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Nature: A Contested Concept

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> **D**efinition
>
> Nature is a contested term that means different things to different people in different places. Generally, this contestation revolves around three main meanings: the 'nature' or essence of a thing; 'nature' as material place external to humanity; and 'nature' as universal law or reality that may or may not include humans.

INTRODUCTION

Natural food is all the rage. Walk down the aisle of your local supermarket and you'll be confronted by entire ranges of products boasting 'all natural' or 'organic' ingredients. Often the packaging is decorated with pictures of verdant fields dotted with grazing dairy cows – or perhaps it's small children frolicking. Bombarded as we are by advertising, we rarely take the time to interrogate the cascade of associations and myths it echoes and extends. Such images of bucolic countryside draw on a long tradition of pastoral art and poetry celebrating nature and the countryside as the true home of humanity. In the context of food packing, they serve to reassure consumers about the quality, freshness, safety and sustainability of particular commodities by locating them rhetorically in an idealized, Edenic environment of healthy, wholesome and leisurely living that is at once youthful and timeless, familiar and far away. There are no factory farms, pesticides, processing plants or migrant farm workers slaving away from dawn until dusk in the imagined geographies of nature depicted in most supermarkets.

We begin with this example to show that 'nature' and the 'natural' are not always what they seem. Behind apparently simple labels like 'natural' and 'organic' stand a whole array of regulations, and the various state, or increasingly non-governmental, inspectors charged with certifying that those standards have been met. In the UK, the Food Standards Agency (2002) publishes a 20-page set of 'criteria for the use of terms fresh, natural, etc. in food labelling', while a host of non-governmental organizations, such as the Soil Association, have formulated codes of practice and other certification schemes to assure the sustainable, organic, Fair Trade or other credentials of particular products. The meaning and definition of nature are more than simply academic concerns. They have important implications for what you eat and how you live.

Geographers, more than most other academics, have been centrally concerned with nature. There is, as Castree (2005) notes, a very close and contested relationship between the nature of Geography as an academic discipline and the nature that geographers take as their object of study. Along with space/location, the concept and study of nature holds together physical and human geography in a single integrative discipline. For this reason alone, 'nature' deserves a central place in any discussion of *Key Concepts in Geography*. Tracing the different ways geographers have understood and studied nature, both as concept and object, provides one way to understand the history of geography as a discipline. Indeed, as we shall see, one of the most important trends in recent research is to blur this distinction between concepts and the objects to which they refer. This move challenges longstanding dualisms and the positivist ideals of objective science that depend on them, which is one reason why debates about the social construction of nature have become so heated.

HISTORY OF A CONCEPT

The literary critic Raymond Williams (1983: 219) famously observed that the 'nature' is perhaps the most complex word in the English language. He identified three broad but complexly interconnected meanings:

1 Intrinsic nature: the essential characteristics of a thing (e.g. the nature of social exclusion).
2 External nature: the external, unmediated material world (e.g. the natural environment).
3 Universal nature: the all-encompassing force controlling things in the world (e.g. 'natural laws' or 'Mother nature').

All three of these meanings figure in debates about the nature (meaning 1) of Geography as an academic discipline. Turner (2002: 63), for instance, sees study of the environment (meaning 2) as central to Geography's claim to be 'an integrated environmental science' well placed to address real-world problems like flooding. Taking that case, physical geographers have elucidated the natural laws (meaning 3) governing the movement of water through landscapes (meaning 2), needed to predict the nature (meaning 1) and impact of flooding. Similarly,

behavioural geographers have developed models to predict the factors controlling (meaning 3) public perceptions of such risks, while a host of critical human geographers have sought to 'take the naturalness out of natural disasters' (O'Keefe et al., 1976: 566) and to show how the nature (meaning 1) of disasters is 'not just an act of God' or a function of 'extreme physical events' (meaning 2) but is socially determined by 'socio-economic conditions that can be modified by' people, if we choose. Against Turner's view that nature is a unifying object of geographical study, it is also possible to draw on other senses of the concept to distinguish human geography, concerned with meaningful human affairs, from physical geography, which studies a brute physical nature in the sense of (2) or (3) or both. This ontological difference between nature and society then forms the basis for distinguishing epistemologically between human geography as a hermeneutic social science of interpretation and physical geography as a positivist natural science of law-like prediction and explanation.

Thus the concept of nature is central not only to Geography and the division between human and physical geographers, but also to science as a whole. Since the dawn of modern science during the Seventeenth century Enlightenment, nature has been critical to various philosophical efforts to distinguish scientific knowledge from other forms of belief. First, science has often been distinguished from religious superstitions on the grounds that its knowledge about the nature of things (meaning 1) is objective in the double sense that it is not based on subjective belief but on direct, impersonal and, in that sense, objective observation of an external and independent reality (meaning 2). Second, positivism defined science in terms of its ability to generate valid predictions from hypotheses. To this view, what human and physical geographers share in common is a search for the essentially necessary and therefore scientifically predictable properties of their respective objects of study. Thus human geographers concerned with the nature (meaning 1) of economic growth would seek to identify the laws (meaning 3) governing its behaviour, while physical geographers explain the nature (meaning 1) of hydrological systems (meaning 2) and the natural laws (meaning 3) governing the behaviour of water in different sized catchments. Though human and physical geographers may study different things, positivists insist that their knowledges are equally scientific, so long as they follow that same scientific method of testing hypotheses about the nature of things against independent observations of those same things.

In so far as all three of these broad meanings invoke a vision of nature that is singular, abstract and personified, there is a central ambiguity about whether or not they encompass humans. Is human nature (meaning 1) determined by some inherent, biological force (meaning 3), like our genes or, as many so-called environmental determinists of the late nineteenth and early twentieth centuries believed, by our physical environment (meaning 2)? Or alternatively, isn't what distinguishes humans from other animals that we can use our rationality to rise above our base biological instincts?

A similar ambiguity runs through the Food Standards Agency's (2002: 10) guidance on the use of the term 'natural' in food labelling: '"Natural" means essentially that the product is comprised of natural ingredients, e.g. ingredients produced by nature, not the work of man or interfered with by man.' Here the

natural is defined so as to exclude any trace of humans and their artifice. That, however, is an impossible standard in so far as all food is the product of intentional human selection. Literally speaking, it is impossible for food *not* to involve the work of people. The FSA regulations go on to explain that it is permissible to label as natural 'foods, of a traditional nature' that have been processed using 'traditional cooking processes' rather than 'novel' ones, such as 'freezing, concentration, pasteurization, and sterilization'. In this way, defining the natural is also defining the human. By eliding 'traditional' with 'natural', FSA regulations simultaneously locate 'novel' food-processing techniques outside nature in a purely human realm of culture and technology, while at the same time fixing certain traditional practices in a timeless realm close to nature where change and technical development are impossible without alienation from tradition and nature.

This ambiguity as to whether nature encompasses humans is not new, and an historical focus demonstrates that there are powerful cultural politics at play in these distinctions. For 'nature', far from being a neutral term, has a contested colonial heritage. The life of 'uncivilized man' living traditionally in a 'state of nature' has famously been imagined as 'solitary, poore, nasty, brutish, and short' (Hobbes, 1651) or, alternatively, as the free and innocent one of a 'noble savage' (Rousseau, 1762). In the context of European expansion overseas, the opposition between nature and civilization was easily racialized and, in the guise of scientific racism, provided a rationale for European colonial rule over more 'primitive' cultures and peoples who were said to be 'naturally' (meaning 3) less rational, civilized, and developed (see Chapter 1 on the histories of geography). Drawing on late nineteenth-century ideas of evolution, geographers like Sir Henry Harry Johnston, author of *The Backward People and Our Relations with Them* (1920, quoted in Livingstone, 1992), argued that it was the 'white man's burden' to govern less developed people and places until they became civilized enough to do it for themselves.

Europeans projected their views of nature on to the new landscapes they encountered in the Americas, Asia, the Pacific and most powerfully, perhaps, Africa. For example, early settlers in New Zealand wrote of the South Island's plains:

> But this vast tract is unpeopled; millions of acres have never been trodden by human foot since their first upheavement from the sea. It is a country fresh from nature's rudest mint, untouched by hand of man. (Hursthouse, 1857: 225)

This separation of rational man from 'primitive natives' helped legitimize the imposition of scientific management to bring order to and 'improve' the land. Where lands proved unsuited to cultivation and other economic use, they were often set aside as national parks or reserves, where nature was to be preserved in an unspoilt state for future generations to admire. But the 'preservation' of so-called wilderness areas was really a production of wilderness, in so far as it often involved the forcible expulsion of indigenous peoples. In Africa, Maasai were evicted to create the Amboseli National Park and only allowed to remain in the Serengeti because they were viewed as 'part of nature' (Neumann, 1998); in the USA the Blackfeet continue to be accused of 'poaching' on the lands of Glacier National Park that originally belonged to them (Cronon, 1995).

Wilderness, then, is a culturally and historically contingent expression of a certain colonialist way of seeing nature. It is, in short, a social construction:

> Far from being the one place on earth that stands apart from humanity, [wilderness] is quite profoundly a human creation – indeed, the creation of very particular human cultures at very particular moments in human history. It is not a pristine sanctuary where the last remnant of an untouched, endangered, but still transcendent nature can at least for a little while longer be encountered without the contaminating taint of civilization. (Cronon, 1995: 69)

RETHINKING NATURE IN GEOGRAPHY

Much recent work in critical geography has sought to question traditional understandings of nature and the Enlightenment dualisms associated with them. One of the most important moves in this regard is the claim, articulated by Cronon in the quotation above, that nature is somehow socially constructed and contingent rather than being intrinsic, external and universal. As we will see, this claim takes a variety of different forms in different traditions of critical geography (Demeritt, 2002).

Marxism

Karl Marx was one of the first theorists to suggest that nature was socially 'produced' or constructed. Marx meant this in a material sense, in that people work on the raw matter of nature to transform it into a second, social nature. However, Marx's account of nature's production under capitalism is highly abstract (Castree, 2005). In his book *Nature's Metropolis*, the environmental historian William Cronon (1992: 266) has provided an empirically rich description of how the American Midwest was remade through the operation of the market:

> Bisons and pine trees had once been members of ecosystems defined mainly by flows of energy and nutrients and by relations among neighboring organisms. Rearrayed within the second nature of the market, they became commodities: things priced, bought, and sold within a system of human exchange. From that change flowed many others. Sudden new imperatives revalued the organisms that lived upon the land. Some, like the bison, bluestem, and pine tree, were priced so low that people consumed them in the most profligate ways and they disappeared as significant elements of the regional landscape. Others, like wheat, corn, cattle, and pigs, became the new dominant species of their carefully tended ecosystems. Increasingly, the abundance of a species depended on its utility to the human economy: species thrived more by price than by direct ecological adaptation. New systems of value, radically different from their Indian predecessors, determined the fate of entire ecosystems.

In addition to this material transformation, Marxist geographers have also highlighted the way in which capitalism depends on a false ideology of nature as both external and universal that serves to conceal and thereby to legitimate

the social relations involved in the capitalist production of nature. In a landmark paper, Harvey (1974) attacked neo-Malthusian arguments about the natural limits to growth both for ignoring the role of economic systems in causing hunger and local resource shortages and for legitimating technical programmes, like the chemical-intensive agriculture promoted as part of the so-called Green Revolution, as the only way to overcome those problems.

Feminism

Feminists have launched some of the most trenchant critiques of the nature/culture dualism and its implications for the subordination of women. Much like Marxist critiques of the ideology of nature, feminists complain that existing and oppressive gender roles are legitimated because they are seen as natural, in the senses both of (1) and (3) we listed above. For instance, in 2005, the then president of Harvard University, Laurence Summers, sparked widespread protests for suggesting that it was biological differences, rather than sexism and discrimination, that explained why so few women succeed in mathematical and scientific careers. In attacking such claims, feminists have enthusiastically embraced constructionist arguments as a 'strong tool for deconstructing the truth claims of hostile science by showing the radical historical specificity and so contestability of *every* layer of the onion of scientific and technological constructions' (Haraway, 1991: 186, original emphasis). Construction talk enables feminists to argue that apparently innate and therefore immutable differences between the sexes are in fact socially constructed *gender* differences that might be changed.

In an influential critique of the masculine bias in geography, Gillian Rose (1993) argued that the discipline's traditions of scientific fieldwork and objective observation were grounded in an eroticized, 'masculine' gaze that at once objectified and feminized the landscape. But Rose's insistence that those scientific ways of knowing are just one of many possible alternatives, begs questions about the status and credibility of feminists' own claims to knowledge. Feminists, as Donna Haraway (1991) notes, have found themselves trying to hold on to two ends of a slippery pole at once. On the one hand, they have sought to dissolve nature/culture and object/subject dualisms so as to insist that all knowledge is essentially social, situated and relative. On the other hand, however, they have also longed for a strong notion of objectivity on which to base their claims about the reality of women's oppression in male-dominated societies. Torn between these conflicting desires, feminists have experienced constructionism as a sort of 'epistemological electro-shock therapy, which ... lays us out ... with self-induced multiple personality disorder' (Haraway, 1991: 186).

Another issue raised by feminist critique is whether and how we distinguish socially constructed *gender* differences from those of a biological nature. De-naturalizing gender roles can leave open the idea that underneath culture, men and women are biologically different. Against that view, a number of scholars have drawn on the work of social theorist Michel Foucault to argue that the sex too is shaped socially and discursively. Foucault (1980) drew on the memoirs of a nineteenth-century hermaphrodite to argue that sex does not have ontological status, and that we are sexualized as woman/man only by medical, social and political

discourses. The hermaphrodite troubled sexual boundary-making practices in France, belying the desire to classify a body as either male or female. Extending that argument, Judith Butler (1993), an influential feminist and Queer theorist, has suggested that the (hetero)sexed body is not determined naturally or biologically, but rather is performed. It comes into being through the repetition of everyday performances and routines that are regulated by wider social discourses and norms and come to shape the body and train its behaviour through an effect she likens to sedimentation.

RELATIONAL GEOGRAPHIES

While feminists and Queer theorists like Butler draw on Foucault to insist that sex and the body have no intrinsic and universal nature, but are instead relational achievements whose precise form and content depend on the social context in which they are shaped, other geographers have made similar arguments about the context dependence of things based on very different theoretical starting points (e.g. Harvey, 1996; Whatmore, 2002).

Interest in such relational geographies reflects a wider concern, among geographers, with ontology. Ontology is the branch of philosophy concerned with the nature of existence. Relational approaches to ontology consider how the nature of things, even reality itself, is context-dependent. As Donna Haraway (1992: 297) explains: 'If the world exists for us as "nature", this designates a kind of relationship, an achievement among many actors, not all of them human, not all of them organic, not all of them technological.' This relational approach to ontology challenges several longstanding Enlightenment presumptions about nature and the world. In particular, the role of relations and context are emphasized over the idea that objects have any intrinsic or universal nature, while the Cartesian idea of external reality as an array of objects located absolutely in the two, separate dimensions of space and time gives way to a sense of space–time as manifold and co-constituted along with what it contains (Massey, 2005).

There are several sources of inspiration for such relational thinking. Within the sciences, developments in complexity and chaos theory emphasize the possibility for systems to become self-organizing as complex higher-order behaviour emerges out of lower-order interactions (Manson, 2001). For instance, a school of fish, containing many thousands of individuals, comes to swim as if it were a single entity, through co-ordination of the lower order-tendency of the individuals within it to follow the movement of their nearest neighbours. In addition to emergence, complexity theory also highlights the sensitive dependence of some systems upon their initial conditions and changing external factors. For example, it is difficult to forecast future weather conditions beyond more than a week or two both because of the potential for storm systems to 'emerge' suddenly and because of the difficulties of knowing with any certainty all of the factors to which their future evolution might prove sensitive (Phillips, 1999). Likewise at the sub-atomic scale, the development of quantum mechanics and Heisenberg's uncertainty principle both emphasize the limits of predictability and the dependence of our experimental knowledge of the world on the context in which it is generated.

One effect of this new awareness of emergence, contingence and indeterminacy within the environmental sciences has been to challenge the trend towards ever-greater reductionism. Instead of breaking fields of study into smaller and smaller parts, a new integrationist Earth Systems Science seeks to study the earth as a single integrated physical and social system (Pitman, 2005). Within ecology, another effect of complexity and chaos theory has been to undermine the idea of the 'balance of nature' (Perry, 2002), which environmentalists have often used to critique human disturbance of the environment as unnatural. Many environmentalists fear that these new ecological ideas may lead to relativism by depriving any clear scientific grounds for distinguishing an anthropogenic impact from 'natural' change (Demeritt, 1994).

However, in a world of genetic engineering and global warming, geographers are increasingly sceptical of even using 'natural' and 'social' as categories of analysis. One influential source for the idea that nature and culture are inextricably 'mixed up' is the actor-network theory of Bruno Latour. In a series of influential books, Latour has developed a unique vocabulary to describe agency, material effectivity, even existence itself, as emergent properties that are realized through historically and geographically contingent relations among the heterogeneous 'actants' of a more than human world. Latour uses the term 'actant', which he takes from semiotics, to emphasize, first, that humans are not the only actors in these relationships and, second, that agency is something that is dependent on a wider structure of relations through which it is produced. Rejecting traditional Enlightenment distinctions between nature and culture, objects and subjects, people and machines, material and imaginary, actor-network theory insists that all elements of a network be described in the same symmetrical terms.

Latour speaks of actor-networks as networked assemblages that operate by 'enrolling', or incorporating, various hybrid actants (which are themselves also composites of heterogeneous, networked elements) into longer, stronger and more durable networks. Sailing ships, for example, were only able to circumnavigate the globe by 'enrolling' the power of the wind, the seaworthy designs of experienced shipwrights, and navigational aids developed through trial and error. If any one of those elements of the network breaks down – for instance if poor navigation or crashing waves make the ship flounder – the network making the ship a ship ceases to hold and the ship literally breaks apart into its constituent elements – boards, bodies, ropes and rigging (Law, 1986).

Such an understanding of the world has potentially far-reaching theoretical and political implications. By extending agency to non-humans, actor-network theory challenges human exceptionalism and the longstanding divisions based upon it between the social and natural sciences. While some geographers insist that trees can be said to 'act' in the same way as people do (e.g. Jones and Cloke, 2002), critics of actor-network theory often note that, in practice, actor-network theorists tend to violate their principle of explanatory symmetry by centring their accounts of network building around purely human actors (Murdoch, 1997). Nevertheless by rejecting human exceptionalism, actor-network theory raises important questions about 'how the we of ethical communities is to be renegotiated on account of its heterogeneous, intercorporal composition' (Whatmore, 2002: 166). Rising to that challenge, Latour (2004) has recently outlined an expanded sense of 'cosmopolitics'. In Latour's 'parliament of things', questions must be put not just to non-humans as well:

You want save the elephants in Kenya's parks by having them graze separately from cows? Excellent, but how are you going to get an opinion from the Masai who have been cut off from the cows, and from the cows deprived of elephants who clear the brush for them, and also from the elephants deprived of the Masai and the cows? (Latour, 2004: 170)

Despite these efforts, critics complain that actor-network provides only a descriptive language and fails to address the pressing moral and political questions about what form our relations should take. To the extent that actor-network theory merely describes rather than also critiquing persistent inequalities, critical geographers complain that such relational geographies remain complicit in reproducing relations of inequality (e.g. Castree and MacMillan, 2001; Smith, 2005).

CONCLUSION

The idea that nature is a 'key concept' rather than the empirical domain of geographic study may have initially seemed rather perverse. But we hope you now appreciate that nature is as a much a concept as it is a biophysical reality. Far from being something located 'out there', nature is also something with us 'in here', in the ways that our bodies, our sense of our selves and our world, and our daily routines are informed by various overlapping concepts of nature. Precisely because of their ubiquity, those concepts are both complex and often hotly contested. Nature, to return to Raymond Williams (1980: 67), 'contains an extraordinary amount of human history', but it also has a geography, though Williams did not remark much upon it. As well as changing over time, concepts of nature, like the things and relations to which they refer, also vary from place to place. Within the discipline of geography, conceptions of nature are closely wrapped up with different ideas about the nature of geography as a science and subject of study. For both those reasons nature is perhaps the most important concept in geography.

SUMMARY

- Nature as a contested concept and as biophysical reality has been central to geography as an academic discipline.

- There is an ambiguity in the concept of nature, in who or what is included and excluded from being labelled 'natural': for example, in organic food, the human body, indigenous peoples, postcolonial 'wilderness', and so on.

- Marxist, feminist and postcolonial geographers have been highly critical of the ideology of external nature (meaning 1) as hiding a politics of exploitative capitalist, gender and colonial relations.

- Relational approaches in human geography aim to blur and bypass the nature/culture dualism. This has far-reaching implications for the physical/ human divide in geography and for how we conceive the differences between the human and non-human.

Further Reading

Noel Castree's (2005) **Nature** in the Key Ideas in Geography series offers the most up-to-date and accessible survey of how geographers have studied nature, while Braun's (2004) and Demeritt's (2001) essays provide shorter overviews of issues dealt with at greater length by Castree. Soper's (1995) **What is Nature?** remains an excellent overview of the idea of nature, while Habgood's (2002) **The Concept of Nature** offers an interesting defence of essentialism from a theological perspective. Useful collections of essays include Braun and Castree's (1998) **Remaking Reality** and Castree and Braun's (2001) **Social Nature**. Plumwood's (2002) **Environmental Culture** or Merchant's (1996) **Earthcare: Woman and the Environment** provide routes into feminist critiques of nature. On animals specifically, edited volumes by Philo and Wilbert's (2000) **Animal Spaces, Beastly Places** and Wolch and Emel's (1998) **Animal Geographies** remain key texts, though Kalof and Fitzgerald's (2007) **The Animals Readers** offer a wider range of essays. Braun's (2002) in treatment of wilderness **The Intemperate Rainforest** refines and extends Cronon's (1995) original arguments, while Wilson (1992) explores the culture of nature in North America more broadly. For accessible applied actor-network theory in geography, see Burgess et al. (2000), Murdoch and Lowett (2003), or Power (2005). The theoretically dense nature of the relational turn in geography presents a challenge to the undergraduate. Murdoch's (2006: Chapters 2–5) **Post-structuralist Geography** offers an accessible introduction; Hinchcliffe's (2007) **Geographies of Nature** draws more directly on relational thinking, see Castree and Macmillan (2001) on lines of disagreement. On complexity theories, see O'Sullivan (2004). Robbins' (2007) **Lawn People** attempts to reconcile relationality with political ecology. On debates about nature as a unifying concern see Harrison et al. (2004).

Note: Full details of the above can be found in the reference list below.

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