Full citation: Lucas, Peter, "Valuing Birds in the Bush: For Pluralism in Environmental Risk Assessment."
Environmental Values 11, no. 2, (2002): 177-191.
http://www.environmentandsociety.org/node/5852

Valuing Birds in the Bush:
For Pluralism in Environmental Risk Assessment

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ABSTRACT

It is now widely acknowledged that social theorists can make an important contribution to our understanding of environmental risk. There is however a danger that the current ascendancy of social theory will encourage a tendency to assimilate issues around environmental risk to those at stake in entrenched debates between realist and constructivist social theorists. I begin by citing a recent example of this trend, before going on to argue that framing the issues in terms of a monism/pluralism dichotomy would make for a more informative analysis. Noting that realists and constructivists can make common cause against risk monism, I turn, in the second half of the paper, to setting out a positive case for risk pluralism. Citing some fictional examples of risk behaviour, I show how different individuals might rationally adopt different perspectives on the same risk. I conclude by exploring some implications of the truth of risk pluralism for two current approaches to environmental decision-making (which I term, respectively, the 'teleological-pluralistic' approach, and the 'economic-monistic' approach). I argue that the importance of risk pluralism lies in its capacity to highlight the shortcomings of the latter approach.

KEY WORDS

Pluralism, monism, realism, insurance, risk

INTRODUCTION

This paper argues for a pluralistic approach to environmental risk assessment. The task is made more complex than it might have been by the fact that while there are good grounds for understanding central theoretical issues around

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environmental risk in terms of a monism/pluralism dichotomy, these issues have tended to be viewed as pitting realists against constructivists. Prior to engaging with the question of the truth of risk pluralism then, I seek to show why framing the issues in terms of a monism/pluralism dichotomy makes for a more informative analysis. I begin by considering a recent survey of approaches to environmental risk. I argue that while the typology this survey provides implies a fundamental realism/constructivism dichotomy, the position it associates with realism is more accurately characterised as a form of risk monism. I then observe that a realist/contructivist coalition against risk monism would be possible; and, having acknowledged that the monism/pluralism dichotomy is not an exhaustive one (since anti-monism may also take a relativist form), I turn to consider the truth of risk pluralism directly. I conclude by considering some practical political implications of the truth of risk pluralism.

1.

In her recent article 'The Songlines of Risk' Sheila Jasanoff distinguishes three different approaches to environmental risk which are dominant as we head into the new millennium.[1] The general character of these approaches is indicative of the substantial impact that social-scientific understandings of risk have had on the prevailing orthodoxy of the 1980s. In the 1980s risk assessment was predominantly seen as a technical affair, cleanly isolable from social and political questions.[2] The range of currently dominant views, by contrast, evidences a general acceptance that risk assessment involves an ineliminable social dimension.[3] But while this development may well signal a significant step forward in our understanding of environmental risk, the typology Jasanoff sets out does not represent the most informative framing of the remaining issues.

Although the three approaches to environmental risk that Jasanoff distinguishes are all significantly indebted to social theory, the overall picture she presents remains a mixed one, since the insights of social theorists are taken up to different ends, and in different ways. The overriding goal for two of the three approaches is that of understanding the origins of competing *perceptions* of environmental risk. These approaches are, in their different ways, primarily indebted to constructivist social theories, and they both portray perceptions of environmental risk as socially embedded.[4]

The overriding goal for the third approach, by contrast, is that of pointing a way toward effective environmental risk regulation.[5] This third approach is premised on the monistic assumption that a uniquely rational perspective on environmental risk is in principle available; and it applies a theory of bureaucratic failure to explain why, given the availability of such a perspective, risk regulation has in practice rarely been a recognisably rational affair. The proffered explanation is that a compound of corruption, inertia, incompetence and

opportunism has caused a loss of governmental control over the environmental risk agenda. As a result the doubts and fears of a frequently irrational public have, almost by default, functioned as the driving force behind environmental risk regulation.[6] This third approach does not however restrict itself to a diagnosis of the difficulties confronting those concerned with effective regulation of environmental risk, it also embodies a proposed remedy for those difficulties. According to Stephen Breyer, Jasanoff's chosen exponent of the 'bureaucratic failure' thesis, what is now required is an environmental risk 'superagency' (Jasanoff's term).[7] The proposed superagency will be a branch of the executive arm of government,[8] and its task will be that of bringing a degree of 'uniformity and rationality' to decision making in what is understood to be a 'highly technical' area. The superagency must be mission-oriented and somewhat independent; it must also possess 'broad authority' and 'significant prestige'.[9]

Jasanoff argues that Breyer's 'superagency' approach to environmental risk is fundamentally undemocratic;[10] and there would seem to be some justice in this charge – the superagency looks, on the face of it, to be more aptly characterised as an organ of technocratic than of democratic government. Breyer does however have a response to this charge. He observes that democratic institutions may achieve legitimacy in different ways: if to describe an institution as 'democratic' is to attribute to it a capacity to reflect changing public moods in a suitably fine-grained fashion, the proposed superagency will not be a democratic institution. However even a 'closed' institution of the superagency kind can reasonably be characterised as democratic, according to Breyer, if it succeeds in bringing single-mindedness, efficiency and expertise to bear on problems of pressing importance, in a manner that is consistent with the underlying public interest.[11] The 'democratic' legitimacy of the proposed superagency could then be said to reside in its capacity to efficiently address underlying environmental risks, while screening out the 'noise' generated by the day-to-day doubts and fears of a frequently irrational public.

Aside from the question of the general defensibility of the sense of 'democratic' Breyer invokes here, it will be apparent that its applicability in this context presupposes a contrast between (publicly) perceived and *underlying* environmental risk – a presupposition that is notably absent from the two alternative approaches that Jasanoff discusses. The dependency of the superagency approach on this contrast suggests that it is the contemporary representative of a realist approach to environmental risk. Jasanoff herself associates the superagency view with a realist view of risk;[12] and, given the constructivist orientation of its main theoretical competitors, it seems that some rather familiar battle lines are implicit in her account. Given the general cultural importance of the superagency view,[13] it seems likely that future debates around environmental risk will concern the relative merits of this view and its constructivist alternatives, and will crystallise around the types of questions that have hitherto divided realist and constructivist theorists in other fields of social-scientific enquiry. We can

envisage a future in which the central theoretical questions around environmental risk are taken to be: is the realist ambition to identify underlying environmental risk, independent of the 'lenses' supplied by culture,[14] a viable one? If not, must we conclude all risk perception to be significantly culturally conditioned? If all risk perception is significantly culturally conditioned, how can we distinguish rational from irrational responses to risk? etc.

However, even granting the general accuracy of Jasanoff's analysis, there is no necessity to frame the question of the relative merits of the superagency view and its competitors in terms that would pit realists against constructivists. As has already been mentioned, the superagency view embodies a monistic view of risk, and while realism is certainly not in general incompatible with monism, it would be a mistake to conclude, as Jasanoff's remarks might lead us to conclude, that a relationship of mutual entailment obtains between the superagency view and realist approaches to risk. The superagency view may, historically, have received sustenance from realist sources. But if we distinguish risk monism from such possible non-monistic alternatives as risk pluralism – the view that a plurality of rational perspectives on risk are in principle available to us – and risk relativism – the view that no perspective on risk can legitimately be distinguished as either 'rational' or 'irrational' – then we will be equipped to recognise that there is no necessary link between realism and a monistic view of risk. To categorise any phenomenon as an example of a risk is, implicitly or explicitly, to attach a value to it. And since it is perfectly possible to be a realist and a pluralist about values (Aristotle is generally held to have been both a realist and a pluralist in this sense), it is possible to be a realist and a risk pluralist.[15] The pluralist realist will hold that different individuals may rationally value the same outcome differently, and thus that a plurality of rational perspectives on the same risk may coexist.

A further possibility that goes unacknowledged in Jasanoff's account is that of a monist constructivism. Hegel is perhaps the best example of a monist constructivist, who combines a thoroughly constructivist understanding of human knowing with a conviction that the historical development of reason is a teleological and monistic process, inexorably advancing toward a uniquely rational form of knowing. The twin possibilities of pluralist realism and monist constructivism give us reason to resist framing the question of the relative merits of the superagency view and its constructivist alternatives in realism v. constructivism terms. A pluralist realist would regard the monistic assumption on which the superagency model is premised as a fundamental flaw, while a monistic constructivist might well come out in favour of something very close to the superagency view. Simultaneously, pluralist realists and pluralist constructivists might form a common front against the monism embodied in the superagency approach.

That said, the ease with which a pluralist common front against risk monism might be established should not be overstated. In particular, the relativist

inclinations of such important constructivist sources as Foucault and Kuhn might suggest – to realists and constructivists alike – that relativism is the more natural partner of constructivism.[16] Getting to the bottom of the question whether, all things considered, constructivists should really be relativists, would be an immense undertaking. However, having established that the superagency approach is more accurately characterised as a monistic approach than as a realist one, I have established the general suitability of the monism/pluralism dichotomy as a framework within which to explore the relative merits of the superagency view and its competitors. I therefore want to side-step more detailed questions concerning the relation of constructivism to relativism, by moving straight to a positive case for risk pluralism. I do so on the basis that if the truth of risk pluralism can be established, then both risk monism and risk relativism will have been refuted, and constructivists will have been presented with a powerful incentive to come out as pluralists. The argument that follows aims to remain neutral on the issues that continue to divide realists and constructivists. The best evidence of the truth of risk pluralism turns out to be rather banal: the existence of the insurance industry. More particularly, the existence of insurance contracts that can be rationally entered into by both parties. If both insurer and insured can rationally enter into the insurance contract this can only be because they are capable of adopting different but simultaneously rational perspectives on the same risk.

2.

Proverbially, a bird in the hand is worth two in the bush. Of course no-one would claim precision for a proverb, but in this case the proverb affords us a neat way to distinguish three different types of perspective on risk.

We can begin by identifying some counter-instances to the proverb, literally interpreted. Most obviously perhaps, a bird in the hand will not be worth two in the bush if, other factors remaining equal, the odds of retrieving any one bird from the bush depart significantly from 0.5. Other factors are almost never equal of course – for example, the birds in the bush might be a breeding pair. If the birds in the bush are a breeding pair, then even with the odds of retrieval of the pair at, say, 0.1, they may well be worth considerably more than the bird in the hand. Equally, the birds in the hand and in the bush might belong to different species. If the bird in hand is a pigeon, and those in the bush are sparrows, the combined value of the birds in the bush might be less than that of the bird in hand, for odds of retrieval very much better than 0.5. Even if it were unrestrictedly true that a bird in the hand is worth two in the bush then, it would be a mistake to conclude that this reflected nothing more than the odds of retrieval – a number of additional factors may be in play. It might be thought that these additional factors intrude because 'birds' constitute a highly heterogeneous class, and on this basis it might

be concluded that the relevant additional factors would be absent if we were dealing in a homogenous commodity – such as money, for example. But even in the case of money, contextual factors, having a similar effect, are always in play.

Imagine a lottery game in which, for a ticket price of one pound, you get a one in a million chance of winning a million pounds. Is it rational to play? Who can say? The odds seem unusually fair. But partly because the odds are so fair, it is hard to say whether it is rational to play. For now everything seems to come down to a question of the relative value, from the potential player's perspective, of the ticket price and the prize. Cases are conceivable in which it would clearly be irrational to play. Potential player A is down to his last few pounds, and has no source of income or unofficial credit. He knows however that on his 21st birthday he stands to receive a very large legacy from an eccentric great-uncle, and he will be 21 at the end of the week. But the legacy has a condition attached: to be eligible he must be able to demonstrate financial solvency on the day of payment. If he can remain solvent for just a few more days he will henceforth have little need of the million pound prize, but he needs to safeguard his meagre and rapidly-dwindling resources to ensure solvency. In this situation it seems that it would not be rational for A to play, despite the reasonable-seeming odds. Player B, on the other hand, is not so lucky. He has a secure but humdrum and rather poorly-paid job, with no chance of promotion. He does however have considerable entrepreneurial and artistic talent, and an original and exciting plan for a civic art resource that, if brought to fruition, would represent a considerable cultural benefit to his community, and a not-insignificant long-term financial benefit to B himself. But the plan involves an investment of £.7 million, and he cannot raise the necessary capital. The one pound ticket price is of practically negligible value to B, but the value of the prize would be immense. Here it seems it would be rational of B to play the game. These examples reveal how contextual factors can ensure that 'the same' risk – measured in purely financial and statistical terms – of giving up a one pound stake for a one in a million chance at a million, may be rationally taken on by one person, and not by another. But what explains this difference?

Perhaps it will be thought that the difference results entirely from the different values A and B place on the sums at stake, and to be gained. It is a familiar thought that 'the same' sum might have different exchange values for different individuals, and in this case it is perfectly possible that A and B might have different ideas of the number of, say, work-hours that would represent a reasonable exchange for a million pounds. But a difference of this kind wouldn't necessarily explain the difference in risk values that has emerged here. Ordinarily we would consider an individual's assessments of exchange value to be, where rational, linear – such that any difference between A and B on the question of the number of work-hours which would represent a fair exchange for a million pounds would be reflected in fairly precise proportion in the different numbers of work minutes which each would consider a reasonable exchange for a

pound.[17] Even where A and B attached different exchange values to the sums involved, so long as their individual scales of values remained linear, there would be little reason to expect that a bet that one of them considered attractive would be unattractive to the other. Within reasonable limits, whatever value I attach to a million pounds, to stake a millionth of that amount on a one in a million chance of winning a million seems a reasonable bet, if not necessarily an attractive one. Even if A and B valued the million differently then (again, within reasonable limits), so long as their scales of exchange values remained linear, what proved an attractive bet for one would be likely to prove an attractive bet for the other.

But we have seen that in this case what is an attractive bet for B is not an attractive bet for A. It looks then as if the difference that has emerged between them is not due to the fact that they are operating with different, but nevertheless linear scales of exchange value – it is not as if they have similar conceptions of the relative values of a pound and a million pounds, but differ on the question of the exchange values of those sums – rather, it looks as if the reason that they have different views of the rationality of the gamble is that they are operating with different *non-linear* scales of risk-value. For A, a single pound with a probability factor of 1 is worth considerably more than a million with a probability factor of .000001, while for B the reverse is true. It is the difference in the relative values each of them places on the sums involved *when the probabilities are taken into account* that makes the difference, not any difference in their conceptions of the non-risk exchange value of the sums at stake. This being so, the difference between the perspectives of A and B might co-exist with agreement between them on the non-risk exchange values of ticket price and prize. It could easily be that they agree that the one pound ticket price is worth half a pint of beer, or three chocolate bars, or a quality newspaper, a bag of crisps, and a box of matches etc., and that the prize money would be worth such and such a flat in central London, or such and such a combination of exotic cars and adventure holidays, and yet that they might still rationally disagree on the wisdom of the gamble. The important difference between them is a difference that need only emerge when risk is involved. Their having different non-linear scales of risk values is perfectly compatible with their having identical, linear, scales of non-risk values.

I now want to introduce a third perspective. Let us consider how things might stand if the game were changed, and the odds were no longer so fair. Suppose the lottery is run for profit, and the prize is not a million pounds, but the entire sum staked in the previous day, whatever that turns out to be. This sum usually varies between £0.7 million and £1.1 million, and this fact is known to potential players. The one in a million chance of winning remains unchanged. The slightly altered prize is unlikely to make any significant difference to our two potential players, A and B. But now we can consider a further perspective, the perspective of the lottery operator. If we assume that the operating costs of the game are minimal, that the operator has sufficient financial backing, and that the game can be guaranteed to be viable in at least the medium term, running the lottery game

might seem to offer a reasonable potential for profit. If the operator can afford to 'play the percentages' then he can rely on the truth of the old adage that the house always wins in the long run when the odds are on its side. Because the house always wins in the long run when the odds are on its side it may be tempting to conclude that while it is rational to run such a game, it is ultimately irrational to play. But there is no reason to think this. On a day when the prize to be won is £0.7 million, There is no reason to suppose that for B, and for players whose circumstances are relevantly similar to those of B, it would be irrational to play the game. Simultaneously however, it will be rational for the operator to take B's bet, though it will remain rational of A, and others whose circumstances are relevantly similar to those of A, to decline to play. It can be rational of B to play, and simultaneously rational for the operator to take B's bet, because while B is (quite rationally) working with a non-linear scale of risk values, the operator, in playing the percentages, operates with a linear scale of risk values. The operator is in a position to view a risk as worthwhile whenever the odds are in his favour, more or less irrespective of the independent exchange values of the sums involved.

Now consider what happens if we turn our example inside out, as it were. Suppose that, a few weeks later, A and B are both in a financially happier situation. A has come into his inheritance, and is enjoying his new-found wealth. B has gambled on the lottery and won £0.8 million. The attitudes of A and B to certain financial risks are now very likely to have been transformed. In particular they are now likely to have very different attitudes to the prospect of substantial financial loss. Faced with a slim but not negligible chance of substantial loss, A can afford to maintain a devil-may-care attitude. B on the other hand has every reason to guard his winnings carefully, and has a strong motive to buy out of any such risk, if possible. The situation of B, and others like him, is a potentially profit-making one for anyone with sufficient financial backing, anyone, that is, who can afford to play the percentages in respect of this new risk – as the lottery operator can afford to do. If the lottery operator were now to offer B insurance on his winnings, at a suitably profitable premium (taking into account the odds involved, and assuming a linear scale of risk values), B would have a powerful motive to buy such cover. Converting our example from a lottery to an insurance case thus brings no radical change to the types of risk perspectives we find, though it does bring some change to their location. A and B still operate with non-linear risk values. But now B has good reason to avoid anything that looks like a gamble, and a rational motive to buy risk protection, while A can afford to take a gamble, and has no pressing need for such protection. Our operator on the other hand can carry on playing the percentages, taking on risks wherever the odds lie in his favour.

Converting our example from a lottery case to an insurance case also enables us to see that these three perspectives are not simply artefacts of our rather recherché lottery example. Those of us who purchase insurance do so because

we are, or think we are, in a situation relevantly similar to B, following his win. Our insurers on the other hand are in a position relevantly similar to that of the lottery operator. They can rationally buy risks that would be potentially crippling for others because they have sufficient financial backing to be able to rely on the principle that the house always wins in the long run when the odds are in its favour. But while it may be tempting to think that if it is rational for your insurer to, in effect, bet that (say) your house will not burn down, it must be rational for you too to do so – and on that basis tempting to think that it is irrational to take out insurance – our examples illustrate that, on the contrary, the insurance contract can be rationally entered into by both parties. Insurers can afford to operate with a virtually linear scale of risk values, householders usually cannot, and will operate instead with a non-linear scale of risk values.[18]

We are now in a position to distinguish three different types of perspective on risk. Let us call them the perspectives of the insurer, of the gambler, and of the householder. These perspectives are not points of view fixed for all time, but are a consequence of the different contexts in which risks are encountered. From the insurer's perspective (and assuming for the moment the homogeneity of the class of 'birds'), two birds in the bush are worth more than one in the hand as the odds of retrieval of each tend upwards from 0.5. From the gambler's perspective (and for whatever contextual reasons), two birds in the bush are worth more than one in the hand for odds of retrieval that may be significantly lower than 0.5. From the householder's perspective, the bird in the hand remains of more value than the two in the bush for odds of retrieval significantly higher than 0.5. Perhaps none of these perspectives rests ultimately on an entirely linear scale of risk-values. But that of the insurer tends to linearity, while those of the gambler and the householder depart from linearity, and do so in different directions.[19] The fact that two or more individuals may, as their particular interest is conditioned by the context in which they find themselves, rationally adopt different perspectives on the same risk, is sufficient, in my view, to establish the truth of risk pluralism for individuals;[20] and the fact that such mundane phenomena as insurance contracts presuppose the truth of risk pluralism, if they are to be rationally entered into by both parties, is sufficient to establish its relevance to everyday risk-management cases.

3.

I will conclude by considering some practical implications of the above findings for the risk management strategies of communities. Risk pluralism says that we may rationally adopt different perspectives on the same risk. It can therefore be distinguished from both risk relativism (the doctrine that our choice of risk perspective can never be a rational one), and risk monism (a doctrine which entails there is a single uniquely rational perspective on any given risk).

Assuming for the present the soundness of the belief-desire model of rational agency, we can say that different individuals may rationally adopt different perspectives on the same risk because, (1) a rational individual will adopt that perspective which best accords with his/her own interest; and (2) there is no particular reason to suppose that the interests of different individuals will coincide. But to show that risk pluralism is also true for communities we would have to show (at least) that communities too possess an identifiable interest, analogous to that of individuals. The attempt to show that communities possess such an interest would take me too far from my main theme, and into some of the longest-contested questions of political philosophy. Instead I will consider the implications of the truth of risk pluralism for individuals for two well-established approaches to understanding the interests of communities, each of which is associated with a different current approach to environmental decision-making. I will argue that the truth of risk pluralism for individuals serves to highlight the shortcomings of one of these approaches, by putting its conception of a community's interest under intolerable pressure.

The first approach I want to consider – which I shall term the 'teleological-pluralistic' approach – understands the interest of a community as its *objective good*. On this view, the interest of a community and the interests of the individuals who belong to that community are intimately linked, such that to ask after the interest of an individual is to ask a question which leads on quite naturally to the question of the interest of the community as a whole. And while the latter question may be a more general one than the former, it is not regarded, on this view, as a question of a radically different kind.[21] As I have already intimated, I shall not be attempting to put a positive case for the teleological-pluralistic approach here. However, I do want to take this opportunity to rebut one possible criticism of it. The criticism in question would argue from the assumption that the interest of an individual is something simple, unitary, and discrete, and the familiar observation that communities are typically traversed by a host of competing interests, to the conclusion that if we can meaningfully speak of *the* interest of a community at all, this must be in a sense quite different from that in which we speak of the interest of an individual. An attempt to defend the teleological–pluralistic approach against this type of criticism might proceed by challenging the assumption on which it is based: that the interest of an individual is something simple, unitary and discrete. It is a matter of common experience that many of our individual choices are made in the face of competing goods. For example, I may choose to spend a free afternoon with my family, or catching up on some reading. My 'interest' would be well served by either option; and, to that extent, both would qualify as objects of a rational choice. But I cannot choose both of them. It follows that the pursuit of my individual interest is not the pursuit of something simple, unitary, and discrete.

This line of defence of the teleological-pluralistic approach might seem to invite a further criticism. One lesson to be drawn from examples of the above

kind is that the path of rational action for an individual frequently diverges: there will often be a plurality of rational courses of action open to us, of which we cannot choose more than one. But, this being so, it seems sensible to ask whether, on the teleological-pluralistic view, the *rational* pursuit of one's own interest can be possible at all. Might it not be the case that we are always confronted by a plurality of rational courses of action, with no rational way to choose between them? If this is not to be the case – if there is to be, among the options open to us, a *more* rational alternative – it must be possible to compare the relevant competing options, so as to establish which of them represents the object of a more rational choice. And here it would be possible to pose the further problem of the commensurability of competing goods: to what extent, if at all, can the relative worth of two or more competing options be quantitatively expressed? Any attempt to give a general answer to this question would have to contend with the fact that much seems to depend on the type of examples we consider. If the competing goods in question are, say, a successful marriage, and a successful career, we might well conclude that there is no common measure of their relative worth. On the other hand, if the goods in question are 'quality time with one of my children', and 'quality time with both of my children', then we might plausibly conclude that they are, within limits, quite commensurable. But it would be a mistake to think that the advocate of the teleological-pluralistic approach must give a general answer to the question of the commensurability of competing goods if s/he is to defend the claim that rational choice between competing goods is possible. Many competing goods (though doubtless not all of them) look to be comparable in such a way as to be ranked in order of their worth, even where their relative worth is not quantitatively expressible. And comparability of this kind is all that would be strictly necessary for us to identify one among a plurality of competing goods as representing the object of a more rational choice. The fact that, in the absence of a solution to the problem of the commensurability of competing goods, the teleological-pluralistic approach seems required to invoke the fuzzy-seeming idea of the 'comparability' of competing goods, may strike us as a weakness in the approach. But in the present context it turns out to be a strength. For although the observation that both individuals and communities are often forced to choose between competing goods which are merely 'comparable' suggests that establishing where the overriding interest of either lies will be a difficult task in practice, it simultaneously softens the contrast between the two types of case. If, in both the individual and the community case, we must carefully consider and compare a variety of competing goods if we are to establish where our overriding interest lies, the claim that communities do not possess an interest analogous to that of individuals begins to look far from self-evident, and this lends plausibility to the claim that, having established where their respective overriding interests lie,[22] different communities might rationally adopt different perspectives on the same risk, much as individuals are able to do.

While the truth of risk pluralism for individuals does nothing then, of itself, to strengthen the case for the teleological-pluralistic approach, we can certainly say that *if* the approach were to prove generally viable, no obvious problem of compatibility would arise in connection with the finding that risk pluralism is true for individuals. The teleological-pluralistic approach could comfortably accommodate that finding by assimilating the community case to the individual case – modelling the process by which communities might make a rational choice of risk perspective on that by which individuals are able to do so.

The relative ease with which the teleological-pluralistic approach could accommodate the finding that risk pluralism is true for individuals can however be contrasted with the difficulty which the second approach I want to consider – which I shall term the 'economic-monistic' approach – would face in doing so. The hallmark of the latter approach is that, while not contesting the observation that communities are typically traversed by a host of competing interests, it employs a formalistic procedure to reduce those competing interest to a single, unitary, community interest. Equating the welfare of a given community with preference-satisfaction for the individuals who make it up, this approach assumes that the overriding interest of any community lies in maximising aggregate preference-satisfaction for its members.[23] The implications of the finding that risk pluralism is true for individuals, are, for this approach, rather serious. I have suggested that a community may be conceived as choosing rationally between alternative risk perspectives where it chooses that perspective which best accords with its own interest. But on the economic-monistic understanding of the interest of a community, there is no such choice to be made. If there is nothing more to furthering the interest of a community than maximising opportunities for preference-satisfaction for its members, then neither the perspective of the householder, nor that of the gambler, can be rationally adopted by any community. On this view the adoption of either one of these perspectives would run counter to the interest of the community, since it would amount to the choice of non-maximal preference-satisfaction. Thus the commitment to delivering Pareto-optimal solutions, in which the justification for the economic-monistic approach to environmental decision-making lies, has the effect of enshrining the perspective of the insurer as if it represented the only rational perspective on risk for communities.[24]

We have seen then that the teleological-pluralistic approach could comfortably account for the truth of risk pluralism in the community case, and that the fundamental presuppositions of the economic-monistic approach would rule out risk pluralism in the community case.[25] But we have not yet identified anything that might count independently in favour of either one of these approaches. It might therefore seem that the finding of the previous section – that risk pluralism is true for individuals – has brought us no closer to a decision concerning the truth

of risk pluralism for communities, and that our brief look at some current approaches in environmental values has done no more than highlight a serious clash of fundamental presuppositions. However, while simply to pronounce risk pluralism true for communities would effectively be to beg the question against the economic-monistic approach, this does not mean we must instead rest content with a clash of fundamental presuppositions. Faced with such a clash, it is reasonable to explore the implications of the relevant presuppositions further, to discover whether any of them generate hitherto unrecognised absurdities. And it is here that I think the practical political promise of the finding that risk pluralism is true for individuals lies. To characterise an approach to understanding the interests of communities as an 'economic' approach is to imply, etymologically, that while the approach may be applicable to a range of communities, it is tailored to grasping the distinctive interest of a particular type of community: the household.[26] As we have seen however, the economic-monistic approach is committed to the claim that no household, or other community, could rationally make the type of provision for risk which householders seeking insurance typically make – sacrificing maximal preference satisfaction for the sake of protecting present assets into the future. This is, I would contend, an absurdity, which serves to highlight the shortcomings of the approach. There is of course no question of a formal contradiction here, since on the economic-monistic approach the interests of the household and of the householder are conceived as sharply distinct. But, at the same time, it is precisely this insistence on seeing such a sharp distinction between the interests of the household and of the householder which is the source of the problem. If the concept of a household is to have any application at all households must be thought of as possessing an interest which is capable of being acted upon by the householder, and it is just because they will tend to have the interest of the household at heart that householders are particularly likely to be risk-averse. To imply then that while householders *qua householders* may rationally adopt a risk-averse perspective, households as a whole may not, looks absurd. Whether or not we choose to emphasise this absurdity, by labelling the risk-averse perspective the perspective of 'the householder' as I have done, it is evident that there is something very seriously wrong with an approach to understanding the interests of households (and other communities) which entails that households cannot rationally make the type of provision for risk which householders seeking insurance typically make.[27] No doubt there is an important role for the perspective of the insurer among the diverse risk-management strategies of any complex economy, but there is no justification for adopting a monistic conception of the interest of communities which effectively installs that perspective as *the* uniquely rational perspective on risk.

NOTES

[1] Jasanoff 1999.
[2] Ibid. p. 138.
[3] Ibid. pp. 135–136.
[4] See ibid. p. 137.
[5] Ibid., p. 138.
[6] Ibid.
[7] Ibid., p.139.
[8] The context of Breyer's enquiry is that of environmental risk regulation under US conditions, though the diagnosis and proposed solution are presumably intended to be more generally applicable.
[9] Ibid., p. 138.
[10] Ibid. p. 139.
[11] Ibid. The military stands as the most familiar example of a closed institution which is arguably democratic in this sense.
[12] Ibid. p. 137.
[13] Maurie J. Cohen characterises it as 'by far the most widespread' school of thought in environmental risk analysis and management (Cohen 1999, p.128).
[14] The 'lenses' metaphor is Jasanoff's own. See Jasanoff 1999, p. 137.
[15] For a contemporary example of pluralist realism in the environmental arena see O'Neill 1993.
[16] Foucault's relativist mood is perhaps best exemplified in his 'Nietzsche, Genealogy, History'. For his part, Kuhn rebuts the charge of relativism in the postscript to the second edition of *The Structure of Scientific Revolutions* (1970), but, confusingly, he does so on what seem to be thoroughly relativist grounds.
[17] Henceforth references to the linearity and non-linearity of scales of values should be taken to concern cases in which it is presupposed that the objects or outcomes valued can be treated homogeneously – as sums of money are standardly taken to be treatable. In cases where the assumption of homogeneity would not apply, references to linearity and non-linearity will be largely redundant, since the requisite degree of commensurability between different outcomes will be lacking.
[18] It should be borne in mind here that, as we saw earlier, the non-linearity of an individual's scale of risk values carries no particular implication for the linearity of their scale of non-risk values.
[19] These three types of perspective have been understood, in the extensive microeconomic and psychological literature on attitudes to risk, to exemplify, respectively, 'risk-neutrality', 'risk-preference', and 'risk-aversion' (see for example Hirshleifer and Riley 1992, ch.1; Tversky and Kahneman 1981). This literature contains far more detailed analyses of these attitudes, and the conditions influencing them, than I can attempt here. However, since my main concern is not with the descriptive analytics of risk, but with the normative question whether any of these attitudes can legitimately be said to represent a uniquely rational attitude to risk, its relevance to the present discussion is no more than tangential.
[20] And for quasi-individuals such as corporations.
[21] The classic source for this type of view is Aristotle, who stresses the close relation between ethical and political enquiry – see Aristotle *Nicomachean Ethics*, 1094B 6–11.

For a contemporary representative of this approach, which relates specifically to environmental decision-making see O'Neill 1993.

[22] I should stress again that I do not take the foregoing argument to have established that communities do have an interest analogous to that of individuals. And, I might add, I have no original suggestions to make concerning how communities should, in practice, go about establishing where their overriding interests lie. I do wish to note in passing however that (1) pluralism may suggest, but does not entail, that the relevant mechanisms should be 'democratic'; and (2) in keeping with frequently-expressed pluralist concerns about the commensurability of competing goods, it will be appropriate to understand these mechanisms as more deliberative than quantitative in character.

[23] For a classic version of the economic-monistic approach to environmental decision-making see Pearce 1989, esp. chs. 2–3.

[24] Otherwise put: either this approach must give up its claim to deliver Pareto-optimal solutions, or it must insist, in effect, that risk-aversion and risk-preference both represent irrational responses to environmental risk on the part of communities.

[25] I have not emphasised, though I might have done so, that these approaches line up similarly on the individual case. My reasons for treating the community case separately in this section, rather than simply arguing that the truth of risk pluralism in the individual case entails the general falsity of the economic-monistic approach, is that, for reasons connected with the problem of the commensurability of competing goods, it would be possible to defend something like the teleological-pluralistic approach at the individual level, while holding that the economic-monistic approach represents our only defensible option when it comes to understanding the interest of communities.

[26] The term 'economic' derives from the Greek '*oikos*', a house.

[27] And concomitantly something very seriously wrong with any political decision making procedure premised upon it – such as cost-benefit analysis.

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