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Risk assessment, policy-making and the limits of knowledge: the precautionary principle and international relations.

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Abstract

This paper looks at the way in which the idea of the Precautionary Principle, increasingly influential in environmental and other policy areas, is being and might be used in foreign and security policy. It aims to contrast the relative precision with which the term is used in the environmental arena with the current usage in international relations. Contrasting the Precautionary Principle with ideas of precaution, prevention, pre-emption and similar terms in post-structuralist analyses of risk, humanitarian intervention and US foreign-policy in the aftermath of September 11th 2001, the paper identifies costs and benefits in deploying a more carefully specified account of the Precautionary Principle. In particular, it highlights key issues of regulatory authority and the way in which policy-makers and analysts understand and respond to the limits of knowledge and knowledge-systems as important challenges to which careful use of the Precautionary Principle can potentially contribute. The paper concludes by suggesting that both policy-making and policy analysis could potentially be improved by adapting and extending the idea of the Precautionary Principle as it is deployed in other policy arenas.

Key words: hazard, precaution, Precautionary Principle, risk, security, Iraq war, Just War, governmentality

Introduction

The language of foreign policy has been significantly altered since the attacks on the World Trade Centre and Pentagon on 11 September 2001. Led by the Bush Administration's much analysed, debated and critiqued National Security Strategies of 2002 and 2006, the issues of regime change and preventive war (or preemptive war in the terms of the National Security Strategy) have driven the idea that attaining national security in the face of terrorism requires innovative techniques.¹ The use of enhanced interrogation techniques (or torture in plain terms) and 'extraordinary rendition' have reinforced the argument that a changed security situation and different sort of security threat demand a move away from previously proscribed practices.²

What holds these different instances of those arguments for innovation together is the idea of anticipatory action, sometimes labelled 'precaution'.³ In order for the US government (although the argument ought, in theory anyway, to hold for any other government) to fulfil its fundamental 'obligation' to provide for the security of its citizens in changed circumstances action must be taken in advance of threats becoming fully formed and indisputably apparent.⁴ Whether that be overthrowing governments suspected of planning to acquire nuclear weapons, or striking terrorist organisations planning further mass-casualty attacks or, at its most threatening, a proliferating government willing and able to assist a terrorist organisation, the gathering of intelligence information and the snuffing out of plots must take place at the earliest possible opportunity.⁵

The idea of anticipatory action in advance of complete knowledge of either the consequences or likelihood of a particular course of action has generated a great deal of political and academic debate and discussion, and in realms well beyond the foreign policy of the United States. Ideas of hazard, risk and precaution are, indeed, embedded in the legal, institutional and regulatory practices of policy-making in areas such as environmental and public health policy, in particular via the 'Precautionary Principle' (PP). In these arenas, these terms have acquired, over three decades or so of debate, advocacy and implementation, a comparative precision of meaning and rigour of use that is in contrast to the way such terms are generally deployed across accounts of foreign policy-making and analysis.

Specifically, this paper aims to look at the way that current discussion of risk and the Precautionary Principle confuse a number of separable ideas and draw their power from different intellectual backgrounds and approaches. There is, for example, a lack of careful differentiation between hazard and risk that tends to blur the physical, measurable and predictable with the social, subjective and unpredictable. Concepts of 'risk' and 'precaution' are deployed in various ways, for example analyses of governmentality indebted to Foucault,⁶ notions of precaution, very different in kind from the post-structuralist readings, derived from Just War theory;⁷ and a general sense of 'better safe than sorry' underpinning preventive war strategies.⁸ None of these, the paper argues, capture the idea of the Precautionary Principle as used in other policy arenas and this is unfortunate for two reasons. Firstly, it confuses and undermines a useful tool for policy-

making and policy analysis. Secondly, it serves to obscure a key challenge facing efforts to transpose precautionary policy-making from arenas like environmental policy to foreign policy: regulatory authority.

Risk, Hazard and the Precautionary Principle

Within arenas where the Precautionary Principle affects policy-making and analysis there are typically two elements to assessing a potential threat. First is hazard, which can be defined as ‘threats to people and the things they value’.⁹ Second is the concept of risk which is commonly defined as ‘the probability of an adverse future event multiplied by its magnitude’.¹⁰ These are clearly linked – hazard is a necessary element of risk – but they tend to invite different types of analytical approach depending on the types of hazard that we are concerned with and the way in which we understand probability and magnitude. The debate on hazards and risks tends to fall under two distinct arguments: objective risk (science-based assessments of risk issues); and perceived risk, (risk as a cultural construct). Objective risk is a way of accurately measuring probability and magnitude by quantitative, reductive scientific procedures. During the 1980s, the Royal Society *Report of the Study Group on Risk Assessment*¹¹ was, according to one risk management theorist, ‘the canonical exposition of risk policy’.¹² It was a scientific understanding which views risk ‘as the probability that a particular adverse event occurs during a stated period of time, or results from a particular challenge. As a probability in the sense of statistical theory, risk obeys all the formal laws of combining probabilities’.¹³

By contrast, the idea of perceived risk relies on cultural theory to describe a different version of risk. In a pioneering study, it was argued that society deals with risks in a culturally determined way, rather than being linked to objective risk measurement.¹⁴ In this approach to risk, which is incomprehensible to the scientific mind, the nature of the hazard and its probability are subjective. For example, as Adams noted, 'slipping and falling on ice ... is a game for young children, but a potentially fatal accident for an old person. And the probability of such an event is influenced both by a person's perception of the probability, and by whether they see it as fun or dangerous'.¹⁵ The argument here is that social and cultural processes are at work that are not recognised under classic scientific investigative methods. On a societal level this approach to risk takes account of moral, political, economic and cultural factors, rather than simply objective risk measurement.¹⁶

It is clear that there are uncertainties, ambiguities and sometimes ignorance in the process of attempting to define hazard and risk, with a view to ascertaining whether they are serious enough for some form of remedial action. As a result, there is scientific uncertainty that goes beyond the range of known, observable uncertainties that are recognised within the parameters of the system being researched. 'Scientific knowledge gives prominence to a restricted agenda of defined uncertainties – ones that are tractable – leaving invisible a range of other uncertainties, especially about the boundary conditions of applicability of the existing framework of knowledge to new situations'.¹⁷ In his seminal work, Wynne produced a typology to identify four different kinds of uncertainty: risk,

uncertainty, ignorance and indeterminacy. *Risk* is considered to be when we 'know the odds' – that is, when we know the boundaries of the system under investigation, and are able to measure in some way the factors involved. *Uncertainty* represents knowledge of the parameters of a system's 'limitations of observational and measurement techniques'.¹⁸ *Ignorance* is that which is not known: for ignorance to be identified, new knowledge must be discoverable. The last category, *indeterminacy*, is the 'recognition of the open-ended and conditional nature of knowledge and its embedded-ness in social contexts'.¹⁹ This fourth category recognises that social behaviour has to be included into the policy process, and this is a characteristic of the Precautionary Principle. It highlights the point that the 'objective risk' approach implies that risk is always quantifiable, but in doing so it reduces scientific uncertainties to the notion that what is studied by experts is controlled and all ambiguities are solvable.²⁰

The development of the PP owes much to the UN Conference on Environment and Development held in Rio de Janeiro in June 1992, where solutions were sought to find ways to conserve resources for future generations – the idea of sustainability. The PP has also become a guiding idea in European Union environmental policy.²¹ In recent years the precautionary principle has been used increasingly in areas other than sustainability issues, such as health screening and food related issues.²²

Principle 15 of the Rio Declaration neatly demonstrates the main elements of the PP: 'Where there are threats of serious or irreversible damage, lack of scientific

certainty shall not be used as a reason for postponing *cost-effective* measures to prevent environmental degradation.²³

Despite the tensions and the difficulties of definition we can observe certain common characteristics within the Precautionary Principle.²⁴ These would include:

a. Acceptance of the limits of current knowledge on a given issue

Governments clearly need the rationality that hard scientific evidence brings to the appraisal of risk because technological risk situations need sound scientific evidence to discover where the uncertainty is located. But they should also recognise the conditional nature of scientific knowledge and that the uncertainties often prevent sound recommendations;

b. Openness to alternative solutions

In the presence of ignorance and uncertainty, initiators of the problem under investigation should be prepared to look for alternative solutions to the safety of their products/systems;

c. Proportionality of response

Costs of actions to reduce or prevent hazards should not be disproportionate to likely benefits and should not aim for zero risk. The focus here is on the *magnitude* of the uncertainty. Rather than simply saying 'there is some uncertainty therefore we should not proceed', this suggests that the *level* of

uncertainty should be assessed, and that the solution should be proportional to the problem;²⁵ and,

d. Reversing the 'onus of persuasion'

If the process of decision-making is to be fair, attention must be paid to the burden of persuasion – 'which party has the burden of demonstrating or refuting a presumed fact'.²⁶ However, the idea that the burden of persuasion should be shifted to the proposers of innovation to convince other stakeholders that there is not a problem is quite a radical change as negatives are difficult to prove, and any formalising of the duty of care may stifle innovation and growth.

Thus, the PP 'is broadly characterised by the acceptance of the limits of scientific knowledge (science does not know all the answers); its openness to alternative solutions (other disciplines can contribute to the debate); the placing of the burden of proof on the initiators of technological change ...; and the inclusion of the knowledge of wider society rather than that of science and industry alone'.²⁷ These characteristics recognise that social behaviour has to be included in the policy process and therefore leans towards perceived risk, rather than objective risk measurement which are based on reductionist science alone.

Risk and Hazard in International Relations

The arena of international relations is one where debates about hazard and risk would, at first glance, appear to be particularly applicable. The subject has traditionally been dominated by questions, such as war, where these ideas would

seem to be central. Yet the usage of these terms is typically imprecise, at least in comparison with other policy areas.

Major areas of foreign and defence policy – nuclear deterrence, for example – are all about manipulating probabilities and managing the most extreme sorts of hazards imaginable, such as global thermonuclear war, in order to achieve political goals, including, potentially, peace. Equally, technological innovation has had major effects on these sorts of debates and policies, and thus arms control negotiations have, for example, had to balance the effect innovation may have on highly valued goals in ways that do not bring about unacceptable costs. It is possible to read many of the classic nuclear arms control treaties via a lens of risk and the management of that risk in order to avoid the hazard of war with the potential to escalate to nuclear confrontation. Issues of ignorance and uncertainty, to borrow Wynne's ideas, also play their role. There is also a clear interaction here between objective and subjective risks, with the latter being far more important to understanding the politics of nuclear deterrence and arms control than the former.

However, this apparent precision of hazard and risk, objective versus subjective risk and the clarity that formal risk assessment promises is difficult to obtain.²⁸ This might help explain why the idea of hazard is one that seems to appear very rarely in international relations and then in the context of formal modelling.²⁹ We understand that the scientific certainty of an objective analysis of hazards and the modellable and statistically demonstrable risks that they may give rise to is rarely

attainable in international relations, and particularly in policy-making. Different political cultures and the beliefs and values of individual decision-makers may have significant effects on a willingness to take risks – risk appetite – and on the appreciation of the different risks that a situation may bring.

It is therefore not altogether surprising that the issue of subjective risk has been picked up more extensively. The social dimension of risk has been heavily influenced by the ideas of Ulrich Beck in his influential sociological discussions of 'Risk Society'.³⁰ Beck's principal focus is on the transformation of what IR would traditionally label 'domestic' societies under the impacts of modernisation and technology and a distinctive move away from the social, political and economic processes that characterised the industrialising phase of modernity. Beck has developed this idea into the notion of 'world risk society', drawing on the debates over globalisation and the idea of the transformation of international relations away from 'Westphalian' models emphasising sovereignty, territory and ideas of state-based power and national interests.³¹ The creation, manipulation and management of risk is a key aspect of these sociological processes and creates social, political and economic environments in which opportunity, power and reward are intimately connected with the ability to take, share and exploit risks and where technologies of risk management, such as insurance and financial instruments, play a key role.³²

Risk and governmentality in IR

It is noteworthy, though, that many of the efforts to incorporate risk into IR depart in important ways from the idea of risk as Beck deployed it, bringing it instead into contact with key notions drawn from contemporary continental political theory, and in particular Foucault's notion of 'governmentality'.³³ This allies the idea of risk to a broadly critical and post-structural perspective that analyses risk in terms of its contribution to the ability of governments to establish narratives supportive of apparatuses of discipline and control. In particular, important and interesting recent work has used risk as a tool for assessing the significance of the war on terror as a particularly distinctive form of this logic of governmentality, taking the idea of the catastrophic level of risk associated with major terrorist attacks as the basis for extending technologies, techniques and discourses of surveillance and intelligence gathering to unprecedented heights in the name of 'precaution'.³⁴

Thus the idea of precaution has begun to appear within this literature, too, although in a way that is at odds with the form to be found in the Precautionary Principle.³⁵ In this Foucauldian mode of understanding risk, precaution is about the governmental logic underpinning more and more stringent and extensive forms of intelligence gathering and surveillance in support of the need to meet the unattainable political imperative of reducing the risk of catastrophic terrorist attack to zero.³⁶ This is used to justify various coercive forms, from indefinite detention through extraordinary rendition, 'enhanced interrogation' (i.e. torture), to preventive war. These practices demonstrate logics or create forms and spaces that connect the notion of risk to other crucial critical concepts in post-

structuralist analyses, such as the idea of the exception and the work of both Carl Schmitt and Giorgio Agamben.³⁷

The virtues and insights of such forms of analysis are many and varied, and the use of the notion of risk within post-structural analyses of international relations is an important move in turning back on itself as a tool of critique an important element of the justification of exceptional, even unlawful, policies in the name of defraying or even defeating the risks posed by fundamentalist trans-national terrorism. Policy-making is revealed as reliant on an ostensibly impartial, even quasi-scientific, notion of risk and risk management that is neither of these things. Instead, this veneer hides a process of power accumulation and deployment that is changing the nature of surveillance and intelligence gathering in ways that undermine liberty and centralise control over permissible framings of political challenges.³⁸ Policy-analysis deploying more conventional understanding of the Precautionary Principle are also subject to critique as a part of the problem because of the way that they buy into the idea that we can attain a degree of independent, even apolitical, knowledge about these risks that will enable us to devise effective strategies of risk management.

This paper resists this post-structuralist move, however, in favour of considering how it is that the Precautionary Principle as it has been developed within environmental and public health fields is beginning to enter into the foreign and security policy fields as a policy-making tool and as a mode of policy analysis rather than as a rhetorical device or critical concept. This requires us to be more

sensitive to the way that critical uses of 'risk' tend to emphasise the social construction and manipulation of the interplay between, in the case of major terrorist attacks, catastrophic risks at very low levels of probability to justify political actions. As the post-structuralists argue, we should be sceptical of efforts to deploy seemingly scientific ideas like hazard, risk and probability in defence of policies that accrue power to certain, already highly privileged, actors. However, that does not mean that we should assume that these analytical tools have been irretrievably coopted into the discourse of power and can no longer be used as analytical tools and in the policy-making process to good effect.

As the language of risk becomes more widely deployed, especially in relation to terrorism, and as policy-makers stress the importance of addressing risks as early as possible,³⁹ the need for precision and accuracy in how hazard and risk are conceptualised and deployed in policy debate grows. The distinctions noted earlier in Wynne's work of risk as something about which we can know the odds and indeterminacy or even ignorance, which demand different responses identifying the limits of our knowledge and the possibility of discovering new knowledge, are not closely observed in the post-structuralist approach. Indeed, risk is seen by some as characteristic of the unknowable or the purely imaginary.⁴⁰ These, at least on the account of the Precautionary Principle developed at the start of this paper, are different types of knowledge situations and ought to require different types of responses. Does this separation represent a viable paradigm for how we might think effectively about risk, precaution and the Precautionary Principle in the policy-making and policy analysis context?

Precaution, humanitarian intervention and Just War

One area where the idea of precaution has been explicitly invoked in policy-making and analysis is humanitarian intervention, but here, too, there are problems of conceptual specificity that hamper the transfer of the PP from environmental and public health fields to foreign policy.⁴¹ For example, according to Ramesh Thakur, 'Even when the just cause threshold of conscience-shocking loss of life or ethnic cleansing is crossed, intervention must be guided by the precautionary principles of right intention, last resort, proportional means and reasonable prospects'.⁴² However, although Thakur makes reference to various threshold criteria that need to be countenanced by policymakers, he has, nevertheless, referred to plural precautionary principles. In other words, Thakur does not offer us a working definition of what a foreign policy based on the Precautionary Principle might be. Instead, he has forwarded what might be regarded as principles that are precautionary. They are also precautionary in the sense that we should exercise care in how we respond to an event – 'conscience shocking loss of life or ethnic cleansing' – that has already occurred. This contrasts with those who see precaution as being about acting in advance of speculative or imagined harms.⁴³

A similar point arises in the ICISS report, co-chaired by Gareth Evans and Mohamed Sahnoun. According to this report, 'criteria for military intervention for human protection purposes ... can be succinctly summarised as right authority, just cause, right intention, last resort, proportional means and reasonable

prospects'.⁴⁴ Interestingly, further on in the same report the authors argue that right intention, last resort, proportional means, and reasonable prospects be classified as 'other precautionary criteria'.⁴⁵ The authors then proceed to urge that the UN General Assembly 'adopt a draft declaratory resolution embodying the basic principles of the responsibility to protect, and containing... *an articulation of the precautionary principles (right intention, last resort, proportional means and reasonable prospect)* that must be observed when military force is used for human protection purposes'.⁴⁶ Although the authors are clear in defining the precautionary criteria that would need to be satisfied in the event of military action being prosecuted for the purpose of protecting humans, it should not be forgotten that they refer to plural 'precautionary principles'. One is left to wonder whether, for example, 'right intention' might be one individual and discrete precautionary principle compared to, for the sake of argument, the other precautionary principle of 'last resort'.

This vagueness stems, we argue, from the lack of careful conceptualisation of risk in this area. There is a very general sense of the Hippocratic principle – first do no harm – at work, so that before acting to address humanitarian emergencies we should be careful to ensure that we do not make the situation worse. What is striking, however, is that this notion of precaution seemingly derives from a moral obligation on the part of those countenancing intervention that is the corollary of the basis upon which a putative right to intervene rests. The idea of the Precautionary Principle embodied in the Rio Declaration simply appears inapplicable in this context. The risks of serious or irreversible damage

are present, but lack of *scientific* certainty is simply unavoidable and we are thrown back on issues of political judgement which are significantly influenced by moral claims that are inescapable outside the sort of scientific assessment and testing regime that may be applicable in environmental policy. The post-structuralist notion of risk as indeterminate and a mechanism for controlling the future through manipulating political subjectivity is also absent in the face of events that have already occurred and demand a political response.⁴⁷

The existence of cosmopolitan moral obligations owed across sovereign boundaries to fellow human beings undergoing grave harms at the hands of, or as a result of the failure of, their government animates the humanitarian intervention debate.⁴⁸ The argument of Responsibility to Protect is that those obligations can, in extreme circumstances, justify the use of coercive military might to mitigate or halt those harms. The argument most typically used in international relations against such action – that it infringes on the sovereignty of the state that is subject to intervention – is overruled because that claim to sovereignty is seen to be derivative from the state's ability to protect and promote the prior rights of its citizens. Where a state and its government are unable or unwilling to fulfil this obligation, the claim to sovereignty lapses. Indeed, the act of intervention may be seen as being restorative of sovereignty because the ultimate aim should be the restitution of a political authority that can and will uphold citizens' rights.⁴⁹ This is not just a prudential move in the name of the international order or the enhancing of security, it is an importantly moral obligation that ought to be fulfilled. Because of both the unpredictability of the

outcomes of the use of armed force and the moral seriousness of fighting and killing in the name of protecting lives and rights then measures should always be taken to try to prevent such circumstances occurring in the first place and all reasonable alternative courses of action should be explored.

These are rarely circumstances, and these are not analytical questions, which lend themselves to objective, statistical analysis based on clear scientific evidence. The idea of risk as a significantly social phenomenon is stretched further in this usage to incorporate not just social understandings of the significance of certain risks to things that society values, but also ideas of universal moral hazards – that we should value the lives of other human beings elsewhere in the world and respond to threats to those lives. We must also respond to crises that threaten the moral value attached to the sovereign state, conceptualised in Responsibility to Protect as the best available means for the protection and promotion of human rights.

The deployment of moral argument and the derivation of these ‘precautionary principles’ from the tradition of Just War theory is highly significant. It is difficult, and potentially intellectually dangerous, to aim at generalisation about a tradition of thought as diverse and dynamic as that of Just War, but the use of principles like proportionality, just cause, reasonable prospects, right intention and legitimate authority – classic *jus ad bellum* principles – in this way suggests an effort to transfer potential bases for normative enquiry into empirical principles for assessing policy options.⁵⁰ Just War theory does not lend itself to the kind of ‘tick

the box' approach to moral assessment implied by the use of precautionary principles by Thakur or Evans and Sahnoun. The idea of a knowledge system with well-understood boundaries, processes and outcomes enabling us to know the risks we are taking is not one that many would apply to humanitarian intervention. The uncertainty involved in these principles goes much further than uncertainty about whether some particular interpretation of how they might apply in a given set of circumstances is fulfilled or not.⁵¹ Instead, what we are reminded of here is the moral significance of political action and the perennial need for moral enquiry into the use made of lethal organised violence in the name of a greater good of some kind, whether that be order, justice, humanitarianism, human rights or one of several other possible candidates.

The Precautionary Principle as deployed in environmental policy is of a different kind than these precautionary principles. It offers an approach to policy-making and analysis that is useful in these sorts of circumstances because it urges us not to demand certainty before we act and to acknowledge the need for judgement and the taking of political responsibility in the face of competing predictions of the future outcomes of policy choices. It is not, though, of great help in answering profound moral questions and that should be acknowledged.

Differences between the PP and existing ideas: prevention and pre-emption

Therefore, when it comes to this field, the literature assessing the Precautionary Principle in the specific sense is limited, although some work is being done.⁵² In addition, this wider literature does not seem to adequately distinguish between

precaution and prevention. The distinction between the two is that: 'precaution concerns potential or hypothetical hazards (uncertainty) whereas prevention deals with known and recognised risks'.⁵³ It is hypothetical hazard that tends to be most prominent in the post-structuralist literature, for example. Moreover, elements of precaution are arguably increasingly visible in foreign policy. Terms such as prevention, pre-emption and precaution need careful examination to avoid confusion. Kegley and Raymond, for example, remind us, '*preventive* military attack entails the use of force to eliminate any possible future strike, even where there is no reason to believe that aggression is planned or the capability to launch such an attack is operational'.⁵⁴ In other words, 'preventive war is based on the concept that war is inevitable, and that it is better to fight now while the costs are low rather than later when the costs are high'.⁵⁵ Therefore, it 'might be argued that preventive war arises 'from states' inability to trust each other to keep to a bargain'.⁵⁶

Some literature claims the Precautionary Principle provided an important element of US defence strategy under George W. Bush.⁵⁷ Such arguments in this literature do not differentiate sufficiently between the PP and the preventive principle. The difference is that the PP is triggered by uncertainty as to the facts of the issue in hand, while prevention deals with purportedly known situations: there is no apparent doubt as the desires and intentions of al Qaeda, only its capabilities. On the other hand, pre-emption 'is nothing more than a quick draw. Upon detecting evidence that an opponent is about to attack, one beats the opponent to the punch and attacks first to blunt the impending strike'.⁵⁸ An

example of this strategy would be the Israeli offensive in the 1967 Six Day War, where Israeli intelligence detected an existential threat from its neighbours and landed the first blow.⁵⁹ Nevertheless, a pre-emptive strike is not precautionary as it relates to a danger where the probability is certain, rather than being a matter of debate and dispute.

In a BBC TV documentary, the writer and producer Adam Curtis examined the war on terror policies of the US and British Governments over recent decades.⁶⁰ The documentary examined the threat from organised terror networks and asked whether they are an illusion. Curtis argued that there is a shift from evidence-based 'what is' decision-making to a speculative, imaginary 'what if', or worst-case scenario decision-making.⁶¹ Towards the end of the programme Curtis quotes the former British Prime Minister, Tony Blair, as stating that the politician's role in this new threat was to look into the future and imagine the worst that might happen and then act ahead of time to prevent it.⁶² Curtis then posed the idea that this statement means the Prime Minister was embracing the Precautionary Principle. It may be that precaution is actually a better characterisation of what the US government styles as 'pre-emption', but which most IR scholars see as preventive war, given the uncertainties involved.

However, the level of those uncertainties is a very significant issue. In a famous example of taking precautionary thinking to its logical extremes, former US Vice-President Dick Cheney propounded the '1% doctrine' – the idea that if there was a 1% chance that Iran could acquire a nuclear weapons capability the US should

act as though it were a certainty.⁶³ This is an example of precautionary thinking, certainly, but it is also an example of an exceptional lack of analytical sophistication. Suggesting that US policy on a crucial international issue should be based on a marginal possibility, itself linking through to other marginal possibilities to do with the uses that Iran might make of such a capability and that Iran's behaviour might not be influenced by a whole range of deterrent strategies, is misguided at best. The Precautionary Principle is not about the elimination of risk, as Cheney's doctrine appears to be, or Blair's account of the changing nature of political responsibility might suggest. It is also easy to see how arguments like Cheney's or Blair's also feed into the post-structural, governmentality analysis of the use of the language of risk, too. Instead, however, the Precautionary Principle is about the acceptance and management of risk. It is impossible to eliminate risk, but there needs to be, in policy-making and analysis, a balance of judgements about what are and are not acceptable risks, linked to the value of the putative outcomes of accepting certain risks and in awareness of the limitations of knowledge. The view that the elimination of the possibility of highly unlikely but catastrophic risks, such as a nuclear attack by a terrorist organisation in a major city, is both an overwhelming political duty that can justify any policy promulgated and prosecuted in its name and the paradigmatic example of risk-based analysis and the deployment of the Precautionary Principle is seriously mistaken. The need for awareness of the distinction between precaution in the face of hypothetical hazard and radical

indeterminacy and the Precautionary Principle in the face of at least some reliable knowledge of the level of risk is an important if easily overlooked one.

The '1% doctrine' or other examples of extreme 'better safe than sorry' thinking reiterate the point that the idea of the Precautionary Principle tends to be used with a lack of specificity in international relations. However, an additional issue that the 1% doctrine highlights is the question of who decides that a risk is at the level of 1%, 10% or 99.9%, beyond which we leave precaution behind and move into the realms of preventing that which is a known outcome in absence of countervailing measures? Key questions remain unresolved about who has the authority to judge the level of risk and whether or not to invoke the Precautionary Principle. Here, we argue, there is a significant challenge that particularly affects efforts to operationalise the Precautionary Principle as a foreign policy making tool.

The Precautionary Principle and the Challenge of International

Authority: Invading Iraq

Appealing to the Precautionary Principle is a complex and potentially highly controversial task. The most significant challenge facing translating this principle to making and analysing foreign policy is the authority structures that are typically presumed in discussions of the Precautionary Principle and those at work in the arena of international politics. This is not to appeal to some simplistic 'domestic politics equals hierarchy' versus 'international politics equals anarchy' dichotomy, but it is to note that the Precautionary Principle generally adopts an expectation

about authority structures that assumes there is consensus, or even formal and institutionalised mechanisms, for determining where decision-making authority lies. Thus within the public health and environmental contexts, especially within Europe, governmental or EU bodies have established the rules about when the Precautionary Principle ought to be applied and can adjudicate on disputes between those pressing for its application and those preferring alternative approaches, such as 'sound science'.

These lines of authority are far less clear in the international arena, at least outside of the European Union. Thus debates about the precautionary principle as a way of formulating, presenting and assessing foreign policy decisions face some important challenges in terms of fundamental questions about the regulatory environment. This is illustrated by two existing analyses of the decision-making in the run up to the 2003 Iraq invasion. McLean and Patterson argue that the Precautionary Principle can be deployed as a way to understand the resistance to the invasion being led by the French and German governments in UN Security Council debates. The US, as the initiator of a new technique – 'preventive war' – for managing a complex nexus of policy-problems, faced the need to persuade the sceptics on the Council of the probable safety and effectiveness of their proposed course of action. However, Stern and Wiener see the US government as being the proponent of a policy appealing to the Precautionary Principle, seeing the UN as an obstacle to the deployment of this principle and as peripheral to the authority the Bush administration was aiming to deploy.⁶⁴ Here the regulatory authority is also the policy initiator, with the role of

precaution and the PP much more in line with the way risk has tended to be used in IR and where being seen to take early and effective action in the face of potentially catastrophic hazard in the absence of certainty is centre-stage. Issues of supra-national regulatory authority, sources of information – such as the UN weapons inspection teams – and the risks to the viability of these systems are swept away by a presumed national security imperative that trumps all other perspectives. This is perhaps hardly surprising given the prominence and influence of so-called ‘new sovereigntist’ thinking on the Bush Administration at that time, with its deep distrust and legal rejection of any claims to authority over the United States by extra-Constitutional bodies, such as the UN, ICC and even the WTO.⁶⁵ These diametrically opposed views highlight the issue of perspective on authoritative regulatory institutions and the opportunity for contestation over this question within international relations, an opportunity that, although not absent, is less extensive within the state or within highly institutionalised international environments like the EU.

Additionally, the centrality of foreign and defence policy to debates about sovereignty, and the perception that absolute control over such matters are at the very heart of traditional notions of sovereignty exacerbates this tension. For example, Stern and Wiener frame their discussion on the basis that authority lies with the United States government as the sovereign authority.⁶⁶ Seeing the UN Security Council as the ‘regulatory authority’ pushes towards the idea of the Precautionary Principle mitigating against preventive war because of the way that many members of the Council opposed the innovative policy being pushed by the

United States and United Kingdom. The risk being considered was therefore the risk associated with a policy proposal that departed from established, even legally enshrined, notions about the legitimacy of the recourse to war, including the rejection of preventive war, and some of the most deeply entrenched standards of international politics, such as the non-intervention norm. The risk involved thus stemmed from the actions of the US and UK and the justifications they were offering. For Stern and Wiener, the issue is the risk supposedly, if erroneously, posed by Iraq and the need argued for by the US to take steps to protect both US national security and wider issues of regional and global security.⁶⁷

The question of political framing becomes of immense importance in interpreting and applying the Precautionary Principle to the formulation, presentation and analysis of foreign and security policy. The challenge of knowing the level of risk associated with particular hazards, such as the acquisition by Iraq of weapons of mass destruction, and the extent, reliability and presentation of that knowledge thus become acute in highly contested circumstances such as these when the deployment of massive military force is at stake. An appreciation for Wynne's different types of uncertainty and the potential contribution they could have made to generating more precise and careful debate was sadly lacking amongst policy-makers, perhaps not surprisingly, but often, it would seem, amongst analysts too. Knowing the difference between 'risk' and 'uncertainty' or 'ignorance' could have informed and improved public debate in significant ways, although expecting governments to be open about their levels of uncertainty and ignorance may be

asking rather more than is politically plausible. Nevertheless, this distinction does help to highlight how it is that the usage of 'risk' in international relations is covering a multitude of finer distinctions and different political and analytical agendas that, ideally, require clarification, separation and an established basis for authoritative adjudication.

The Precautionary Principle and the Challenge of Authority: the role of non-governmental authorities

One way in which the problem of governments being generally unwilling to call time on policies they have frequently initiated and institutionalised is partially overcome by establishing a role for non-governmental organisations (NGOs). This has become a common feature of policy-making based on the Precautionary Principle. There are ways in which non-governmental actors have been able to secure a voice in the process that must be considered and taken into account by those who ultimately take the decisions. This has served to diversify the range of voices heard, broaden the perspectives on a particular policy challenge and reduce the risks of overly narrow 'expert' opinion becoming entrenched and privileged in ways that can close-down debate and close-off potentially important sources of evidence.⁶⁸

Outside of foreign policy there have been some notable moves in this direction. For example, the UK government's review of the regulatory framework and the guidelines for scientific advice lays down new definitions of what is meant by the term 'expert' and what constitutes 'relevant' advice to government.⁶⁹ This means

expert sources are taken to include not only scientists but also public research bodies, consumer and other stakeholder groups, and lay membership of government committees. Similarly, the Phillips' Report on the UK's BSE outbreak stressed the need for government departments to insure that recruitment to membership of expert committees should be based on an expanded definition of who is an expert, and urges members of committees themselves to identify clearly and precisely their remit, and for advice itself to be honest about uncertainties.⁷⁰ And in the EU, the Commission's policy document on the PP outlines its approach to the dilemma of balancing the rights of individuals, industry and the need to reduce risks to the environment, human and animal health.⁷¹ Thus a more socially inclusive approach to environmental decision-making is owed to a move towards a commitment to the concept of precaution.

It is misleading to suggest, as many critics do, that the PP simply means that business and science cannot innovate unless their proposals or discoveries satisfy a body of people who are firm defenders of the *status quo*. Rather, evidence of a link between a damaging effect and an activity must have been noticed by someone, or some scientific or governmental body to trigger an investigation under the PP. An example of this in the early years of the twentieth century was the reports of several factory inspectors of the effects of asbestos on workers in those factories. This led to asbestos being identified as toxic to workers and eventually to other substances being used.⁷² In reality what happens is that informal early warning systems exist, such as the factory inspectors in the above example, and environmental NGOs and pressure groups who can act as

competent observers and raise instances of emerging problems. These competent observers do not produce absolute 'proof beyond reasonable doubt' but their observations/objections are enough to trigger a decision to evoke the PP. Therefore, the idea that those who innovate and invent are subject to a veto by a group of people who are obsessively attached to an absolute version of the PP is not what the PP is about. It bears repeating that precaution and prevention are not synonymous: the PP is triggered by uncertainty as to the facts of the issue in question, while prevention deals with known situations.

There are few democracies that do not sport a vibrant range of think-tanks, public affairs organisations and academics willing and able to play such a role within a policy-making framework indebted to the Precautionary Principle. Different political systems may, though, be less or more receptive to formalising the PP into their policy practices. This has been the experience in the environmental arena. For example, the Precautionary Principle has varying degrees of legitimacy amongst civil society groups within the US, UK, Germany and France. The academic literature suggests that the PP is more accepted in the continental European states than it is in the UK or US⁷³ although recent research has argued that this characterisation is stereotypical.⁷⁴ Some commentators have suggested that this might be due to the latter countries' preference towards minimal state intervention in the economy.⁷⁵ However, general support for the PP within wider society does not mean government will accept it in policymaking or, even where it does, that more than lip-service will be paid on individual issues. The general

assumption that the PP is more influential in France and Germany than the US or UK is usually in relation to areas of 'low politics' such as environmental policy.⁷⁶

Other commentators argue that there is a clear divide between the US and EU in international regulation for environmental protection purposes. The US objects to the PP because, it is argued, the principle's ambiguity lends itself to misuse as a pretext for protectionism. The EU prefers a formalised idea of precaution, providing a legal basis for regulatory decision-making which recognises scientific uncertainties and monitors for change.⁷⁷ Therefore, it would appear that a research agenda is currently developing that examines the extent to which the idea of the PP is amenable to national governments as an idea and a way to frame, direct and validate social learning. It would appear that the PP would be more amenable to governments in countries such as Germany or France, and less so to governments within the US or UK, given how these states view the PP in environmental politics. We might speculate that the latter governments might be more reluctant to embrace the PP through their general reticence to pool sovereignty within international organisations (the United Nations in terms of the US, and the European Union in terms of the UK). In comparison, it could be argued that issues of sovereignty are less important to the French and Germans.

Conclusions

The language of hazard, risk, prevention and precaution has never been absent from foreign policy making or analysis, but it does seem to have become more prevalent in recent years, particularly since 2001. Whether concerned with critical

investigations into the role of risk in strategies of governmentality or the need for ethical caution in the face of humanitarian crisis, the necessity of responding to uncertainty is unavoidable. It is also, though, hardly novel, but what marks out these recent moves is the sense of an organised effort to channel policy-making and analysis down certain routes to create structure and direction. The use of the Precautionary Principle in the environmental field has appeal in this regard, because of the way that it established principles upon which decision-making in the face of uncertainty can be based. However, as this paper has tried to show, the uncertainties in the field of foreign policy are of a different sort and there are distinctive challenges.

The tension between objective and subjective risk is both acute – the problem of (mis)perception is well known in international relations – and open to manipulation, as stressed in post-structural analyses. The moral significance of action stressed in the use of precautionary principles in Responsibility to Protect adds to this problem. The lack of scientific certainty, statistically valid analyses and established mechanisms for testing, evaluating and reviewing data all bedevil such debates. Deploying the Precautionary Principle in foreign and security policy-making is not a straightforward task.

The PP is, though, a very useful analytical tool for framing, discussing and critiquing the kinds of precautionary claims that are increasingly made in foreign policy arenas such as the ‘war on terror’ and humanitarian intervention. As ideas of risk are increasingly appealed to by policy-makers and scholars, the PP offers

a valuable counter-point to the looseness of public political debate and the emphasis on discourse and critique emphasised by those reading risk through post-structuralist lenses. Policy making and policy analysis in environmental and public health sectors have benefited from this approach, suggesting a valuable contribution can also be made, at least in analytical terms, in international relations.

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