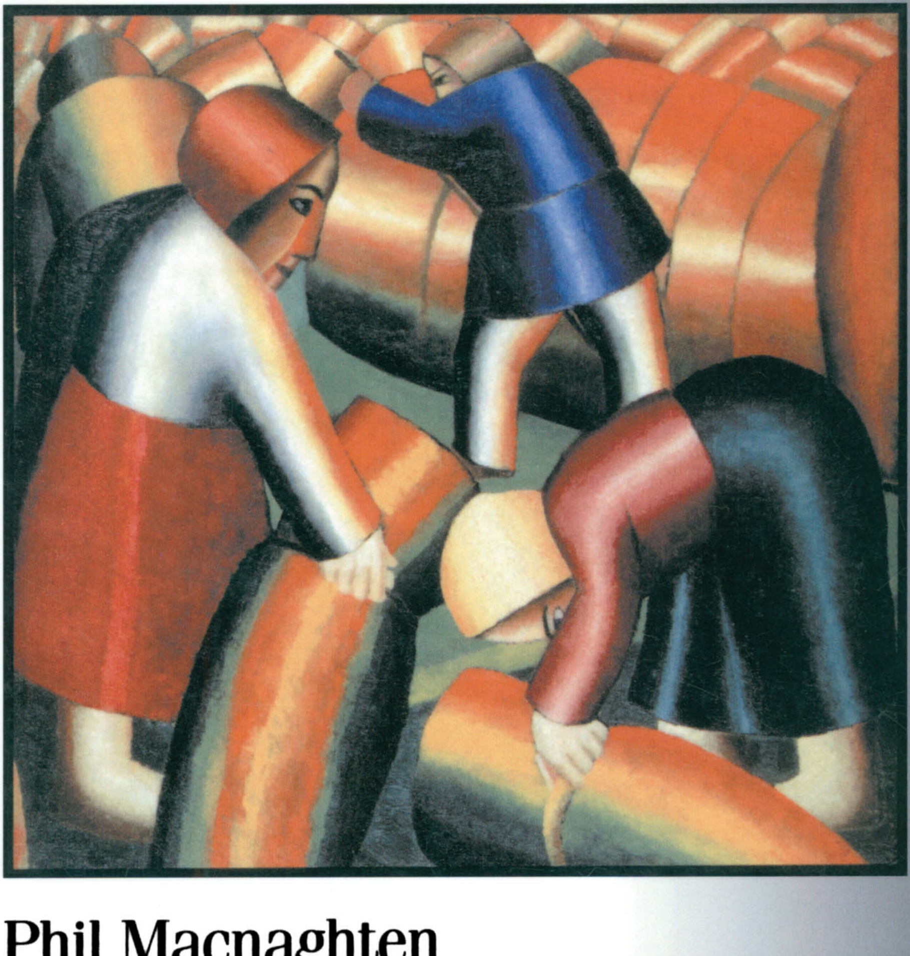
Contested Natures



Phil Macnaghten
& John Urry

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Phil Macnaghten and John Urry

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To Miranda

In memory of Wilga Urry

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1

RETHINKING NATURE AND SOCIETY

In this book we seek to show that there is no singular 'nature' as such, only a diversity of contested natures; and that each such nature is constituted through a variety of socio-cultural processes from which such natures cannot be plausibly separated. We therefore argue against three doctrines which are widespread in current thinking about nature and the environment. We begin this introductory chapter by briefly outlining these before seeking to develop our own position.

The first, and most important for our subsequent argument, is the claim that the environment is essentially a 'real entity', which, in and of itself and substantially separate from social practices and human experience, has the power to produce unambiguous, observable and rectifiable outcomes. This doctrine will be termed that of 'environmental realism', one aspect of which is the way that the very notion of nature itself has been turned into a scientifically researchable 'environment'. Modern rational science can and will provide the understanding of that environment and the assessment of those measures which are necessary to rectify environmental bads. Social practices play a minor role in any such analysis since the realities which derive from scientific inquiry are held to transcend the more superficial and transitory patterns of everyday life.

The second doctrine is that of 'environmental idealism', which has partly developed as a critique of the first. This doctrine holds that the way to analyse nature and the environment is through identifying, critiquing and realising various 'values' which underpin or relate to the character, sense and quality of nature. Such values held by people about nature and the environment are treated as underlying, stable and consistent. They are abstracted both from the sheer messiness of the 'environment' and the diverse species which happen to inhabit the globe, and from the practices of specific social groupings in the wider society who may or may not articulate or adopt such values. This doctrine can coexist with the first.

The third doctrine specifically concerns the responses of individuals and groups to nature and the environment. It is concerned to explain appropriate human motivation to engage in environmentally sustainable practices and hence the resulting environmental goods or bads. It seeks to do this in terms of straightforwardly determined calculations of individual and/or collective interest (such as cost–benefit analysis and contingent valuation schemes).

This doctrine we will term 'environmental instrumentalism' and is importantly linked to a marketised naturalistic model of human behaviour, and its radical separation from non-human species.

Obviously all these three positions have something to contribute to the untangling of contemporary debates on the environment. But it will be our view that all three ignore/misrepresent/conceal aspects of contemporary environmental change and human engagement. Our approach will emphasise that it is specific social practices, especially of people's dwellings, which produce, reproduce and transform different natures and different values. It is through such practices that people respond, cognitively, aesthetically and hermeneutically, to what have been constructed as the signs and characteristics of nature. Such social practices embody their own forms of knowledge and understanding and undermine a simple demarcation between objective science and lay knowledge. These practices structure the responses of people to what is deemed to be the 'natural'. We thus seek to transcend the by now rather dull debate between 'realists' and 'constructivists' by emphasising the significance of embedded social practices.

Such social practices possess a number of constitutive principles. These practices are:

- discursively ordered (hence the importance of the analysis of everyday talk especially as it contrasts with official rhetorics and models such as sustainability);
- embodied (hence the significance of identifying the ways in which nature is differentially sensed by the body);
- spaced (hence the importance of the particular conflicting senses of the local, national and global dimensions of the environment);
- timed (hence the analysis of conflicting times in nature including the apparent efforts of states to plan for the uncertain future);
- and involve models of human activity, risk, agency and trust (which are often the opposite of or at a tangent to 'official' models of human action, and which may or may not be at odds with the interests of non-human animals).

Much of the book is concerned with showing the character and significance of such social practices. Overall we seek to show that responses to and engagement with nature are highly diverse, ambivalent and embedded in daily life. Such responses necessarily involve work in order that they develop and are sustained. This work is not just economic and organisational, but also cultural in often complex and ill-understood ways. These social practices are structured by the flows within and across national boundaries of signs, images, information, money, people, as well as noxious substances. Such global flows can reinforce or can undermine notions of agency and trust.

Such social practices stem from and feed into tacit notions of the human agent, nature, the future, and so on. These notions are often opposed to, or contradicted by, official bureaucratic, scientific and managerial discourses, such discourses often becoming part of the problem rather than the solution. They may reinforce further manifestations of political alienation and estrangement. It also follows that these complex social practices need to be researched by 'methodologies' which are able to represent and capture some of these ambivalent and multiple characteristics. We will subject much of the research in the environmental area to methodological critique and develop alternative modes of investigation appropriate to such complexities.

We will also go on to examine how global–local changes transform what it is to be a subject/citizen/stakeholder within contemporary societies. We shall outline a revised politics of the environment which is not based on a simple interest model but one which recognises how arguments about nature provide new and embryonic spaces for political exploration and self-discovery. Further, we shall not argue for abstract values disembodied from the world of everyday experience, but we do recognise that nature and the environment are hugely bound up with certain valuations of desirable and/or appropriate 'natures'. We thus examine the character and complexity of human responses to nature, of people's hopes, fears, concerns and sense of engagement, and how current unease and anxiety about nature connects to new tensions associated with living in global times. And we shall not suggest that environmental activism automatically follows from environmental 'damage'. It is mediated by signs, senses of agency and particular timings. But we do recognise that environments change, that such changes can in certain ways and via a variety of media be sensed, and that those sensings can crystallise at some defining moments into perceived threats to 'the environment' and hence to significant socio-political responses.

We will also consider what an appropriate politics of nature would be; one which stems from how people talk about, use and conceptualise nature and the environment in their day-to-day lives, in their localities and other 'communities'. Such talk takes place in the context of official and public discourses and of the ideas, money, information, signs and substances flowing across national borders and which bring into being some often very extended 'communities'. Moreover, people's sense of their power or powerlessness in relation to such flows, as well as the impact of such flows upon the details of everyday life, will be identified as crucial for understanding how people make sense of nature, including the existential experience of living with environmental risks of unknown proportions and unknowable consequences.

In that sense we will try to provide some more specific sociological grounding for recent communitarian philosophy, which on the face of it would seem to have a lot to offer to the environmental movement. But we will endeavour to connect such possible communities to some of the unutterably modernist processes which appear to envelop nature and from which these philosophies and practices cannot escape, as Szerszynski argues (1996; see also Eder 1996). We do not think that the discovery of nature and the identification of 'natural limits' resolves the modernist dilemma. Nature does not simply provide an objective ethics which tells us what to do. It is too ambivalent, contested and culturally paradoxical for that. But we will argue that emergent 'cultures of nature' may on occasions facilitate the kind of communities and traditions that provide an enormously significant sense of meaning and value in societies struggling to break from the modern world; communities and traditions that are socially embedded and embodied, and temporally and spatially structured.

Finally, there are three important points of clarification. First, this book principally concentrates upon the relationship between society and nature within the 'West' or what we prefer to call the North Atlantic Rim societies. We will not consider the cultures of nature as these are shaping the development of environmental issues in the Pacific Rim, in the developing world, or in what was known as 'Eastern Europe'. Second, the book deals mainly with what would normally be identified as 'environmental' rather than 'biological' issues (see on the biological issues, Benton 1993; Haraway 1991; Strathern 1992). However, even that distinction is difficult to justify or sustain since it in part derives from the very development of those specialised sciences through which nature has been tamed and transformed. Moreover, people's responses to 'nature' and hence to particular 'environments' are in part derived from the kinds of human and non-human species which inhabit or have inhabited or might have inhabited particular locales. Third, this book is selective and makes no claim to be an exhaustive survey of even current environmental issues or debates. It will focus upon a limited number of 'contested natures' and has little to say about debates on shallow and deep ecology, Gaia, biocentrism, the 'new age', ecocentrism, technocentrism, and other conceptualisations of new and more ecologically 'benign' paradigms or worldviews (although see chapter 3 below for a critique of how some of these concepts embody variants of the doctrines set out above).

Nature and sociology

We have argued that nature and the environment have been inappropriately analysed within the three doctrines outlined. In particular the 'social' dimensions of nature have been significantly under-examined. In this section we turn to the discipline which on the face of it should have engaged with such an agenda, namely, sociology. However, we suggest that the neglect of the 'social' in the environmental literature has partly stemmed from sociology's own trajectory of development. This trajectory has been based upon drawing a strong and undesirable distinction between 'society' and 'nature'.

The discursive development of sociology was the product of a particular historical moment, of industrial capitalism in Western Europe and North America. Sociology's key concept has been that of society, as opposed to those of capitalism or the division of labour which are central to historical materialism (see Dickens 1996). Sociology accepted certain *a priori* assumptions about the consequent relationship between nature and society. Taking for granted the success of such modern societies in their spectacular overcoming of nature, sociology has concentrated and specialised on what it has been good at, namely, describing and explaining the very character of modern societies. As such, sociology has generally accepted a presumed division of academic labour which partly stemmed from the Durkheimian desire to carve out a separate realm or sphere of the social which could be investigated and explained autonomously. In a way sociology employed the strategy of modelling itself on biology and arguing for a specific and autonomous realm of facts, in this case pertaining to the social or society. Such a realm of social facts presupposed its separation from, and antithesis to, nature (Dickens 1996: 47; Dunlap and Catton 1994; Durkheim 1952; Macnaghten and Urry 1995).

As a discipline sociology has until recently been that social science least concerned with the natural, in either its biological or environmental form. The dichotomy between the social and the natural has been most pronounced in the case of sociology. The other social sciences have enjoyed a more messy and confused relationship with the facts of nature. In sociology this academic division between a world of social facts and one of natural facts has been regarded as largely uncontentious. *Inter alia* it was reflected in the conceptualisation of time, where it was presumed that the times of nature and of society are quite distinct (see Adam 1990; Lash and Urry 1994: chap. 9). Moreover, this account made good sense as a strategy of professionalisation for sociology since it provided a clear and bounded sphere of investigation, a sphere parallel to but not challenging or confronting those physical sciences that unambiguously dealt with an apparently distinct and analysable nature. The competition between the different nascent disciplines, including sociology, led to new forms of scientific authority and elitism, with a striking disparagement of lay, implicit, tacit forms of knowledge. What people 'know' in their 'social practices' was devalued and marginalised (Dickens 1996: chap. 1).

An interesting exception to such sociological orthodoxy was that posed by the American sub-discipline of environmental sociology in the United States (Catton and Dunlap 1978; Dunlap and Catton 1979). Dunlap and Catton (1994) defined the field as 'the study of interaction between environment and society', and sought to highlight the inextricable relationship between the development of human societies and their use and exploitation of finite resources and life support systems. By highlighting these links, environmental sociologists have advocated a reorientation of sociology towards 'a more holistic perspective that would contextualise social processes within the context of the biosphere' (Buttel 1987: 466). Yet even such a sociology employs a division of labour between the natural sciences, which provide the hard and factual base of the state of nature, and the more subservient social sciences, which identify the impacts of physical nature upon society, and the impacts of society upon nature.

Moreover, it is this model of sociology and more generally of the social sciences which is most visible in current investigations of so-called 'global environmental change'. Roughly speaking, the role of the social scientist is seen as that of addressing the social causes, impacts and responses to environmental problems which have been initially and accurately described by the natural scientist – a kind of 'Biology and Science First' model (also see Grove-White and Szerszynski 1992). Such emphases can be identified in most major international research programmes on global environmental change (see Newby 1993; Wynne 1994). For example, in early formulations of the Intergovernmental Panel on Climate Change, environmental change is conceived of as a set of scientific problems essentially requiring technological solutions. A linear model was outlined with working panels established on the scientific evidence (WG1), the environmental and socio-economic impacts (WG2), and the appropriate response strategies described in explicitly technical terms (WG3) (although see Shackley 1997 for recent reformulations).

A similar process can be located in the UK research framework on global environmental change. Following a number of significant events, including a wave of environmental public consciousness in the late 1980s and Margaret Thatcher's landmark speech to the Royal Society in 1988 (see chapter 2 below), a new research culture emerged in which to study environmental processes. Following international models, the focus of this research was largely global and natural science-oriented (see Grove-White 1996a). Thus, when the UK Inter-Agency Committee on Global Environment Change was formed in 1990 to link all UK environmental research, the first report in April 1991 was unmistakably natural science in orientation. Moreover, when social science research became more prominent, propelled by the Government funding of a Global Environmental Change programme started in 1990, it operated in a political climate where considerable expectations and policy commitments became invested in the role of the social sciences as secondary, as formulating appropriate responses to the problems embodied in mounting natural scientific evidence (ESRC 1990).

Thus the role of the social scientist in the analysis of global environmental change has been largely seen as that of a social engineer, as someone who manipulates and 'fixes' society so as to facilitate the implementation of a sustainable society specified in essentially technical terms (based on variations of doctrines 1 and 3 outlined above). In such an analysis instrumentalist social science disciplines such as economics and geography have been particularly significant in forming and addressing an environmental agenda.

However, in the last few years there has been the development of some alternative thinking and research about nature and the environment. Such new wave thinking has been found within various disciplines, including anthropology (see Douglas 1992; Milton 1993a, 1996), archaeology (Bender 1993), cultural history (Arnold 1996; Robertson et al. 1996; Ross 1994; Schama 1995; Wilson 1992; Wright 1996), geography (Barnes and Duncan

1992; Cloke et al. 1994; Fitzsimmons 1989), literary studies (Wheeler 1995), the analyses of modernity and post-modernity (Lash et al. 1996), philosophy (O'Neill 1993), politics (Dobson 1990; McCormick 1991a, 1995), sociology (Beck 1992b, 1996b; Benton 1993; Dickens 1992, 1996; Eder 1996; Martell 1994; Redclift and Benton 1994), the sociology of science (Yearley 1991, 1996), and women's studies (Haraway 1991; Merchant 1982; Shiva 1988, 1991, 1994). These have begun to resonate with each other and to have begun the development of what we will loosely take to be a more socio-culturally embedded analysis of nature. In this book we seek to reflect these interlinking developments and to develop them further within the context of particular environmental topics. And by connecting such developments to those social practices through which nature becomes produced and consumed, we shall in a sense seek to repopulate environmental issues as they are lived, sensed and encoded in contemporary societies.

We turn now to a brief account of the history of the relationship between nature and society, in order to understand better how historically the social and the natural were torn apart and some of the different forms taken by this dichotomisation. This is not to provide anything more than a brief schematic account of certain moments in the changing relationship of 'nature' and 'society'.

Nature and society – historical context

In historical terms the juxtaposition of society and nature reached its fullest development in the nineteenth century in the 'West'. Nature came to be degraded into a realm of unfreedom and hostility that needed to be subdued and controlled. Modernity involved the belief that human progress should be measured and evaluated in terms of the domination of nature, rather than through any attempt to transform the relationship between humans and nature. This view that nature should be dominated presupposed the doctrine of human exceptionalism: that humans are fundamentally different from and superior to all other species; that people can determine their own destinies and learn whatever is necessary to achieve them; that the world is vast and presents unlimited opportunities; and that the history of human society is one of unending progress (also see Dunlap and Catton 1979).

This dichotomisation of nature and society possesses a number of deficiencies and has been subject to various kinds of critique. The following deficiencies should be noted: the dichotomisation has led to exceptional levels of exploitation and degradation of land and landscapes and of other animal species which many humans now find intolerable; humans have themselves suffered from being relatively estranged from these 'natural' processes; and there is no simple entity which we can designate as 'nature' which is to be regarded as waiting to be subject to enlightened human mastery. Indeed, the very idea of nature has been analysed as having multiple and even oppositional meanings: it can refer to the essential quality or character of something; the underlying force which lies behind events in the world; the entirety of animate and inanimate objects, and especially those which are threatened; the primitive or original condition existing prior to human society; the physical as opposed to the human environment and its particular ecology; and the rural or countryside (as opposed to the town or city) and its particular visual or recreational properties (see Strathern 1992: 172; Szerszynski 1993; Williams 1976: 219).

We now provide a brief historical sketch of the changing interpretations of human/nature relations; an exercise designed to show the multiple, contested and differentially embedded notions of nature even within the West during the high point of the doctrine of human exceptionalism. This delineation of some of the key transformations of people's understandings and relationships to nature in the West is usefully outlined by Williams (1972, 1976; and see Foucault 1970; Glacken 1966, 1967; Koestler 1964; Lewis 1964; Lovejoy 1936; Merchant 1982; Schama 1995; Short 1991; Thomas 1984; amongst numerous sources). He argues that the term 'nature' is perhaps the most complex and difficult word in the English language; that the idea of nature contains an enormous amount of human history; and that our current understandings of nature derive from an immensely complicated array of ideas, linked to many of the key concepts of western thought, such as God, Idealism, Democracy, Modernity, Society, the Enlightenment, Romanticism, and so on.

However, it is the abstraction of a singular nature from the multiplicity of lived experiences (starting over two thousand years ago) that was to prove so critical for subsequent human responses to the physical world. Indeed, the ways in which nature has historically been made singular, abstract and then personified provides key insights as to how people thought about themselves, their place in the world, their relationships with each other and with the land, and their sense of general power and powerlessness in shaping their lifeworlds. Starting with mediaeval cosmology, Williams identifies the social significance of the formation of a series of abstracted, singular and personified natures. Thus, first as a goddess, then as a divine mother, an absolute monarch, a minister, a constitutional lawyer, and finally a selective breeder, the appeal to a singular nature defined respectively the changing and often bitterly contested relationships between a state of nature, a state of God, and humanity. Indeed, once the idea of a singular nature became established, it then became possible to consider whether human activities did or did not fit into such a pre-existing and pre-ordained natural order. Williams argues:

> For, of course, to speak of man [*sic*] 'intervening' in natural processes is to suppose that he might find it possible not to do so, or to decide not to do so. Nature has to be thought of, that is to say, as separate from man, before any question of intervention or command, and the method or ethics of either, can arise. (1972: 154)

C.S. Lewis suggests that it was the pre-Socratic Greek philosophers who invented the first singular and abstracted nature. It was they who first had the idea that the 'great variety of phenomena which surrounds us could all be impounded under a name and talked about as a single object' (1964: 37). Then, and only then, could nature be personified, starting with nature as Goddess. However, the idea of nature was soon seen not to cover everything, and in not covering everything nature came to locate itself in relationship with humans and with God. In the mediaeval European idea, for example, nature was believed to have 'her' own particular place in the grand scheme of things:

> She had her proper place, below the moon. She had her appointed duties as God's vicegerent in that area. Her own lawful subjects, stimulated by rebel angels, might disobey her and become 'unnatural'. There were things above her, and things below. It is precisely this limitation and sub-ordination of Nature which sets her free for her triumphant poetical career. By surrendering the dull claim to be everything, she becomes somebody. Yet all the while she is, for the medievals, only a personification. (Lewis 1964: 39)

Within this grand design people too had their precise and pre-ordained place in the scheme of things, a place distinct yet bounded and connected to that of nature. In such a world nature was commonly portrayed as God's creation, and as reflecting a divine and perfect order in which everything had its right place, its home, its sense of belonging. Or, as Lovejoy says: 'the men of the fifteenth century still lived in a walled universe as well as in walled towns' (1936: 101). The mediaeval relationship between God and nature was often described through the analogy of nature as a book, requiring attentive reading. Glacken describes in scholarly detail how much of mediaeval theology was concerned with the two books in which God revealed himself: through the Bible (the ultimate book of revelation), and through the book of nature (through which the work and artisanship of God could be revealed; 1967: 176–253). Moreover, as Williams points out, the inclusion of people within nature was not static:

> The idea of a place in the order implied a destiny. The constitution of nature declared its purpose. By knowing the whole world, beginning with the four elements [i.e. earth, water, fire and air], man [*sic*] would come to know his own important place in it, and the definition of this importance was in discovering his relation to God. (1972: 153)

Such a perspective on nature, Williams argues, produced a quite considerable tension concerning the appropriate limits of physical inquiry and thus of human ethical action. To inquire too deeply could be construed as transcending one's allocated place, as an attempt to intervene 'unnaturally' in God's work. Such views of one's relationship to nature led to vigorous study of, and reverence towards, the visible world of creation (see also Merchant 1982; Ovitt 1987). Indeed, although during the Middle Ages there was substantial intervention in physical nature – from the clearance of forests and woodland for agriculture, to the quarrying of millions of stone for cathedrals and building – progress and intervention in nature were predominantly conceived in spiritual terms, in terms of discovering God's providential design and in constructing artefacts designed to express the perfectibility of God's order (Ovitt 1987: 200).

Yet, even in mediaeval times, there was ambiguity in people's relationship to nature, an ambiguity captured in two singular and largely competing personifications: that of nature as God's absolute monarch who possesses such powers of destiny we cannot escape; and that of nature as God's minister or even mother earth, who nurtures and provides for the needs of humanity. Williams (1976) argues that such singular natures helped make sense of the uncertainties in everyday life. When times were good, nature was personified as a mother, a provider, a goddess who sustained and nurtured; whereas in times of famine and plague, nature became personified as a jealous and capricious monarch.

As described above, pre-modern cosmology involved the idea of an overarching order within which humanity, nature and God were inextricably bound together in the Great Chain of Being (Lovejoy 1936). Moral judgement was then largely understood in terms of whether human action conformed to this 'natural' God-given order.

Two crucial transformations took place from the sixteenth and seventeenth centuries onwards, both dependent upon the separation and abstraction of a 'state of nature' from that of humanity and God, both effectively denying the possibility of an all-inclusive cosmological order. The first transformation involved the deadening of the state of nature from a life-giving force to dead matter, from spirit to machine. In effect, through the new sciences of physics, astronomy and mathematics, the study of nature became the study of how nature is materially constituted. Nature became a set of laws, cases and conventions, discoverable through the new rules of inquiry; forms of inquiry which could be carried out in their own terms without any recourse to a divine purpose or design (see Williams 1972).

Such a transformation was pioneered by the mechanists, and in particular by the physicalist ontology provided by Galileo, by the philosophy of Descartes which removed everyday *sensed* reality from nature (through distinguishing the world of science and primary qualities from the world of appearance and secondary qualities), and later by the scientific 'world picture' put in place by Newton. The scientific method no longer required teleological explanation. By contrast, the basic forces controlling creation could be described in mathematical or geometrical terms (Glacken 1967: 505; see also Whitehead 1926: chap. 3). God no longer had to be conceived *within* nature, but could now be detached from nature, placed in the heavens overlooking 'His' mechanical creation, intervening periodically with the occasional miracle. Such detachment is reflected in Kepler's clockwork analogy of the universe:

> My aim is to show that the heavenly machine is not a kind of divine, living being, but a kind of clockwork (and he who believes that a clock has a soul, attributes the maker's glory to the work), insofar as nearly all the manifold motions are caused by a single, magnetic, and material force, just as all motions of the clock are caused by a simple weight. And I also show how these physical causes are to be given numerical and geometrical expression. (Kepler 1605, cited Koestler 1964: 340)

The second transformation involved the contrast between a state of primeval nature and a formed human state with laws and conventions. Mythologies of an original state of nature, of a golden age in which humans and nature were in a state of balance and harmony, have been commonplace since the ancient Greeks. They have often coincided with the myth of Eden, of 'man' before the fall. However, such mythologies themselves have been ambivalent, based on a tension between nature as a state of innocence (nature as the state before the fall), and nature as the wild, untouched and savage places metaphorically outside the garden (the fall from innocence as a fall into wild and savage nature). Two variants of this idea evolved broadly into what we now term the Enlightenment and Romanticism. These two variants were grounded in the dispute over whether this 'pre-social state of nature' was the source of original sin or of original innocence. An early articulation of this dispute can be seen in Hobbes and Locke. While Hobbes famously described the pre-social state of nature as 'solitary, poor, nasty, brutish, and short', Locke described this state as one of 'peace, goodwill, mutual assistance and co-operation'. As such Hobbes argued that the basis of civilised society lay in overcoming 'natural disadvantages', while for Locke the basis of a just society lay in organising society around 'natural laws'. These novel constructions of nature had major consequences for the relationship between forms of social activity and a state of nature.

Indeed, the effect of the new abstract and geometrical 'natures' of the Enlightenment tradition legitimated not only theoretical inquiry – 'a separated mind looking at separated matter', 'man looking at nature' – but also new applications. Williams (1972) argues that the separation of nature from society was a prerequisite for practices dependent on constituting nature instrumentally: as a set of passive *objects* to be used and worked on by people (the doctrine of 'environmental instrumentalism' we set out at the beginning of the chapter). The morality used to justify the enormous interference which occurred from the eighteenth century onwards arose from this construction of a separate nature, whose laws became the laws of physics. And since these were considered God's laws, physical interference came to represent the continuation of God's creation. Indeed, it led to systems of thought where it became considered fundamentally purposeful for people to interfere on a massive scale for human use, first in the field of agricultural innovation, and later in the industrial revolution. It also led not only to arguments proclaiming the 'naturalness' of interference, but also to the argument that interference in and on nature was so inevitable that any criticism of the argument itself became classified as unwarranted interference in the mastery of nature. Hence a particular version of the socio-economic order, that involving a Hobbesian vision of struggle, of self-interest, and of the sanctity of physical intervention on nature for human use, came to be read as an extension of nature and of a naturalised order.

However, the formulation of 'natural laws' in the eighteenth century, alongside a renewal of interest in the state of the natural as original innocence (Rousseau), was closely aligned to the rise in popularity of natural history. Such interest itself arose partly from the life sciences, where the mechanical doctrines had not effectively supplanted the much older idea of the earth as a divinely designed environment, reflected in the very same sensory qualities (its beauty, form, smells and colour) that had been dismissed by the mechanists as unimportant and secondary. For those interested in the variety and complexity of *life*, the new scientific methodology appeared limited and abstract, and ultimately dissatisfying:

> Many men [in the eighteenth century] were dissatisfied with the knowledge of nature and natural laws which mathematics (and especially geometry) had yielded. The philosophy of Descartes, for example, was too removed from reality, from the nature as observed by travellers in all parts of the world. Where in Descartes were the fragrances, stinks, blossoms, colors? Nature was too rich, too luxurious, too complex to be understood by mathematical deduction from first principles. (Glacken 1966: 357)

Such interest in natural history was to prefigure the development of a new and important idea of nature in the late eighteenth and early nineteenth centuries. Just as the 'improvers' of nature were claiming the inevitability of their actions and their transformations of nature, so many people began to experience the turmoil which followed from this massive interference in 'nature'. From work-houses to smog-filled factories, from child chimney sweeps to the destruction of the countryside, from tuberculosis to syphilis, these processes rapidly became criticised as inhumane, unjust and, most relevant here, 'unnatural'. However, as Williams (1972) argues, while these many negative impacts of industrialisation were relatively easy to identify, it was much harder to imagine and to articulate a coherent 'natural' alternative.

Two of the most distinctive contributors in England to this Romantic critique were Wordsworth and Ruskin, who have both been viewed as early environmentalists (see Bate 1991 on Wordsworth; Wheeler 1995 on Ruskin). Ruskin's views were probably the most developed. He argued that good design in industry depends upon appropriate organisation, that this in turn depends upon the proper structuring of society, and that this in turn depends upon how faithful it is to the natural form. Ruskin particularly criticises the ways in which industrial society produced forms of social organisation that were not organic and functional as in nature, but involved competition, individual achievement and the division of labour. At much the same time Carlyle coined the phrase 'industrialism', and said that 'cash was becoming the sole nexus between man and man . . . while there are so many things [for] which cash will not pay' (cited Haigh 1986: 77). The division of labour is particularly criticised by Ruskin. It is, he says, not strictly speaking the labour which is divided by the 'division of labour', but people who are 'broken into small fragments and crumbs of life' (Ruskin 1985: 87). Some of the 'unnatural' phenomena that Ruskin critiqued included the railway, industrial pollution, litter, water reservoirs, cast or machine-made objects, industrial cities, suburban housing, plate glass, and so on (see Wheeler 1995).

Ruskin, though, stood out in his condemnation of the effects of the market. For most nineteenth-century commentators it was the market which was taken to be natural. As it and the associated division of labour were increasingly institutionalised in society, it became difficult both to criticise the mechanism which was identified as the creator of wealth, prosperity, profits and liberal democracy, and to devise a coherent alternative that did not entail the domination of nature (most socialist and Marxist alternatives equally implied the 'death of nature'). Indeed thanks to the utilitarians and late nineteenth-century neo-classical economics, the market itself and the associated division of labour rapidly came to be understood as 'natural'. The laws of the market were viewed as analogous to the laws of the natural world, and therefore not to be interfered with or contested. Williams argues:

> The new natural economic laws, the natural liberty of the entrepreneur to go ahead without interference, had its own projection of the market as the natural [*sic*] regulator. . . a remnant . . . of the more abstract ideas of social harmony, within which self-interest and the common interest might ideally coincide. (1972: 158)

This naturalising of the market strikingly showed how the restructuring of nature as 'natural science' was to cast its baleful influence over humanity and the social world. All kinds of inquiry became subject to the same search for natural laws.

The alternative conception of nature which did emerge in the nineteenth century, from the Romantic rather than the Enlightenment tradition, was more escapist than visionary (see Bate 1991; Williams 1972). Instead of efforts to reinvoke a morality and ethics within nature by thinking through new ways to rework nature *into* the social, nature sustained 'her' separation by departing from the predominant human sphere to the margins of modern industrial society. Nature was increasingly taken to exist on those margins, away from the centre of industrial society:

> Nature in any other sense than that of the improvers indeed fled to the margins: to the remote, the inaccessible, the relatively barren areas. Nature was where industry was not, and then in that real but limited sense had very little to say about the operations on nature that were proceeding elsewhere. (Williams 1972: 159)

In the eighteenth and nineteenth centuries in Europe one feature of nature that became especially valued was the sea, and especially its wild, untamed and immense quality; it seemed to be nature in a quite unmediated and directly sensed fashion (Corbin 1992). Nature was thus valued right at the margins of the civilised land, or perhaps where nature and civilisation came into direct and sustained contestation. And yet of course the sea too became subject to pretty rapid domestication and taming during the course of the nineteenth century. Piers and promenades, beaches and bungalows, swimsuits and swimming soon exerted the mastery of nature on the margins of society (see Shields 1991 on the beach as a marginal zone; and Sprawson 1992 on swimming). This was part of a general development in much of Europe to develop a much more managed conception of nature. In Britain it was exemplified in the campaigns by Wordsworth and later Ruskin to 'conserve' the Lake District and elsewhere, as places or enclaves distant and protected from science, industry and the operation of power (see chapter 6 below; Cannadine 1995 on the history of the National Trust in England, which has played an exemplary role in fostering such a managed nature; Wheeler 1995 on Ruskin).

In the USA many national parks were established, beginning with Yosemite in 1864. These were places where a particular conception of nature as managed wilderness was found. Thus the division between nature and society increasingly came to take a spatial form, with society in and at the centre and nature as the 'other' pushed out to the margins. And even at the margins there was increasing regulation and intervention so as to ensure that there was still a (managed) nature out there to sense (as will be discussed in chapter 4 below).

Seeing nature as the other, as on the margins of society, also relates to the ways in which nature is often presumed to be female (and God to be male). This we now know has been a characteristic conception, that nature has often been constructed as female, as a goddess or as a divine mother (see Yanagisako and Delaney 1995: 3). Further it often claimed that the taming of nature through the industrial economy, reason and science involves its 'mastery' and a form of domination analogous to how men master women, both directly and through the power of the 'look'. Implicit, then, in certain notions of nature have been male sexualised conceptions of the raping and pillaging of nature, akin to men's treatment of women. Central in many such accounts is the similar priority apparently given to the malevolent power of the visual sense (see chapter 4 below). Moreover, in some versions of eco-feminism it is claimed that women are in some sense more 'natural' and closer to 'nature' than are men; and this is particularly because of their role in childbirth and reproduction. It is also argued that women are often the 'guardians of biodiversity' since in developing countries they often know more about local farming practices, the soil, weather, and so on (Shiva 1988). Many feminist utopias have been built around an all-female society which lives at peace with itself and with the natural world (Merchant 1982; Plumwood 1993). Some of the discourses surrounding recent environmental politics have particularly emphasised the way that women 'naturally' will be more concerned to protect and conserve the environment, partly it is said because they will be more likely to take into account the interests of their children (and their children's children and so on; see Roseneil 1995 on the Greenham Common protest against cruise missiles). However, other recent theoretical formulations have criticised what can be seen as essentialist conceptions of men and women, society and nature (Haraway 1991).

It should also be noted that the history of nature further needs to account for how colonialism and racial oppression have also been premised upon a separate nature which is there to be exploited by and for the West (which in total now takes on the character of society). This nature has been seen to consist both of separate 'virgin' territories of often extraordinary natural abundance, and of peoples who are seen as more 'natural' as workers and later as objects of the colonising tourist gaze (Arnold 1996; Grove 1990; McClintock 1995; Shiva 1991, 1994). Plumwood neatly summarises the effects for social groups of thus being presumed to be natural, as located actually or imaginatively away from the centres of reason and science:

> To be defined as 'nature' . . . is to be defined as passive, as non-agent and non-subject, as the 'environment' or invisible background conditions against which the 'foreground' achievements of reason or culture . . . take place. It is to be defined as . . . a resource empty of its own purposes or meanings, and hence available to be annexed for the purposes of those supposedly identified with reason or intellect. (1993: 4)

The conclusion of this brief historical account is that there is no singular nature as such, only natures. And such natures are historically, geographically and socially constituted. Hence there are no simple natural limits as such. They are not fixed and eternal but depend on particular historical and geographical determinations, as well as on the very processes by which nature and the natural is culturally constructed and sustained, particularly by reference to what is taken to be the 'other' (see Arnold 1996: chap. 8 on the invention of 'Tropicality'). Moreover, once we acknowledge that ideas of nature both have been, and currently are, fundamentally intertwined with dominant ideas of society, we need to address what ideas of society and of its ordering become reproduced, legitimated, excluded, validated, and so on, through appeals to nature or the natural. And the project of determining what is a natural impact becomes as much a social and cultural project as it is 'purely' scientific.

We turn now to a brief account of some areas where we will develop analyses of nature and the environment in the succeeding chapters. These in part arise from how the 'social' and the 'natural' are being radically reconstructed in contemporary societies. In this we outline a tentative agenda for the social analysis of nature and the environment, focusing on four interrelated areas: a sociology of environmental knowledges; the cultural reading of 'natures'; environmental bads; and a more general account of the relationship between environmentalism and society.

A sociology of environmental knowledges

In many ways the current role ascribed for the social sciences presupposes a particularly modernist account of nature. Even though the planet is now largely acknowledged as having finite limits and thus no longer identified as offering endless bounty, scientific research programmes still operate under a number of highly modernist assumptions concerning the physicality of the world, its accessibility through scientific and rationalistic inquiry, and the fundamental separation of people and human culture from the physical environment. One implication of this agenda lies in the assumption, currently largely shared in social scientific accounts of the environment, that nature sets clear and measurable *limits* to what humans can achieve. The emphasis on absolute limits, typically defined by ecological science, has passed from the agenda of a few visionaries in the 1960s and 1970s into a commonly shared post-Rio agenda (see Newby 1990a; Redclift 1987, 1993, 1995; Yearley 1996). This is most apparent in current official moves and initiatives aimed at promoting sustainable development, including key intergovernmental documents whose primary aim is to identify ways to limit human activity so that economic and social development can proceed within the finite ecological capabilities of the planet (see, for example, CEC 1992b; IUCN 1980; LGMB 1993; UK Government 1994; UNCED 1992; WCED 1987). Such foci have been particularly organised around the identification, agreement and monitoring of a huge panoply of measurable indicators (see Macnaghten and Jacobs 1997; WWF and NEF 1994). In chapter 7 we examine how a global discourse of sustainability has recently come to organise the emerging environmental agenda, including the role ascribed to sustainability indicators. But what is most striking here is how all these approaches rest upon what we have termed the doctrine of environmental realism: that the realm of nature is separate and distinct from that of culture. In the rest of the book we seek to counter such a thesis.

There are various ways in which this doctrine can be seen to be misleading. First, it ignores the way in which nature should not be viewed as simply setting limits, as subjecting humans to constraint. In other words, nature can be not only constraining but also enabling. The enabling aspects are perhaps most visible when one conceives of nature as the lifeworld in which the social life takes place, rather than simply as a set of finite physical resources available for human exploitation. In chapter 2 we see how the popular appeal to ecology and the environment arose only occasionally through the direct findings of scientific inquiry. By contrast, we examine how public concern about and engagement in environmental issues resulted from specific contestations about instances of nature (involving government bodies, the media and the increasingly potent environmental groups) which came to symbolise a wider unease with the modern world. We will also examine how such concern has reflected aspirations for more meaningful collective engagement and moral renewal and thus a different basis to society, often in marked opposition to the spread of market-based doctrines and their associated model of instrumental human relations (doctrine 3). ‘Nature’ is not then something that only has to be tamed or ‘mastered’, or something that is necessarily at odds with human endeavour.

Indeed, to reify such an emphasis on limits, implemented with a series of don’ts, or do less, can promote the belief that environmental responsibility is something that is ultimately restrictive and disciplinary, a matter of Foucauldian normalisation. In chapter 6 we examine the ways in which the emerging environmental policy agenda in the English countryside is associated with a paradoxical increase in the disciplinary regulation of visitors (such as the ‘Country Code’). Moreover, by defining limits in terms of physical quantities, the political focus lies in achieving commitments to limit economic behaviours, as opposed to the more fundamental questions concerning the very relationship between the natural and the social upon which current economic behaviour resides. Dickens (1991, 1996) has usefully set out how such disciplinary relations (such as ones which do not allow the realisation of intrinsic human potentialities) can be seen as a product of living in late capitalist societies, societies in which human/nature relations become commodified, abstracted by the division of labour, alienated from the sphere of productive labour, and how this forecloses possibilities for emancipation (see also Bookchin 1980 for a sustained critique of the notion of hierarchy in human society). In a parallel fashion we too seek to reconfigure nature/social relations. Instead of identifying current 'environmental knowledges' as setting the parameters for social action, we seek to explore the social origins involved in the production of such knowledges and their impacts in shaping the diverse subsequent debates.

Some of the implications of this can also be seen in relationship to risk (Royal Society 1992). Traditionally the role of the social scientist in public risk perceptions has been in developing techniques that purport to quantify public risk perceptions, in the face of what are taken to be objective accounts of the real risks of particular dangerous or hazardous technologies (nuclear technologies being perhaps the prime example). However, a more explicitly sociological approach is emerging, critical both of the methodologies (such as cost–benefit analysis, decision analysis and mathematical risk analysis) which are used to determine risk perceptions, and of the value-laden judgements upon which they rest.

An early challenge was proposed by Douglas (1966, 1985, 1990, 1992; Douglas and Wildavsky 1982). Douglas argues that individual risk perceptions need to be situated culturally in a network of social and institutional relationships which set concrete constraints and obligations to social behaviour. Risks are to be understood as inscribed in forms of life. All risks are primarily social constructionisms. They are a question of 'purity and danger' in which something is out of place and someone is to blame. Such risks are then analysed in terms of Douglas' categories of grid and group. Her typology aims to capture four idealised ways in which people conceive of their involvement and incorporation in society. Group refers to people's sense of their group solidarity; grid to their sense of control over their own lives. Schwarz and Thomson (1990) have recently used cultural theory in the realm of environmental change, arguing that perceptions of environmental risk depend on the moral commitment of particular communities to particular 'myths of nature' (also see Adams 1995; Harrison and Burgess 1994; Thomson et al. 1990). Four primary myths of nature are then mapped onto the grid–group typology, each representing a distinct cultural filter through which people make sense of the same environmental information. Thus Schwarz and Thomson propose that egalitarians support a view of 'nature ephemeral', hierarchists one of 'nature perverse', individualists one of 'nature benign', and fatalists one of 'nature capricious'. However, this analysis of risk has been criticised as being essentialist, oversimplifying more complex shades of social difference, and ignoring the more general causes of the growth of risk lying at the very centre of contemporary societies (see Johnson 1987; Lash 1995; Shackley et al. 1996).

A less deterministic framework for exploring the social framing of risk perceptions has been developed by Wynne (1982, 1989, 1992a) and Jasanoff (1987). They argue that we have to take into account the wider social and cultural dimensions articulated in people's concerns about risk. Focusing on the assumptions which experts make in setting the framework for the evaluation and assessment of risk, such as trust, ambivalence and uncertainty, Wynne (1992b) argues that these often radically conflict with the views of the lay public and that therefore the so-called experts misunderstand how people actually relate to their risk-laden environments. Public assessments of risk essentially involve judgements about the behaviour and trustworthiness of expert institutions, especially of those that are meant to be controlling the risky processes involved. Thus risks are what he terms 'social relational', and involve judgements of the quality of institutions and of one's relationship to such institutions. Such a view also emphasises that the lay public do not simply respond to risks and assessments of risks which are simply 'out there'. The responses of the public are partly generated by the very threats to their identity which arise from the inadequate conception of the human which is deployed within and by the objectivist or expert science which is supposedly there protecting the public against such risks (Wynne 1996a). We return to this issue in chapter 3 below and provide new empirical material on risk perceptions to illuminate such an approach in chapter 7.

Wynne (1996a) develops a further point here, namely, that in much discussion of risk there is a diminished view of the fluidity and constructed character of the boundaries between objective science and lay knowledge. What counts as authoritative scientific knowledge is, to a considerable degree, a product of active processes of interaction and negotiation between scientists and policy makers. For example, models of global climate change, central to international policy responses to threats of global warming, implicitly rely on questionable assumptions about human, institutional and market behaviour (see Shackley and Wynne 1995b). Yearley (1996: chap. 4) also examines the negotiations between supposedly universal discourses of science and the formation of policy in the fields of ozone depletion, global warming, biodiversity and sustainable development (see also Waterton et al. 1995). He suggests that in different ways standardising discourses of science can actually conceal unwarranted political assumptions, ignore local and cultural difference, and at times mask self-interest, especially for the benefit of the North (see also Agarwal and Narain 1991).

It is also possible to show that on occasions the analysis of 'local knowledges and practices' can challenge the explanatory power of the technical and natural sciences rather more generally. Such sciences often rest upon social assumptions which in the 'real world' mean that the predictions of the theory derived from the laboratory do not always work out in particular 'lived' circumstances. The laboratory is after all a very particular social and natural setting and the lay public may be better informed about the scientific understandings which will apply in their place of work or residence (see Latour and Woolgar 1986 on the laboratory). They may be in that sense better scientists.

This point is well shown in the case of the effects of the fallout from Chernobyl on sheep farming in the English Lake District. Wynne summarises:

> Although the farmers accepted the need for restrictions, they could not accept the experts' apparent ignorance of their approach on the normally flexible and informal system of hill farm management. The experts assumed that scientific knowledge could be applied to hill farming without adjusting to local circumstances . . . Experts were ignorant of the realities of farming and neglected local knowledge. (1991: 45; see also Wynne 1996a)

What this shows is the importance of identifying and analysing social practices, often in some sense based on local knowledges, which mediate forms of scientific knowledge. It is clear that implicit in western models of science is a process of standardisation, which almost certainly means that scientists will ignore the particular local conditions and the forms of local knowledge which are relevant to the appropriate assessments of risk.

Developing categories of analysis to make sense of such localised social practices and forms of knowledge is a key task of this book (see especially chapters 4 and 5 below). Such an endeavour also forces us to reflect further about appropriate methods of research (see chapter 3 below).

Cultural readings of natures

We begin here by noting that the social and cultural sciences can help to illuminate the socially varied ways in which an environment can be seen, interpreted and evaluated. What is viewed and criticised as unnatural or environmentally damaging in one era or one society is not necessarily viewed as such in another. The rows of terraced housing thrown up during nineteenth-century capitalist industrialisation in Britain are now viewed not as an environmental eyesore, but as quaint, traditional and harbouring patterns of human activity well worth preserving. The shifts in reading are even more remarkable in the case of the steam engine in Britain, whose belching smoke is now almost universally viewed as natural, as almost part of the environment. More generally there has been a striking shift in how the railway is viewed (see Richards 1995). Some 'man-made' features become 'naturalised', as almost part of nature, and would be very hard to demolish (plate 1.1). The reading and production of nature is something that is learnt. It is a cultural process and varies greatly between different societies, different periods and different social groupings within any society (see Barnes and Duncan 1992).

Furthermore, it is necessary to analyse and understand the complex social processes which give rise to certain issues being taken collectively as 'environmental'. We argue against the first and third doctrines outlined at

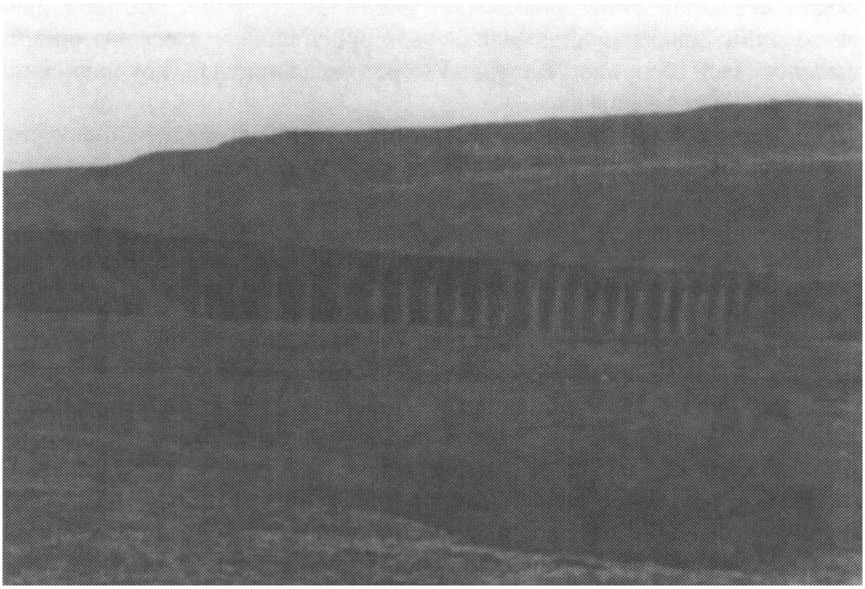

Plate 1.1 *View of Ribblehead Viaduct, Yorkshire Dales National Park: man-made objects becoming part of nature (source: John Urry)*

the beginning of this chapter in which it is assumed that environmental issues progressively come to light via the extension of scientific understandings into the state of the environment. Rather it is necessary to identify the social and cultural context out of which environmental understandings are sensed and articulated *and* are seen as collectively 'environmental' (this is well shown in the case of various nineteenth-century environmental controversies in Wheeler 1995; see also Hajer 1995 for a social contructivist account of the 1980s acid rain controversy in the UK and the Netherlands).

The social and political threads of contemporary environmentalism are complex and we will only consider here a couple of points. Contemporary environmentalism is linked both to the emergence of various other social movements, and to certain processes of globalisation (see Eyerman and Jamison 1991; Lash and Urry 1994; Melucci 1989). Theorists have argued that environmentalism is a new field of struggle against the 'self-defeating process of modernization' (Eder 1990, 1996). Environmentalism thus appears to stem from an emerging critique of a globally planned society, something initially reflected in the counter-culture of the 1960s which led into various other social movements as well as links to the 'enterprise culture' of the 1980s. But something else is involved here. Grove-White (1991a) argues that the very symbols and concepts that currently constitute the environmental agenda involve a process of active construction by environmental groups in the 1970s and 1980s, in response to rather more general concerns about the character of contemporary society. Using the examples in Britain of motorways, nuclear power, agriculture and conservation, Grove-White argues that the particular forms of environmental protest were related as much to widespread public unease with a highly technocratic and unresponsive political culture, as with any specific evaluation of the precise threats to the health of the physical, non-human environment. This argument is examined in some detail in chapter 2 below, in relation to the 'invention' and discursive construction of the contemporary environmental agenda in the UK.

So the environment as a problem came to be created or 'invented' through issues and politics which were apparently not directly concerned with a single unambiguous environment as such. Szerszynski (1993) notes that two preconditions had therefore to develop. First, it was necessary that a range of empirical phenomena came to be regarded as environmental *problems* rather than as simply demonstrating environmental change. So motorways or nuclear power had to be viewed as novel and disruptive, and not merely as further changes which were in a sense 'naturally' part of the modern project (as much fossil fuel energy continued to be so regarded; Szerszynski 1993: 4). And second, there had to be gathering up of a whole series of issues so that they became viewed as part of an overarching environmental crisis, in which a striking array of different problems and issues come to be regarded as part of 'the environment' and subject to similar threats (also see Porritt 1984; Rubin 1989). In chapter 2 we examine the ways in which movements emerge at particular defining moments which are almost always constructed through certain key images and signs. Such key symbolic moments in the UK include the 1976 Windscale inquiry on nuclear reprocessing, the 1981 Wildlife and Countryside Act, Margaret Thatcher's speech to the Royal Society in 1988, and the 1992 direct action protests over the building of the M3 at Twyford Down.

It will also be necessary to analyse those more widespread social practices that facilitate the reading of the physical world as environmentally damaged. This is particularly the focus of chapter 4, when we consider how different senses combine together to generate different 'natures' and different forms in which the environment appears to be 'polluted'. We consider especially the social practices of travel, since on occasions they provide people with the cultural capital to compare and evaluate different environments and to develop that sense of what is 'natural' and hence what appears to be environmentally damaged. It may have been the lack of travel in what was 'Eastern Europe' which partly explains the apparent blindness to the many kinds of environmental damage that we now know were occurring throughout the region. Other social processes which may be contributing to an emerging sense of the environment under threat include the widespread distrust of science and technology, and the perceived lack of agency of individuals when confronted with large-scale (often global) organisations operating within contemporary societies. This last point is to be examined in some detail in chapter 7, where we analyse how ordinary people talk about, value and make sense of nature in daily life, and how people's sense of their engagement in and responsibility towards nature is mediated by their longer-standing trust relations with public institutions.

Interestingly, though, while environmentalism can be seen as mostly in contradiction with modernity, there are other aspects of the latter which have facilitated a greater environmental sensibility, especially to the reading of nature as increasingly global. Thus, the emergence of global institutions such as the United Nations and the World Bank, the globalising of environmental groups such as the World Wildlife Fund, Greenpeace and Friends of the Earth, and the emergence of global media conglomerates have all helped to foster something of a new global identity in which environmental processes are increasingly identified as global and planetary. However, we will go on to consider whether these processes are really more global than many previous environmental crises which have tended to be seen as local or national. And although we will see that the 'global' in global environmental change is partially a political and cultural construction (see Wynne 1994), we also examine in chapter 7 the multiple senses of the global through which people comprehend their involvement in environmental change.

We thus take for granted that strictly speaking there is no such thing as nature, only natures. Such different natures both derive from and provide resources for various kinds of contestation over and objections to transformations of the 'natural'. Recently Szerszynski (1993) elaborated two distinctive ways in which nature has been conceptualised (and see Dickens 1992 for some mass observation data). First, there is the notion of nature as threatened. This sense can be seen in a variety of forms: in the panics over rare and endangered species, especially those which are spectacular and aesthetically pleasing; in the perception of nature as a set of exhaustible resources which should be stewarded for future generations; in the sense of nature as a collection of rights-bearing subjects, especially animals but also some plants (Benton 1993; Porritt 1984); and in the notion of nature as a healthy and pure body under threat from pollution, a nature which, according to Carson (1962), is fast becoming a 'sea of carcinogens' (see Szerszynski 1993: 19–20; also see chapter 2 below).

The second set of representations of nature construct it as an expressive realm of purity and moral power, to be enjoyed or worshipped. Nature may be seen as having sacred properties. There are again a number of alternative forms taken: nature as an object of spectacle, beauty or the sublime; as a recreational space to be roamed across; as a state of pre-social abundance and goodness reflected in the notion of 'natural' healing (see Coward 1989; Stacey 1997); as representing a return from alienating modern society to an organic community; and as a holistic ecosystem which should be preserved in its diversity and interdependence, as in the notion of Gaia (Lovelock 1988).

Both these conceptualisations of nature have of course long and turbulent histories (see Pepper 1984, 1996; Worster 1985). They also provide cultural