses the 'precautionary culture and the rise of possibilistic risk assessment'. His contribution is highly critical in claiming that the application of a precautionary logic leads to an attitude towards the future that makes us fear that anything and everything may go wrong. Here his analysis runs parallel to a common theme in discussions about precaution, where uncertainty is stressed beyond the limits of scientifically valid predictions. In his sociological analysis, he links the precautionary logic to a loss of faith in the modern ideal of creating a better world through human intervention. In this sense, the precautionary logic, according to Furedi, signifies a loss of faith in the human capacity to do good.¹⁰ Whereas people in the 20th century embraced modern utopias, in the 21st century we seem to focus on post-modern dystopias. From this perspective, the threat of terrorism is even quite small compared to the climate crisis that global warming is thought to have in store for us.

Like Furedi, Hanekamp offers an explicitly critical analysis of precautionary logic. His analysis contains two important themes. The first is a search for the historical roots of precaution. In writing on the need for precaution with regard to environmental degradation, it is common to refer to Rachel Carson's *Silent Spring*.¹¹ Hanekamp shows, however, that two years before Carson published her criticism of the use of nuclear energy and pesticides, Herman Kahn wrote *On Thermonuclear War*, which for instance popularised the term 'megadeath'.¹² Kahn tried to develop ways of anticipating the Soviet nuclear threat. In this endeavor he 'believe[s] not only the impossible and the improbable, but also the implausible, the unlikely, and the unproven.' Such statements show that Rumsfeld's infamous statement on 'unknown unknowns' that we have to take into

⁹ Cf. n. 5 and 6.

¹⁰ Also see F. Furedi, *Culture of fear: risk-taking and the morality of low expectations* (London: Continuum 2002); note the subtitle.

¹¹ R. Carson, *Silent Spring* (London: Penguin Classics 2000) [original American publication: 1962].

¹² See for more information <http://en.wikipedia.org/wiki/On_Thermonuclear_War>. Kahn's book was published in 1960 by Princeton University Press. It is reprinted in 2007 by Transaction Publishers.

account when dealing with terrorist threats has a renowned pedigree. This kind of reasoning is a clear example of Furedi's 'possibilistic thinking'. In fact, Kahn goes beyond 'possibilism' by believing even the impossible.

Hanekamp's other theme is the relation between science and policy. He criticises authors who stress the limited value of scientific knowledge and plead for citizen participation. In his view, this kind of precautionary logic is strongly connected with utopian attempts to control the future. From this perspective, the attempts to create a sustainable future by foreseeing and forestalling all possible environmental threats are not different from Kahn's attempt to foresee and forestall all possible Soviet nuclear threats. By surpassing the scientific domain of theoretically validated and interpreted facts and entering the domain of the possible, the improbable, and the unknown, we contribute to the erosion of science. We do this by ignoring the 'tentative, exploratory, [and] questioning' character of science in our quest to find a certain and secure future that takes us beyond what we can reliably know.

Arnoldussen also offers a critical analysis of precautionary logic. His analysis is philosophical in nature. He identifies several 'absolute presuppositions' that can be found in all precautionary reasoning. These suppositions are absolute in that they are never questioned but always implicitly assumed to be self-evident truths. Like Furedi, Arnoldussen concludes that the suppositions of precaution stand in stark contrast to those of the Enlightenment. Along this historical line, he points to parallels between precaution and the religiously inspired philosophy of several church fathers from the Middle Ages. From this analysis, Arnoldussen draws the tentative conclusion that precautionary policies will tend to be of a moderate nature. Starting from the presupposition of the fragility of nature, humankind, and society, precaution will tend to warn us to be moderate and not to upset 'natural balances'. Arnoldussen postulates that precautionary policies therefore will be of a moderate nature as well.

All of the contributions offer an analysis of a different aspect of precaution. In conclusion, I want to offer some thoughts on what may be called the hermeneutic aspect of precaution. Whenever precaution is advocated, we tend to find remarks about the increased complexity and uncertainty of the reality we face in our time. For the most part, the claim is made that the nature of the world itself has changed: our social, economic, and political reality has become more complex and uncertain. Less often the claim is made that our attitude towards the world has changed. Because of this change of perspective, the world appears to be more complex and uncertain. And as our perspective determines our actions, the increased complexity and uncertainty we ascribe to the world actually is the result of a self-fulfilling prophecy.

The view that the nature of the world itself has changed seems hardly convincing. Think of the position Alexander the Great, Charlemagne,

or Philip II of Spain were in. Whenever they left their palaces they entered uncertain territory. This condition began as soon as they left their homes and became worse the further away that they moved. Even palaces themselves were not always safe for rulers. The question is whether we leave our homes with an optimistic sense of adventure or with a sense of dread. Do we venture out for the purpose of advancing the quality of our lives or for the purpose of guarding ourselves against threats that have remained hidden thus far?

The change in dominant cultural outlook pointed to by Furedi and Arnoldussen brings us to the second possibility. It is not so much that the world has changed but that we approach the world with a different attitude. It would be interesting to explore the role scientists and philosophers – or intellectuals in general – have played in this change. Peter Bernstein showed in *Against the Gods* how the idea of ‘risk’ gradually was picked up in political, economic, and legal practices.¹³ This changed those practices for good. In a similar way, it is important to write the remarkable history of uncertainty. Uncertainty has certainly become a true buzzword among scientists today.¹⁴ As a working title for such a history, I suggest *Against all Odds*.

The ‘post-modern’ turn in the appreciation of science will probably have a prominent place in this history. Proponents of precaution often criticise the arrogance of scientists and stress the limited value of scientific knowledge.¹⁵ And in a sense they are right; it is true that all received scientific knowledge is ‘valid through’ today. However, the more we seek security for a future that is further away from us, the more we encounter uncertainty. In this way, precautionary academic writing takes us away from what we can know with reasonable certainty. In encouraging us to ensure a sustainable world for our grandchildren – and for theirs – precautionary logic

¹³ P.L. Bernstein, *Against the Gods: the remarkable story of risk* (New York: Wiley 1996).

¹⁴ See for instance O’Malley, above n. 5; G. Bammer and M. Smithson, *Uncertainty and risk: multidisciplinary perspectives* (London: Earthscan 2008); O. Renn, *Risk governance: coping with uncertainty in a complex world* (London: Earthscan 2008); M. Power, *Organized uncertainty: designing a world of risk management* (Oxford: Oxford University Press 2007); J. O. Zinn (ed.), *Social theories of risk and uncertainty* (Oxford: Oxford University Press 2008); and R. Pieterman, *De voorzorgcultuur: streven naar veiligheid in een wereld vol risico en onzekerheid* (The Hague: Boom Juridische Uitgevers 2008). [The precautionary culture: striving for security in a world full of risk and uncertainty].

¹⁵ See for instance European Environmental Agency, *Late Lessons from Early Warnings: the precautionary principle 1896-2000* (Copenhagen: EEA 2001). The report can be downloaded at: <www.eea.eu.int>. Also compare C. Raffensperger and J. Tickner (eds.), *Protecting public health & the environment: implementing the precautionary principle* (Washington D.C.: Island Press 1999).

urges us to try to foresee and to forestall problems that could arise in the long term. Climate models typically have a time horizon of one or two centuries. Herman Kahn too wrote a book on the next two hundred years.¹⁶

The Dutch Scientific Council for Government Policy urges us in *Uncertain Security* to take uncertainty seriously.¹⁷ For the Council, this means that we need to look beyond what we know or can predict with reasonable certainty. It is difficult to see how this could lead to anything but speculation. However, if we refrain from attempting to control the future and settle for piecemeal engineering, taking uncertainty seriously can also be understood as a plea to accept that the validity of all knowledge is limited.¹⁸ Such acceptance should lead us to lower our aspirations in trying to create a 'sustainable' world.

All future generations will eventually and inevitably face their own 'present'. Perhaps the best we can do is to make sure that our children are well educated and have sufficient resources to effectively face the dangers they are sure to come up against. Many of these dangers are not known by us nor can they be known now. The realm of the known and the unknown unknowns is out there, and it will always remain beyond our present grasp. Accepting this is a cultural change that seems hardly possible, given the vested interest many institutions and scientists now have in the existence of an uncertain future. However, the precautionary turn that started in the 1960s and 1970s was also thought to be impossible, as it went against many of the dominant interests of that time.¹⁹ To answer Vlek's final question: I do feel that hope is a better counsellor than fear.

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¹⁶ H. Kahn, W. Brown and L. Martel, *The next 200 years: a scenario for America and the world* (New York: Morrow 1976).

¹⁷ Cf. n. 4.

¹⁸ See K. Popper, *The poverty of historicism* (London: ARK Paperbacks 1986).

¹⁹ Pieterman, above n. 14.

