

# Risk, Environment & Modernity

*Towards a New Ecology*



*edited by*  
Scott Lash, Bronislaw Szerszynski  
& Brian Wynne

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## Preface

This book arose out of an international symposium – ‘The Risk Society: Modernity and the Environment’ – organised at Lancaster University in May 1992 by the Centre for the Study of Environmental Change (CSEC) and the Department of Sociology. The symposium was founded on a critical examination of the perspectives of Ulrich Beck and Anthony Giddens, focusing on modernity, risk and the cultural dimensions of contemporary environmental issues. It occurred at a time when dominant understandings of risk and environmental issues were undergoing what many at the symposium felt to be an unreflexive shift towards a highly globalised, scientised and universalistic idiom.

The Lancaster meeting brought together for the first time a range of European social theorists and scholars interested in these issues, not only as academic fare but also in terms of their profound importance to late-modern society, and to the turbulent debate over the meaning of European Union. The book is inspired by a shared conviction that more creative intellectual work is needed if we are to engage fully with the social, cultural and political dimensions of these issues, dimensions whose complexities are being obscured by the dominant modes of thought in policy and academic circles.

We are grateful to our authors for the work and commitment they have shown in responding to our editorial efforts to offer a more coherent framework of debate than would be offered by a simple collection of papers. We are also grateful to those many symposium participants from all parts of Europe whose ideas and contributions do not appear as chapters. Thanks are also due to Anne Stubbins for her highly effective organisational support, and to Robert Rojek at Sage for his continued interest and calm reassurance. The UK's Economic and Social Research Council provided funding for the symposium, as well as for CSEC's ongoing research programme on Science, Culture and the Environment. This and the continuing intellectual support of Robin Grove-White and other colleagues in CSEC, together with that of members of the Department of Sociology, and the Lancaster Cultural Change Network have played a crucial role in making this volume possible.

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# INTRODUCTION: ECOLOGY, REALISM AND THE SOCIAL SCIENCES

Bronislaw Szerszynski, Scott Lash and Brian Wynne

Journalists and other commentators on environmental matters never cease, it seems, to bemoan our ignorance of the needs of nature. This is indeed ironic because the last decade or so has, much to the contrary, witnessed an unprecedented outbreak of environmental discourse. We hear of benign – and not-so-benign – ecological neglect, but never before has the environment been the object of so much knowledge. We hear of silent watching while seals fade into extinction and rainforests are despoliated, yet never has there been such a cacophony of voices taking ecology as their thematic – a cacophony led by a multitude of disparate expert voices.

This book thus begins not from the presupposition of too much silence about the environment, but from that of perhaps an overproduction of expertise on green issues. How, amidst the rising clamour, to tell signal from noise? More specifically, it begins not so much from the volume, the overload of noise generated on things environmental, but rather from the mode in which such ‘greentalk’ has been enunciated. It contends that the translation of things ‘environmental’ into authoritative scientific and policy vocabularies occurs in ways which could be described as, amongst other things, epistemologically ‘realist’, positivistic, disembedded, technological and cognitivist, and that it thus tends to mask important cultural, social and existential dimensions of the contemporary ‘environmental crisis’.

This is all the more serious because widespread public concern over the effects of human activity on the natural world has produced a broad consensus between scientists, policymakers and other ‘authoritative’ commentators about the need for more reliable information about the present condition of the environment, the status of current threats, and the imperative for appropriate responses. From such a consensus has emerged a number of large-scale intergovernmental research programmes, global conventions and national policy commitments, all too often orientated around overwhelmingly realist accounts of the environment. Even the social sciences, in their embryonic grapplings with the environmental agenda, have hitherto largely proceeded uncritically on the basis that the environment exists simply as a material substrate of the social, defined by

scientific inquiry. The increasing role of social science in environmental policy knowledge generation has been attended by an intensification of the dominant idiom of social scientific knowledge – positivistic, rational-choice, economic, behaviourist even – thus obliterating the possibility that the human conceptions reproduced in such ‘scientific’ discourses may well be part of that which has come to be crystallised as the modern environmental problem.

This book constitutes a sort of ‘slow manifesto’ against such tendencies in the social sciences more broadly, presenting a number of different accounts of the environmental phenomenon in late modernity which are in different degrees constructivist rather than realist, hermeneutic rather than positivist, poetic rather than technological, situated rather than disembodied. These accounts are organised under three broad themes. Part I addresses issues of science, technology and expert systems, exploring in different ways the exhaustion of the very modernist ideas of technical prediction and control which are being reinvoked in responses to the global environmental crisis. Part II explores questions of subjectivity and individualisation: at a time of rapid environmental, technological and cultural change how are our identities, and hence the modes in which we might engage with our predicament, being transformed – and at what cost? Finally, Part III points to emerging problems with the ways in which environmental considerations are being incorporated at the level of political institutions.

An important catalyst for the arguments presented here has been the work of the German sociologist Ulrich Beck. Beck’s *Risikogesellschaft*, published originally in 1986 and then in English by TCS/Sage in 1992, has had an enormous impact on the understanding of the environment, sociological theory and political debates in general, first in Germany and now in the UK and elsewhere in Europe. Beck argued that an older industrial society, whose axial principle was the distribution of ‘goods’, was being displaced by an emergent ‘risk society’, structured, so to speak, around the distribution of ‘bads’. In risk society the distribution of hazards seems blind to inequalities; they flow easily across national and class boundaries; they are not delimited by metanarratives of temporal closure.

Risk society is recognisable not only by the problematisation of objective physical-biological dangers, but also fundamentally by a principle of individualisation, in which agents become ever more free from the normative expectations of social institutions. This was thematised in, for example, his and Elisabeth Beck-Gernsheim’s *Das ganz normale Chaos der Liebe* (The Normal Chaos of Love), which examined the self-construction of love- and life-narratives resulting from the institutional shake-up of the modern family. Addressing the risk problematique, other books like *Gegengifte* (Antidotes) and *Der feindlose Staat* (The State without Enemies), all translated or in the process of being translated into English, examine ecological danger in the context of *de facto*, *de jure* and possible institutionalisations and move directly into the political realm.

The authors of this Introduction and a number of the contributors to the book are fundamentally sympathetic to the thrust of Beck's thesis. They all share the perspective that reifying environmental problems as if they are shaped by real processes in nature alone, and as if the range of possible societal responses is also thus determined, is self-defeatingly reductionistic. However, the occasional sociological tendency to criticise such scientific reification by advancing the alternative view that all such problems are 'mere' social constructions, and hence (it is implied) not real, is equally misleading. Both such positions simply reproduce the cultural categories of modernity, nature versus culture, which are rightly problematised as part and parcel of the environmental problem. An aim of this collection is to help transcend such sterile reductionisms. Most of us will thus argue that Beck has not gone far enough in his break with the dominant 'technological' paradigm in environmental analysis. However, whatever the pros and cons of Beck's particular approach, his creative drawing together of the problems around environmental risk (and especially its globalisation) with those of modernity at large is a valuable and lasting contribution. In this collection we use Beck's contributions to illuminating this modern environmental problematique as a starting place for critical reflection on the state of social science and dominant 'social paradigms', using Europe as an arena. In particular, the main themes addressed by Beck – (1) environmental discourse as technology, (2) individualisation and (3) the transformation and cultural renewal of the political – give at the same time a basis and a structure to this book.

## **Part I Environment, Knowledge and Indeterminacy: Beyond Modernist Ecology?**

With the disintegration of the external threat from the East, Ernst Bloch's dictum concerning 'technology as the enemy within' is today, as never before, apposite. And indeed Horkheimer and Adorno's dire warnings of a dialectic of enlightenment in which reason would metamorphose into technology is nowhere more profoundly confirmed than in 'man's' domination and instrumentalisation of nature – including human nature. The instrumentalist epistemic shift of mainstream science from the 1920s onwards – a shift that coincides intriguingly with the rapid growth of big bureaucracies of public administration – has occasioned surprisingly little critical observation from the social sciences, which have instead anxiously sought to follow the road so mapped by their more confident and prestigious 'natural' cousins. Humanity's colonisation of nature through technology has taken place through a whole apparatus of material resources, such as machinery and computers, as well as through a range of expert-systems – especially capitalist management and the administrative apparatus of the state. Instrumentalist social science has only aided and abetted these trends and transformations. And it is as a challenge to the

subjugation of the natural lifeworld by the ravages of state and technology that environmentalism began as a critical discourse, rich in cultural resources and resonances.

The shift of register in environmental discourses around the 1987 Brundtland Report, from environmental threat to sustainable development, offered the promise of overcoming the usual opposition of nature to society – the idea that we could only achieve environmental protection at the expense of human economic and social development. Sustainable development insisted that notions of global equity, justice and basic human rights were intrinsic aspects of the environmental issue. In principle, this resonated with the constructivist, culturalist insistence that the environmental issue is fundamentally an issue of human relations, and thus of culture and politics. However, these politically enlarging ideas – which it has to be noted implied more complex challenges in integrating multiple and even contradictory dimensions – were met not by cultural recognition and revolution but by grandiose ideas of ‘Managing Planet Earth’ by technocratic expertise (Clark, 1989; Sachs, 1993). Significantly, these managerial resources included the new resource of *social science*, conceived in identical epistemic clothing to the natural sciences – instrumental prediction and control. Thus, for example, the Intergovernmental Panel on Climate Change, set up in 1988 to advise governments and international bodies on the threats of human-induced global warming, and built around a natural-scientific working group of climate modellers, called unselfconsciously for deterministic social-scientific predictions of human inputs to the climate system for up to centuries ahead, and assumed that equally deterministic predictions could be made of human impacts of thus-predicted climate changes. Human society and culture was thus in effect reduced to a behavioural stimulus–response mechanism, and international social science was largely cultivated within this idiom, often quite determinedly and anxiously enforced (for example, in the Human Dimensions of Global Change programme of the International Social Science Council and the US National Science Foundation). The representation of environmental factors in decisions by economic monetary valuation, often operating as an alternative to considering more lasting, participatory and deliberate institutional and procedural changes, further intensifies this dominant social science paradigm and its culturally self-defeating epistemology.

Within the European context, analysts such as Jachtenfuchs and Huber (1993) have shown how environmental policy concerns have repeatedly been ‘technologised’, for example by translating the diverse complex social and lifestyle challenges of energy efficiency and energy demand reduction into technological programmes of new energy sources. This ‘path of least resistance’ syndrome is not, of course, unusual. However, an extra dimension appears to prevail at European level, one which takes on particular significance. The European Union (EU) response to environmental challenges like global warming has been, as noted, to evacuate them of any social or cultural meanings and to construe them instead in

terms of new technologies of energy supply, or standard Europe-wide measures (like an energy tax) whose hugely different meanings, impacts and ramifications across the social and cultural heterogeneity of Europe are ignored. This standardises the problem and the human agents it encompasses. Yet whatever the universals of the issue may be, cursory examination underlines the most intense if diffuse and variable cultural energies fuelling recognition of and engagement with environmental issues. Several sociological critics have proposed that the sense of environmental threat is rooted in just those alienated culturally disembedded and humanly unsatisfactory models of the human and social embodied in dominant discourses of response to environmental problems – the individualistic, instrumental, non-relational models framing the economic social science paradigms which have monopolised official and wider reactions, even (as we shall see in Part III of this volume) amongst non-governmental organisations (NGOs). Thus the dominant discourses of 'solution' at the European level may perversely be laying the foundations, not only of their own ineffectuality in environmental policy, but also of a much deeper – and, we believe, reactionary – antagonism to the idea of Europe as such, captured as it has been by this culturally arid technocratic modernism.

European institutions have run scared of acknowledging the cultural dimensions of difference which pervade and shadow all emergent European practices and formal frameworks, of legal and regulatory rules, technical definitions supporting the single market, and the like. In truth, this has been an understandable denial, given the extreme regressive forces of nationalism, sentimentality and naked racialism which seem to haunt the modern European project. But this instinctive denial of cultural (and even institutional) variation, depth and difference on the part of policy officials and their social science handmaidens only fuels the fires of parochial fear and retrenchment to which it attempts to deny air. Rather than grasp the nettle of recognising the culturally rooted, human relational dimensions of environmental sensibilities, European policy culture and its institutions have been at the forefront of articulating and imposing an acultural, standardised, unreconstructed modernist conception of the *problematique*. This resonates all too easily with the familiar shibboleth of the nationalist right – a federalist bureaucratic superstate. Thus the germ of a culturally attuned environmental sensibility in Europe is pincered between on the one side a dominant instrumentalist managerial standardising paradigm, emptied of human meanings, and on the other a set of populist, all too humanly meaningful, parochialist, sentimentalist and antimodern cultural defence movements. Transcending this barren modernist/antimodernist, culture/nature dichotomy requires us to find a new set of terms which reflect the co-construction of nature and culture, and which in so doing may provide the grounds for a renewal of public agency and identification with environmental and related public policies. Thus far, the dominant idioms of social science giving identity to European environmental

research and development have shown not the remotest awareness of these deep currents washing over the environmental issue, seen as it is in largely literal, realist terms. The scientific and policy discursive communities implicated in this sterile 'discourse-coalition' thus seem about to be joined by the sociological experts. And it is this particular actor-network, this alliance-in-truth, to which this volume lays down the gauntlet, in the name of the deleted dimensions of culture and of human commitment.

This environment-as-technology coalition not only presents us with a set of constructed and violently imposed truths, but also gives us an attached metadiscursive epistemology – an objectivist, physicalist and fully naive realism. It is objectivist in its insistence that the scientific observer is somehow separate and not irreducibly embedded in the 'object' he/she is studying. It is physicalist in its construction of risks and dangers through the symbolic prism of biological extinction, thus at the same time strategically maximising affective impact on the public. It is naively realist in its assumption of the brute fact – determined solely by nature, and only revealed by science – of global warming as the central environmental hazard, and in its neglect to mention that a number of such 'brute facts' were with us before the mid-1980s, yet have been constructed as pivotal environmental dangers only in the past few years. Within this paradigm, the fact that *globalised* dangers have become the axial principle of environmental threat at this point in historical time can only be explained by invoking supposed exogenous factors, such as a lag in institutional learning (Hajer, this volume). The complex social and cultural changes that have brought about the constitution of the environmental threat in these terms are completely overlooked.

It is at this point that the account put forward by Beck, whose contribution forms the first chapter of this volume, begins. Beck starts from the premise that the environmental crisis is primarily not a natural but a *social* crisis. The hazards produced by society can no longer be contained within conventionally modernist systems of prediction and control. In the face of nuclear, chemical and biotechnological dangers it is no longer possible for authoritative decisions to be made by groups of experts. Because of this, epistemic authority no longer rests with particular groups of scientists, politicians and industrialists, but has fragmented across a huge range of social groups, the incessant interaction of which is potentially raising society to a qualitatively new level of self-critique. As Beck emphasises, this is not a critical theory of society, but a theory of critical society – critique is endemic to the risk society, and does not have to be introduced from outside by the sociologist.

But what Beck usefully spells out here, as he indicated for the first time for English readers in his collaboration with Anthony Giddens and Scott Lash (Beck et al., 1994), is that reflexive modernisation is characterised as much by 'reflex' as it is by 'reflection'. The publication of *Risk Society* itself had raised worries for many readers that Beck seemed to be offering a vision of a kind of hyper-Enlightenment, where individuals and institutions

were becoming increasingly able consciously to reflect on the premises of their own and others' commitments and knowledge claims. In his more recent work, however, it is possible to detect a move towards seeing reflexive modernisation as in most part propelled by blind social processes – a shift, crudely, from one where risk society produces reflection which in turn produces reflexivity and critique, to one where risk society automatically produces reflexivity, and then – perhaps – reflection (indeed his work can be seen as a *call* to reflection on our changed social condition). This shift has largely met concerns that he had illegitimately treated forms of knowledge as floating free from culture, institutions and practices – and thus as enabling subjects to reflect on society from outside, as it were (though the 'individualisation' strand of his analysis does indeed tend to imply such a picture, as should become clear from our discussion of the papers of Part II below).

However, despite our characterisation above of Beck as being perhaps excessively social constructionist with respect to the ontological status of environmental problems, at another level there is a curious realism in his analysis. For Beck it appears to be the genuine, real, physical riskiness of, for example, large-scale nuclear and chemical technologies, that has taken industrial society beyond its own limits of calculability. In Chapter 2, Brian Wynne takes Beck – and Anthony Giddens – to task for this realism, and for the asymmetry of their treatment of expert and lay knowledge, in a lengthy critique of the politics of the risk society thesis. Wynne, drawing on some fifteen years of his own research into risk and the environment, and his own background in the sociology of science, presents perhaps the most sustained effort to date to provide a radical alternative to the Beck thesis. The thrust of his case is a challenge to the strict division between scientific and lay knowledge that 'neo-modernist' analysts such as Beck and Giddens put forward in their juxtaposition of the 'propositional' and determinate knowledge of science on the one hand and the 'formulaic', indeterminate knowledge of the lay public on the other. But rationalists such as Beck and Giddens who privilege (social-) scientific over lay knowledge are not the only ones guilty of this flaw. So are more 'post'- or 'anti'-modernist writers such as Lash or Zimmerman who would seem to privilege the hermeneutic truths of lay actors over the propositional truths of the scientists in the understanding of the natural environment. Again the same dichotomy is invoked; the hierarchy is merely stood on its head.

Wynne's claim is that scientific knowledge itself is pervaded with a quite indeterminate and formulaic set of communications and practices, whilst the logics of practical and theoretical reason is always, already and also present in the language and truths of lay social actors. Wynne's idea of 'indeterminacy' here goes well beyond Giddens's allusions to the unanticipated consequences of scientific knowledge for the environment: the very woof and warp of scientific practices are irretrievably hermeneutic and indeterminate. Not only does scientific knowledge produce unanticipated consequences, but the knowledge *itself* is indeterminate and uncertain.



Furthermore, the claims of scientists for determinacy is first and foremost a legitimating rhetoric which helps constitute the 'actor-networks' of which they are the key members, but which stretch far beyond science to materially order society. Perhaps the worst problem in this is that scientists believe in the validity of this rhetoric, thus preventing their solutions from taking into account the local knowledge of lay actors involved in ecological crisis points. Wynne illustrates this with his research on the effects of radioactivity and struggles between scientists from various agencies and sheep farmers in the north of England. Here the experts' systematically bracketed inattention to the practical and contextual knowledge of the sheep farmers made their predictions on the time span of radioactive danger catastrophically inaccurate.

Wynne's argument – illustrated through the examples of the sheep farmers and of the 'craft-based' knowledge of Andean potato farmers – is that this science-serving dichotomy between propositional and formulaic knowledge, along with the necessarily flawed nature of the scientists' predictions, puts the lay public in a double bind. On the one hand they are made to be dependent on the knowledge of the experts, and, on the other, they have a basic mistrust of them. The result of this very constructed (rather than ontological) insecurity is fear – the sort of fear explicated by John Maguire in Chapter 7 below. This anxiety is, often, only exacerbated by social-scientific surveys of public perceptions of risk, surveys that share the epistemological assumptions of the natural scientists, effectively joining them, along with government and various business interests, in an actor-network of literally overwhelming proportions and power.

Wynne's position is in many ways closely aligned to that of Bruno Latour. Like Latour, Wynne in effect argues, against both moderns and postmoderns, that 'we have never been modern' (Latour, 1993). For both of them, the supposed fundamental qualitative differences between pre-modernity and modernity, and between 'simple' and 'reflexive' modernity, on which modernisation theories like those of Beck and Giddens rest, just do not exist. Thus lay actors, well before the onset of reflexive modernity and the risk society, fundamentally distrusted scientific opinion. Thus even scientific knowledge is also irreducibly pre-modern, indeterminate, uncertain and formulaic. Furthermore, not just the craft-based wisdom of potato farmers but also 'laboratory life' itself involves local knowledge – the main difference being that the 'discoveries' of laboratories are presented as being universalistic in character. Wynne, however, does part with Latour in respect of the latter's antihumanistic reduction of human beings, institutions, non-humans and inanimate objects to 'actants'. In so far as there is a 'realist' element in Wynne's own position it consists in a refusal to see human beings as malleable without remainder. For Wynne, what propels public reactions to technocratic projects is resistance to the inadequate models of the human person and the social which institutions attempt to impose on the public. Compared to Beck, then, Wynne's



account is much more ‘social’, in that it is not physical but ‘identity’ risks that propel reflexivity. But compared to Latour, it is a lot more ‘realist’ – but this in the sense of moral, not scientific, realism.

The need for an explicit moral dimension is also a strong theme in the recent work of Barbara Adam, who, in Chapter 3, takes up this volume’s challenge head-on by insisting on, and providing pointers for, the ‘revisioning’ of the assumptions about *time* held by the social sciences. Time, she reminds us, is not just an abstract backdrop for social and cultural change, but something which is itself understood differently in different cultures and different social contexts. The social sciences, she argues, have tended unthinkingly to reproduce Enlightenment notions of linear, one-dimensional, ordered time which are no longer appropriate under the conditions of late modernity, and which prevent us from adequately engaging with the environmental crisis. In describing these new conditions, she closely follows the accounts of Beck and Giddens: globalisation processes, particularly the diffusion of telecommunications technology, have created a ‘global present’, compressing decision-making processes and fostering a sense of global connectedness; the acceleration of the innovation process has rendered the future *in principle* unknowable; contemporary technologies are generating dangers (often invisible and unprovable) on timescales, from the infinitesimal to the millennial, which are completely dislocated from those of their benefits and control systems; and the bringing of nature under increasing human control has rendered obsolete distinctions between the social and the natural, and thus between social and natural time. These conditions demand of us that we develop a different framework for the conceptualisation of the environmental crisis. We must move from an emphasis on the material, the quantifiable, and linear causality to one on the immaterial, the unquantifiable and the unpredictable; and we must abandon individualism, Eurocentrism and anthropocentrism in order to embrace the not-like-us, the not-human, and the not-yet-born.

Time is an extraordinary difficult – perhaps impossible – area to theorise without paradox. In this case, we might perhaps wonder whether Adam’s account fails to be self-exemplifying – whether, despite her persuasive argument that our experience and concepts of time are always socially and historically situated, she herself has produced yet another desituated account of time with her classically sociological narrative of the emergence of globalised time. Is there something qualitatively different about the present epoch? Or is such a notion a more nuanced version of ethnocentrism? Is it not always the case that technologies – from gunpowder, through the printing press, to eighteenth and nineteenth century industrialisation – have had invisible effects on multiple, dislocated timescales? But Adam’s core insight about time – that we need to *morally* engage with the future – remains robust and vitally important for any endeavour to revision the social sciences in an age of ecological crisis. Perhaps because the world has become more complex and unpredictable than it was, or perhaps