

What Is Nature?

Culture, Politics and the Non-Human

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Chapter 2

Nature, Human and Inhuman

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Nature, Human and Inhuman

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Two closely connected distinctions have been central to Western thinking about nature: that between what is naturally given and what is contrived (the artificial) and that between what is dictated by nature and what is humanly instigated (the cultural or conventional). As R. G. Collingwood points out, in posing the question of the nature of nature the Ionian philosophers of the seventh and sixth centuries BC had already presupposed a difference between natural or 'self-occurring' things and the products of skill or artifice,¹ while by the fifth century a nature-culture demarcation is at least implicitly at work in the distinction between *nomos* (that which is a convention of culture, or socially derived norm or law) and *physis* (that which is naturally determined).

Both distinctions presume that there are certain ways in which humanity can - and indeed must - be counterposed to the rest of nature. The distinction between the natural and the artificial, for example, implies that there is a type of productive activity or creativity that is exclusive to human beings. Humanity, that is, has seen itself as differing from the rest of nature in virtue of the fact that it both reproduces and produces, or, if preferred, in virtue of the fact that it creates both natural and artificial 'products'. For while other living beings both produce in

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the sense of reproducing themselves, and create objects (nests, webs, hives, etc.), the latter have been denied the status of artifice precisely because they are viewed as purely instinctual and undeliberated, as the necessarily determined 'products' of their nature. This, it should be noted, is not quite the same as denying them the status of art, since, as Kant points out, we are 'pleased to call what bees produce (their regularly constructed cells) a work of art' and 'we recognize an art in everything formed in such a way that its actuality must have been a representation of the thing in its cause (as even in the case of the bees), although the effect could not have been thought by the cause'.² But, he argues, since no rational deliberation has gone into their making, we refer to such works of nature as 'art' only on the strength of their analogy with our own productions: 'where anything is called absolutely a work of art, to distinguish it from a natural product, then some work of man is always understood'.³ It is this same insight that is registered in Marx's remark concerning the role played by the prior imagination of his construction in differentiating the work of the architect from that of the bee.⁴ Through the notion of the conventional we likewise draw a distinction, which is denied to obtain in the case of other creatures, between those of our practices and modes of behaviour that are naturally ordained and those that are self-instituted and hence in principle revisable. Other animals are here defined as beings who do not instigate conventions and for that reason are viewed as belonging entirely within the order of nature.

An opposition, then, between the natural and the human has been axiomatic to Western thought, and remains a presupposition of all its philosophical, scientific, moral and aesthetic discourse, even if the history of these discourses is in large part a history of the differing constructions we are asked to place upon it. Whether we are asked to view

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nature as an external realm, or ourselves as belonging within its order; as vitalist or mechanistic; as the mere object or instrument of human purposes, or as dialectically shaping us as much as we shape it; all such thinking is tacitly reliant on the appreciation of our difference from nature or 'the rest of nature', and would have no purchase on our understanding without it.

To point this out, it might be said, is not to say very much. Clearly, we cannot be asked to construe a conceptual distinction in this way rather than that, to adjust, undermine or collapse it altogether, unless we already in some sense observe it. Yet it may not be so idle to comment on this a priori dimension of the humanity-nature distinction, given its implications both for those who would emphasize the 'culturality' of nature; and for those who emphasize human affinities with nature. For a concept of the natural as that which is distinguished from the human or the cultural is implicitly at work in any attempt to deny its independent reality or to have us view nature as itself an 'effect' or 'construct' of culture. Arguments that would assimilate nature to culture by inviting us to think of the former always as the effect of human discourse presuppose the humanity-nature dichotomy as the condition of their articulation. Nor can there be any claim to the effect that this dichotomy is itself conventional that does not tacitly rely for its force on precisely that objectively grounded distinction between what is humanly instituted and what is naturally ordained which is being rhetorically denied. When anti-realists insist upon the relative and arbitrary character of the nature-culture antithesis they are implicitly assuming what they purport to deny: that both terms have reference to distinguishable orders of reality.

Transcription note - original page 39: 'culture' is the selected reading, but the word is not clear in the source scan.

But the same point must apply conversely to those who would emphasize human communality with nature, since they too necessarily presuppose the difference they might appear rhetorically to deny. Those who insist on

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human affinities with other animals, or would have us view humanity as belonging within the order of nature, must admit that they are speaking of an affinity or continuity between two already conceptually differentiated modes of being. Similarly, those who deplore the 'anthropocentricity' of human attitudes to nature must accept that the very coherence of their complaint relies on an acknowledgement of human exceptionalism.

Indeed, all ecological injunctions - whether to sacrifice our own interests to those of nature, or to preserve nature in the interests of our future well being, to keep our hands off it, or to harness it in sustainable ways, to appreciate the threat we pose to nature or to recognize our kinship with it - are clearly rooted in the idea of human distinctiveness. For insofar as the appeal is to humanity to alter its ways, it presupposes our possession of capacities by which we are singled out from other living creatures and

inorganic matter. Animals have in the past been morally blamed, and even brought to trial, for the havoc they have brought about to human lives and crops. But I have yet to encounter any ecological argument of our times that subscribes to this Mediaeval morality, which calls upon the Dutch elm beetle to be more responsible to the elm, or sees fit to blame the geological fault for the earthquake it precipitates. Green arguments are addressed to humanity's destruction of a nature from which it is distinguished, and impute responsibilities to human beings of a kind that it is presumed to be meaningless to ascribe to the rest of nature, organic or inorganic. Thus far, they credit us with powers to monitor and transform our impact on the environment that are denied to other forms of being. For, although other creatures certainly change their ways of living, sometimes with dramatic and calamitous impact on their immediate habitat and other species, this is deemed to be adaptive behaviour very different in kind from that which

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humanity is called upon consciously and pre-emptively to undertake. This argument applies not only to ecologically motivated assertions of our affinity with the rest of nature, but to any and every theory that would have us view human attributes and culture as explicable in terms of features shared with the rest of animal life. For were humanity not - at least implicitly - being accorded powers of self-conceptualization denied to other species or inorganic matter, both the production and the claims to attention of such theories would be incomprehensible. No one stressing what is common between humans and other species devotes much attention to persuading those other species of the truth of their claims. Nor can anyone calling upon us to appreciate our affinities with other animals really deny that they are calling upon us to perform an act of cognition of which other beings are incapable - and which therefore renders them different from us. I take it, therefore, that, however carelessly formulated some claims about our communality with nature may be, they are not intended to be construed in ways that deny us our species-specific capacity to articulate and understand them.

What is then at issue in the humanity-nature division is not the positing of the distinction in itself, but the way in which it is to be drawn, and importantly whether it is conceptualized as one of kind or degree. Are we thinking of an absolute difference of realms or modes of being, or of a totality or continuum within which no hard and fast delineation can be drawn between the human and the natural? These questions have preoccupied both philosophy and the human sciences, though their levels of address have been rather different. In modern philosophy, the humanity-nature antithesis has on the whole been interpreted very broadly and abstractly as a Subject-Object division: as a division between the Humanity that is the thinking subject

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and the Nature that presents itself to thought, but is incapable of thought itself. Within the human sciences, by contrast, the humanity-nature relationship has for the most part been interpreted as the site of questions concerning the relations of difference or continuity between human beings and other animal species. While philosophy has been primarily concerned with what can be known of Nature construed as 'external' reality, and with whether humanity, as the knowing subject of this reality, is necessarily transcendent to and ontologically distinct from it, the human sciences have been concerned with the extent to which the empirical knowledge we have of biology, the evolution of species and animal ethology can provide a basis for understanding what is specific to human beings and their forms of life.

Humanity-nature relations are under this aspect conceived essentially in terms of the opposition between the order of culture and the order of nature, where the former is defined in terms of language and symbolism, and socially instituted norms and conventions of behaviour, and the latter in terms of what is given and transmitted genetically. Here the central debates concern the definition of culture and the extent to which it is exclusive to human societies; the respective roles played by nature and culture in the constitution of human individuals; and the degree to which specifically human attributes and practices are deemed amenable to naturalistic explanation. In short, is there a rigid and theoretically unbridgeable divide between the 'cultural' and the 'natural', or is the distinction between humanity and animality (notably other primates) a matter of degree rather than a difference of kind?

The Human Subject and the Natural Object

There can be no question here of offering any systematic survey either of philosophical discourses on Nature, or of

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the controversies between naturalist and anti-naturalist approaches within the human sciences, and I shall do no more here than offer some illustration of the form they have taken. A first point to make here, perhaps, is that for Nature to be conceived as Object, as it is in philosophy from the time of Descartes onwards, it must already be opposed to the mental - as that which differs from the Subject in not possessing mind, spirit or soul. The Subject-Object conception of the Humanity-Nature relationship is the register in modern philosophy of the 'scientific revolution' which in the course of the sixteenth and seventeenth centuries replaced an animistic with a mechanistic view of nature. This cosmological shift, in which a conception of nature as 'ensouled' organism is supplanted by a conception of it as inorganic, fundamentally mathematical and hence objectively quantifiable, has its correlate in the philosophical dualism of Descartes, which opposed God (the Architect and Prime Mover of the 'machine') to Nature (the 'clockwork' set in motion), and mind or soul (as the essence of humanity) to the body or inanimate matter of the rest of existence. The abiding influence of Cartesian mind-body dualism on subsequent philosophical approaches to the humanity-nature relationship is readily understandable if we consider the limitations or philosophical difficulties of the two positions from which it is distinguished: a pantheistic conception of the natural world on the one hand, together with the superstitious or magical modes of understanding and relating to it which that encouraged; on the other, a materialism for which the mental was to be viewed as simply a rather special form of matter and comprehensible in physicalistic terms. But having noted that, one must immediately point to the deficiencies of Cartesian dualism itself, and most notably in respect of its failure to offer any convincing account of the interaction of mind and body. To accept the Cartesian picture is simply to accept

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that there exist two utterly different kinds of substance, that God saw fit to create them both, and that they miraculously but inexplicably operate continuously upon each other. Since, for Descartes, the essential being of humanity lies in thinking, and mind can in principle, if not in practice, exist

independently of body, Descartes in effect places humanity outside the order of nature, and can only account for its existence in terms of its separate creation by the deity.

Yet if the Cartesian two-substance theory of mind and matter offers no satisfactory solution, the problem of how to respect their essential difference, without denying the unity essential to the existence of either, has continued to vex philosophy ever since, and the mind-body problem remains thereafter the axis around which Subject-Object, Humanity-Nature relations have been conceptualized. How do we accommodate the fact that as embodied entities we are clearly part of the order of nature, subject to its determinations and knowable in terms of natural science, while at the same time paying due heed to the fact that, qua Subjects, we are possessed of attributes - cognitive, moral and aesthetic capacities - seemingly unamenable to explanations of a physicalist kind?

The Kantian answer to these questions is notoriously double-edged: human subjects are both free of nature and determined by it, both 'noumenal' creatures whose rational and moral capacities place them beyond the ken of scientific understanding and release them from the grasp of a causal order, but also 'phenomenal' beings whose empirical existence makes them subject along with everything else to natural necessity and knowable to the 'human sciences'. Kant, then, resolves the question of our relations to nature by splitting the human subject, and relegating the problematic 'spiritual' dimension of self-hood to a realm beyond scientific cognition; as transcendent beings we cannot be understood in the terms with which we

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understand the world of Nature, but as objects of empirical knowledge we do indeed belong within that order. At the same time, since we cannot know of this order other than as it appears to us in our own experience and as moulded by the categories we bring to it, Kant in a sense allows for a wholly other and objective world of 'Nature'. In positing a noumenal 'reality' independent of human experience and cognition he can be seen to preserve the idea of a 'Nature' that is indifferent to human purposes and the unknowable condition of human (and all other) existence, rather than the mere servant and adjunct of human knowledge. The world as we know it appears to have been designed with a view to allowing human cognition of it, and thus far Kant's philosophy subscribes to the Enlightenment conception of Nature as specially adapted to human interests and uses. In the same process, it projects a view of humanity as the imbricated and yet transcendent agent through whom a harmony implicit in the ordering of the universe can find its realization. Yet in positing a noumenal world beyond the powers of human cognition, Kant at the same time registers a resistance to this teleology and hints at a resistance in Nature itself to its subsumption within human knowledge.

For Hegel, by contrast, this Kantian compromise between Nature and Humanity is altogether too timorous - an unwarranted and philosophically vacuous concession to the limitations of human knowledge. Hegelian idealism returns Nature to the fold of human knowing by revealing its very objectivity and difference as the dynamic vehicle of the realization of the Idea. Nature may appear as an utterly separate, other and indifferent realm of being, but it does so only to a consciousness that is not yet aware of its own conceptual role in positing Nature as other to itself. As consciousness proceeds to an awareness of its own alienation in presenting Nature as 'alien' to it, it transcends this alienation, subsuming the objectivity

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of Nature into its own subjective knowing. For Hegel, therefore, the very otherness of Nature becomes the vehicle through which Mind or Spirit realizes the transcendence of the cognizing subject to that which is cognized. The Subject, as it were, subsumes the Object of Nature through an appreciation of the dependency of the ideas it has of the latter on its own powers of conceptualization.

For Marx, this subsumption of Nature represents the height of idealist abnegation, and there can be no comprehension that does not proceed from recognition of the dependency of all forms of human knowing on the material world, both in the sense that knowledge is the acquisition of embodied subjects who must eat before they can think, and in the sense that it is acquired only in and through the practical encounter with a physical environment. For Marx, indeed, there can be no posing of the question of humanity-nature relations that abstracts from this practical engagement and its consequences in transforming both the natural environment itself and the 'nature' of the human subjects who are continuously interacting with it. In Marx's conception, Nature figures as a kind of inorganic body of human subjectivity, and in transforming the 'object' we necessarily transform the subject - to the point, Marx suggests in his early work, of constituting even our very senses of sight, taste and touch. In humanizing nature we also naturalize ourselves in the sense that by creating the objective world of our existence we also will determine the nature of even our most immediately sensory responses to it.

Unlike other animals, however, whose 'nature', it might be said, is also formed (and transformed) in response to an environmental context, human beings are quite capable of interacting with nature in ways that are profoundly untrue to themselves, and alienating of their 'species being' - as happens, according to Marx, under relations of private ownership and capitalist exploitation. Humanity is thus

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presented both as belonging with the order of Nature, and sharing in a structure of dependencies on the environment that is common to other animals; but also as differentiated from that order in its very capacity to create the conditions of its own alienation (and, so Marx would argue, of its eventual emancipation). Humanity viewed as a collective Subject is thus both a 'spontaneous' or 'natural' product of its interaction with Nature, but also an active agent who - unlike the spider or the bee - is responsible for the forms of that interaction and in principle capable of transforming them. Humanity is both the creature of nature and its creator, and it is this dialectic - or tension - between active and passive dimensions that has made Marxism such a fertile, if problematic, resource for both naturalist and culturalist approaches within the human sciences.

Part of the problem, it might be said, of construing the humanity-nature relationship as a Subject-Object antithesis is that it already presupposes a division between 'subjects' and 'objects' that is strictly speaking illegitimate. For is this not to bring to the world a prior knowledge of its forms of 'being': to suppose that we already know what it is to 'be' a 'subject', what it is to 'be' an 'object'? Such, at any rate, is Heidegger's challenge to the Western metaphysical tradition. For Heidegger, all scientific thinking and all philosophy, at least from the time of the pre-Socratics, has failed to concern itself with this fundamental question of 'being'. It has failed, that is, to stand back from its metaphysical assumptions of mind and body, subject and object, to engage in a kind of presuppositionless awe over the sheer fact of

existence. Instead of pausing to wonder why there are existents rather than nothing, or why the myriad of things by which we are surrounded take the form which they do, rather than some other, science and philosophy take this fundamental 'beingness' of the world as if it were inevitable and unproblematic. For Heidegger, however,

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'Nature' in this sense is precisely not a necessary order but an extraordinary contingency that might either not have existed at all or happened in some entirely other kind of way. Moreover, there is no way in which it can be thought of as an 'external' world, since Dasein or the Being-of-humanity, is always a Being-in-the-world and inseparably bound up with it. To consider the world of Nature as 'object' is already to have stood back from a primary and pre-cognitive familiarity and imbrication with it; it is already to have adopted a theoretical mode of 'knowing', which necessarily overlooks or distorts the more primordial level at which Nature is already simply 'there' for us and we ourselves 'thrown' into its midst. The entities of the world therefore present themselves as 'objects' only to a theoretical and technological mode of thinking that is permanently dislocated from a more unthinking pre-understanding of the world.

Heidegger therefore comes close to suggesting that we are alienated from the world in the very act of cognitively reflecting upon it; that our 'authentic' relations with Nature are those in which we have only an immediate, unthinking, sensory or aesthetic responsiveness to it. Hence his tendency to celebrate the immanent non-reflective relations to Nature of an idealized 'peasantry'. Yet it would be mistaken to present Heidegger as engaged in a simplistic nostalgia for a pre-technical world, since 'technology' is not a dispensable feature of human relations to Nature, but part of the intrinsic structure of Dasein from whose destiny there is no escape or turning back. It is built into Dasein's own nature that it should overlook and forget its originary being in the world, and there is in this sense no collective political project by which this loss might be recuperated. Dasein in its 'mass' or average or collective existence is thus presented by Heidegger as doing no more than following a predetermined and quasi-natural course in the very 'fallenness' or inauthenticity of its relations to

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Nature. Only the rare individual, the poet or artist, so Heidegger suggests, is in a position to realize, by means of an aesthetic transcendence of technological wisdom, the promise of authentic relations to Being. This is no more than an outline of some of the more influential discourses on the humanity-nature relationship that have been developed in modern philosophy. Yet enough has been said to indicate the extent to which thinking in this area is troubled by the paradox of humanity's simultaneous immanence and transcendence. (Nature is that which Humanity finds itself within, and to which in some sense it belongs, but also that from which it also seems excluded in the very moment in which it reflects upon either its otherness or its belongingness.) To insist on our naturalness, it seems, is to pay too little heed to those exceptional powers and capacities through which we have exercised an ecologically destructive dominion over Nature, but without which there can also be no question of overcoming this alienation. To insist, on the other hand, on our 'super-naturalness' or essential separation from Nature is to sever us too radically from the material context of existence, to conceptualize human nature in idealist terms (by viewing its essence as 'mentalist' or 'spiritual'), and to open the way to a purely conceptual or subjectivist - and hence ecologically irrelevant - resolution of the problem of alienation.

Humanity and Animality

This dilemma is reflected in the tension between what may very broadly be described as dualist and monist approaches to the questions of humanity's relations with the rest of animality. For the dualist, our attributes, realized capacities and potentialities as human beings are so radically different from those possessed by other species

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that there is no proper analogue between humans and other animals. For the monist, by contrast, all the ways in which we differ from other species are matters of degree, which can be all the better illuminated by seeing them as gradations within an essential sameness of being.

It is important, however, to recognize that this is an extremely broad brush distinction that cannot really do justice to the complex and divergent arguments associated with either perspective. In the first place, there is a distinction to be drawn between 'separate creationist' dualism and those who would accept an evolutionary account of the emergence of homo sapiens as a distinct biological species, but are dualist in the sense that they view certain distinguishing features - notably the use of language - as exclusive to humanity and as offering a clearcut criterion for dividing between the 'cultural' and the 'natural'. Disputes about the origins of the human species have in this sense to be distinguished from disputes about the defining properties of the 'human' and the 'cultural', and about the extent to which the latter are explicable in terms of natural features. Monists and dualists are not necessarily in dispute about evolution (though there has been a recent revival of Creationism in the USA,⁵ it is now generally accepted that homo sapiens is not a distinct creation, the divine work of the sixth day of Genesis); nor do they dispute the species-specific attributes of homo sapiens. What is at issue, rather, is the extent to which these properties or powers are entirely exclusive to human beings, and whether they provide the grounds for a rigid demarcation between the 'being' of human beings and that of other creatures.

If, for example, we pursue a monist or naturalist line on this issue, then there are no hard and fast discriminations to be drawn between our capacities and those of the higher primates, who, it is said, do have some limited linguistic capacity, and also give evidence of learnt, as

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opposed to genetically inherited, forms of behaviour. The, admittedly rather meagre, success in teaching 'language' to chimpanzees is frequently cited in support of these claims, and indicates, it is argued, the fundamental mistake of attempting rigidly to distinguish between the cultural and the natural:

'Language' facility, existence of learned and shared behaviour among non-human primates do not mean that there are not large differences between humans and other primate species. What they do indicate, however, is that these differences are the product of evolutionary transformation and not of a - theoretically - unbridgeable gap between ourselves and other species. Human capacities and abilities are the product of evolution, they are not the gifts of God.⁶

The dualist, however, may well agree that humanity is not the 'gift of God' while nonetheless arguing that it is not the gift of 'nature' either - but precisely of culture. One is born homo sapiens (distinctively

biological animal), but one becomes human, which is to say that one does things (uses language in a non-inverted commas sense of the term; is subject to rules of behaviour) that are, definitionally, symbolic - which is to say, inexplicable by reference to natural properties. As Marshall Sahlins puts it:

The 'symbolic faculty' defines culture. Human beings are not socially defined by their organic faculties but in terms of symbolic attributes, and a symbol is precisely a meaningful value... which cannot be determined by the physical properties to which it refers.⁷

Claude Lévi-Strauss, likewise, while speaking of the rule which establishes culture (the incest taboo) as a 'transition' from nature to culture, nonetheless insists on the irreducibility of the cultural defined as a matter of rule-following rather than obedience to natural laws:

The prohibition of incest is in origin neither purely cultural

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nor purely natural, nor is it a composite mixture of elements from both nature and culture. It is the fundamental step because of which, but above all in which, the transition from nature to culture is accomplished. Before it culture is still non-existent; with it, nature's sovereignty over man is ended. It brings about in itself the advent of a new order.⁸

Hence, in a general sense:

The absence of rules seems to provide the surest criterion for distinguishing a natural from a cultural process. Wherever there are rules we know for certain that the cultural stage has been reached.⁹ From a culturalist perspective, then, what matters is not the possession or absence of biological properties, but the presence or absence of certain practices. It is therefore not a question of seeing how far chimpanzees can be taught 'language' or persuaded to perform in quasi-human ways. Any falling short of the symbolic capacities of normal human beings will be enough to deny them 'cultural' status; as, indeed, will be the fact that, left to themselves, they will manifest not even the minimal 'linguistic' skills they acquire as a consequence of intensive human training. Indeed, from a culturalist point of view, such attempts to 'prove' the potential of other animals to approximate in their behaviours to human comportment are largely irrelevant, as is the choice of only the higher primates for the exercise. For it is of the essence of their definition of the cultural that it consists in a set of capacities and practices that are normally displayed by all members of the *homo sapiens* species. Moreover, it follows from the logic of this definition, that were any animal community, however remote from us in evolutionary terms, to show evidence of these practices (to behave, for example, after the manner of the donkey whom Aristotle reports having been seen to throw itself over a cliff face on perceiving that it had

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had intercourse with its mother),¹⁰ then, presumably, they would have to qualify as cultural creatures. It might be very improbable for biological reasons that any animals other than those closest to us in evolutionary terms would manifest any evidence of human-like behaviour, but the culturalist would go by the achievement, not by the nature of the beast.

What matters, then, to those insisting on the absolute duality of the human (or cultural) and the natural is the gap between what chimpanzees can be taught, usually with much effort, to do in the way of sign-using, and the human facility in language and dependence upon its acquisition for normal life; the difference between human and animal production (between, say, the beehive, bird's nest or ant heap, and the opera house, power station or cathedral); or between animal and human sociality and culture (between the pecking order and the rules of kinship, the migration of birds and the tourist industry). For the dualist, that is, any attempt to explain what human beings alone are able, or potentially able, to do, by reference to what other species do, or might become able to do, is mistakenly reductive. For the monist, by contrast, to insist on an absolute division of realms is to impose an arbitrary and anthropocentric demarcation belied by everything that zoology and human biology, evolutionary theory and animal ethology has taught us about animal life in general, including that of *homo sapiens*.

The claim that animals are essentially different from people is traceable back to Aristotle, is a prominent feature of Stoic thinking, and is scarcely much challenged before the nineteenth century. One of its most radical versions is to be found in Descartes' claim that animals, being deprived of a soul, are in effect no more sentient than plants, and therefore lack the capacity of feeling pleasure and pain in any subjective sense. For Descartes, since the capacity for language was essential to thought,

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and thought essential to the experience of selfhood, animals were in effect like machines, which might send out behavioural signals of joy or distress, but lacked any corresponding sensibility of the kind possessed by human beings.¹¹

It is not essential to a dualist view, however, to accept this Cartesian picture of the indispensability of language and thought to the capacity to feel. One might agree that animals experience pleasure and pain in a subjective sense, while still arguing that they differ absolutely from people in lacking cognitive, moral and aesthetic capacities and sensibilities. Kant argued, for example, that humans differed from other animals in being 'ends in themselves', by which he meant creatures who, in virtue of their possession of reason, came with certain entitlements 'in their own right' (by which they also acquired duties), and for whom alone it made sense to speak of 'just' and 'unjust' dealings. Animals, then, differ essentially from us in not being morally culpable for their actions; but, by the same token, neither do they possess rights of the kind which must be respected in people (though this is not, of course, to imply that we should not take account of the sensibilities they do have in our treatment of them).

It is also true that one could accept Descartes' dualist position on language as a cardinal divider between humanity and animality, while disagreeing with almost everything else he said. Structuralist and post-structuralist theories reject the Cartesian treatment of consciousness as the primary source of understanding, while yet subscribing to the view that it is language use that marks us off from animality. From this perspective, language is indeed the defining property of humanity, but since language is itself a social system not an individual property (a truth which Descartes failed sufficiently to recognize), entry into its symbolic order is essential to becoming a human subject and its system of meaning is socially pre-given to the

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individual. For this 'culturalist dualist' position, what is definitional of being 'human' is the possession not of certain biological properties defining of homo sapiens, but of certain capacities and behaviours that are theorized as acquirable only in a human cultural and social environment. One becomes a human (or 'cultural') being only insofar as one is subjected to a social and conventional set of norms and meanings and organizes one's identity in terms of it. Culturalist dualism is marked, therefore, by a resistance to accounts of the human in terms of properties locatable at the level of the individual.

Yet the Cartesian distinction between 'language-users' and the 'rest of nature' has also been defended by Naom Chomsky from a position which emphasizes the individual biological basis of language and thus challenges the idea that human nature must be conceived as an entirely cultural construction. Chomsky criticizes Descartes' assumption that all the phenomena of the natural world, save consciousness and human creativity, could be explained in terms of 'push-pull' mechanics,¹² while nonetheless agreeing about the uniqueness of human language: 'all normal human beings acquire language, whereas acquisition of even its barest rudiments is quite beyond the capacities of an otherwise intelligent ape - a fact that was emphasized, quite correctly, in Cartesian philosophy.'¹³ In contrast to culturalist dualism, however, Chomsky emphasizes the indispensability of the particular structure of the human brain to the capacity for language; and he has suggested that, were it not in virtue of neural mechanisms exclusive to homo sapiens, it would be remarkable that other species had failed to become language users.¹⁴ Chomsky therefore questions the assumption that what distinguishes us essentially from other species must be attributed to social and historical conditions and cannot be traced to natural features. It is this preparedness to accept that 'human nature' might be a discovery of science

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that distinguishes his position, so he has suggested, from that of Foucault and culturalist approaches in general. The key difference, he argues, lies in their much greater scepticism about 'developing a concept of "human nature" that is independent of social and historical conditions, as a well-defined biological concept.'¹⁵ In other words, while Chomsky seeks to differentiate humans from other animals in terms of a common biological essence, the culturalist takes the view that what is critical to the difference between humanity and the rest of nature is not some individual and a-historic property of the mind, but the forms of human sociality themselves. Both regard culture as the defining attribute of the human species, but, while one sees this as conditional upon attributes internal to individuals, the other views it as external to them. Yet in the end, the difference here, Chomsky suggests, should be viewed as one of emphasis rather than an absolute division, and, while he himself has stressed the universal features of the human mind, this is not to dispute the relevance of the culturalist attention to social and historical conditions. Some compromise of this order certainly seems the most convincing, since, while it is no doubt true that we do not become fully human other than in a specific and always historical human social context, it is difficult to explain the emergence of such contexts without reference to biologically predisposing properties.¹⁶ It may be objected, however, that a position such as Chomsky's is not properly speaking to be viewed as dualist at all, since by making biology rather than culture the basis of the distinctive character of human language, he undermines rather than sustains the rigid divide between man and animal. Such a view is certainly implied by Paul Hirst and Penny Woolley, when they appeal to Chomsky's argument in support of their claim that 'in evolutionary terms a "talking ape" is as possible as is a "naked" ape: there is no essential difference between Homo Sapiens and

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any other animal.¹⁷ All the same Chomsky's approach must be differentiated from a monist (or naturalist) position that objects in principle to the drawing of any absolute boundary between humanity and animality. According to this view, humanity can be divided from other species neither by sign, symbol or taboo, nor is it alone in possessing culture, even if its culture, or cultures, are markedly different from those of other animals. There is, therefore, no 'essence' of the human or the cultural whose explanation is to be sought in properties of biology or sociality that are entirely exclusive to *homo sapiens*. The differences, in short, between ourselves and other animals are all to be theorized as differences of degree, gradations within an essential sameness of being.

As with dualism, however, a monist perspective encompasses quite widely divergent forms of argument, and we must distinguish here between more and less reductive approaches. We may define as reductive, or biologically determinist, any attempt to explain individual behavioural dispositions and abilities, or past and present social arrangements, as the inevitable consequence of biology. In some of the crudest versions of the determinist argument, differences of 'character' or ability have been directly associated with such features as body shape and weight (morphology), brain size (phrenology), skin colour (theories of so-called 'racial' difference), and sexual anatomy and function (biological explanations of gender difference). Much contemporary theory of criminality, deviance, mental functioning and mental illness is likewise underwritten by a determinist approach, as are the 'pop ethology' accounts of human territoriality, aggression and sexuality offered in the works of such writers as Konrad Lorenz, Robert Ardrey and Desmond Morris.¹⁸

Within the reductive bracket we may also include the currently very influential attempts within sociobiology to explain all human and other animal forms of 'social'

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behaviour in terms of the individual genotype or 'selfish gene'.¹⁹ These attempts are reductive in the sense that all forms of apparently learned and culturally transmitted behaviours are accommodated within, or made to conform to, a narrow range of evolutionary hypotheses based on the theory of natural selection. The essential thesis of sociobiology, in short, is that the individual organism is to be viewed as the vehicle for the reproduction of the gene and that all overt forms of altruistic or cooperative behaviour are explicable in terms of an underlying 'competition' for genetic inheritance. Individual actions, however apparently self-sacrificial, can always be interpreted as indirect strategies designed to secure genetic survival, and what we think of as 'morality' is simply a circuitous device for preserving genetic material. Even those behaviours which appear directly to confound the thesis, such as the rules of exogamy, are explicable, so it is claimed, in terms of the advantages they secure for the individual genotype.²⁰ Such theories have been widely denounced for the incoherence of their assumption of an 'intuitive calculus of blood ties' and for their failure to address the obvious fact that the human groups that exchange in marriage are by no means determined exclusively by ties of blood, but by many other circumstances (adoption, migration, clientship, etc.). Exogamy, in other words, is not a practice confined to those who happen to be naturally related, and kinship rules cannot therefore be viewed as biologically determined.²¹ More generally, sociobiological explanations have been charged with reading biology in the light of existing relations of class, gender and racial exploitation, and thus with deploying genetic theory in the

interests of socially inculcated ideologies and the preservation of the capitalist order. The theory has been criticized for its naturalization of tribalism, racism, entrepreneurial activity, xenophobia, male domination and social stratification; feminists have roundly condemned the tracing of differences in sexual

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behaviour to the determination exercised by the 'selfish' gene (in 'causing' females to 'invest' in nurturing, males in 'philandery' and both in strategies of 'mutual exploitation');²² and the argument of sociobiology has been extensively accused of bias and circularity. Thus, it has been said, that what is determined as 'deviant' is deemed by sociobiology to be the object of a corrective programme at the level of the gene thought to determine the trait; while what is deemed more universal and acceptable (male assertiveness, for example) is legitimated as the norm and invites no such programme of genetic intervention.²³ The sociobiologists, in short, would have it both ways: they would both deny that their argument has any political motivation or relevance, and seek to explicate the political and social consequences that supposedly follow from their objective science.²⁴ A deterministic naturalism, however, might be critical of the specific explanations offered by sociobiology, while nonetheless maintaining that human beings are no better placed than any other of nature's species in respect of their powers to change their 'nature', whose effects on the environment may be of a different order from those of other creatures but no less 'pre-programmed'. Such a view would have us regard human culture as itself no less a part of nature than the culture of other species, the generation of nuclear power or rock-music coming just as 'naturally' to us as the creation of the spider-web to the spider or nectar-gathering to the bee. The critical indifference of this form of philosophical determinism to the impact of different types of human activity - which are all viewed as equally inevitable consequences of our occupation of the planet - makes it problematic, as we have noted, from the point of view of any form of ecological recommendation. Certainly, the attribution to humanity of moral responsibilities for nature are incoherent for a naturalism of this type, though an ecological version of

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such determinism might take the form of arguing that, if humanity does come to adjust its attitudes to nature, this will have followed from its nature in much the same way as other species are constantly adapting their behaviours to changes in their environmental conditions.

Non-reductive naturalism, by contrast, purports to respect all the ways in which humanity differs from animality, including those ethical capacities that make meaningful the attribution of responsibilities for the natural world. It thus has many quarrels with reductive approaches and would reject their political fatalism and legitimation of the status quo. But it also rejects any form of culturalism that refuses to accept that the possible range of human behaviours is ultimately biologically determined, and insists that all human capacities and 'cultural' attributes are grounded in the biological species being of *homo sapiens*. It is thus opposed to the idea that there is any fundamental ontological division to be drawn between the human and the animal. There are many particular arguments that may be construed as defending a non-reductivist naturalism. Much in the writing of Marx and Engels tends in this direction, even if, particularly in the case of Marx, there are a number of more dualist themes that gainsay it.²⁵ Freud, likewise, though very resistant in much of his argument to any reductive explanations of human culture and psychic experience (hence the justification for the Lacanian insistence on a linguistic interpretation of

psychoanalysis), nonetheless offers accounts of the cultural as taking the form it does in virtue of somatic instincts and needs, which are shared with the animal world at large. Evolutionary perspectives that emphasize the gradual emergence of what is distinctively human out of a previously more animal state of being, and the analogues between human and animal 'culture' would also claim to be anti-biologicistic, while

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nonetheless refusing to recognize any absolute division of the cultural and the natural. We may also note here the 'critical realist' defence of naturalism elaborated in the work of Roy Bhaskar, and Ted Benton's defence of a non-reductive naturalism (some of the ecological implications of which are discussed in chapter 5).²⁶

Civilized Conceptions

One of the difficulties, one may argue, in any formulation of the humanity-nature distinction in Western discourse concerns its reliance on a metaphysical vocabulary that has developed in tandem with the development of Western culture or humanity itself. To the extent that the very concept of the 'human' has been arrived at in the light of the practices and relations to nature of 'developed' or 'civilized' society - practices and relations which by definition are not 'primitive', 'wild', 'savage', or 'exotic' - its very meaning may be said to be dependent on a history of exclusion of some of those members or groups of the homo sapiens species for all of whom it purportedly speaks.

Transcription note - original page 61: 'humanity' is the selected reading in the phrase 'Western culture or humanity itself', but the word is not clear in the source scan.

What is deployed, as if it were a universal concept, carries within it the traces of semantic history that has always defined what is more properly or truly 'human' on the model of Western culture, and has selected in favour of that in its very disposition to think of other societies as 'primitive', 'closer to nature' or less alienated from it. Very often, moreover, what is being said of the human side of the equation in discussions of humanity-nature relations or forms of interaction is meaningful only if we assume that we are talking of the relations of Western humanity to nature, rather than of humanity in general.

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One needs, however, to be careful in making such claims, for not all Western discourses on what it is to be 'human' are equally ethnocentric, and many of them seek explicitly to avoid an interpretative bias in favour of 'civilized' humanity. To make claims concerning the structure of the 'human' brain, or about the 'human' symbolic or linguistic capacity, its bipedalism, use of tools or rule-governed behaviour, is to make claims that precisely do not discriminate between the different members of the homo sapiens species or types of human societies. Such representations of what is common to humanity or to human culture are indeed the product of Western science and dependant for their dissemination on its academic institutions, but they pertain to all human beings or societies regardless of race, creed, colour, or type of cultural development. Those who have sought to provide explanations in terms of an invariant human essence have also linked this quest to the avoidance of ethnocentric bias. Chomsky views his insistence on

language as the invariant and exclusive property of humanity as offering a 'modest conceptual barrier' against racism and other ethnocentric tendencies, precisely because it avoids the empiricism for which other attributes, such as colour, might be deemed relevant to the definition of the 'human'. A structuralist conception of human societies as differentiated only in the variety of their symbolic systems is, for Lévi-Strauss, of critical importance to avoiding the ethnocentric limitations of previous anthropology. Since from the structuralist perspective there is no meaning prior to signification, there is no meaning to which we could reduce the variety of symbolic systems, nor can we order them hierarchically in terms of a linear 'progressive' evolution. In refusing to explain social phenomena by reference to feeling or experience (and tracing instead the content of all forms of human experience to a common unconscious structure or system of shared categories), structuralist

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anthropology precisely aims to avoid the usual concern with understanding 'native' experience, and thus to escape the dangers of interpretations of other cultures that are predetermined by the expectations of the investigator. In explaining totemism, myths and kinship systems as forms of an invariant structure of human cognition, it aspires to an 'objectivism' for which all cultural systems of thinking, including that of Western anthropology, must be viewed as having equivalent status.²⁷ All the same, even where the theory is arrived at in awareness of the possible distortions of viewing other cultures through the lens of our own attitudes and interpretations, a problem remains concerning the status of its own discourse. If, as Lévi-Strauss has suggested, his theory of myth is itself on a par with myth, why should we take it seriously as explanation, and how are we to reconcile its claimed 'mythical' status with its claim to scientific objectivity? Why should we not, it has been asked, view the very quest for such objectivity as part of the mythology of the West? Perhaps the very attempt within Western thought to develop a genuinely 'objective', non-ethnocentric discourse on 'humanity' is in this sense necessarily self-defeating - caught up in a quest for a universalist truth which is itself a piece of cultural 'imperialism'?

As a preliminary to his discussion of the work of Levi-Strauss, Jacques Derrida makes the general point that the discursive character of ethnology means that:

whether he wants to or not - and this does not depend on a decision on his part - the ethnologist accepts into his discourse the premises of ethnocentrism at the very moment when he denounces them. This necessity is irreducible; it is not a historical contingency. We ought to consider all its implications very carefully. But if no one can escape this necessity, and if no one is therefore responsible for giving into it, however little he may do

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so, this does not mean that all the ways of giving in to it are of equal pertinence. The quality and fecundity of a discourse are perhaps measured by the critical rigor with which this relation to the history of metaphysics and to inherited concepts is thought. Here it is a question both of a critical relation to the language of the social sciences and a critical responsibility of the discourse itself. It is a question of explicitly and systematically posing the problem of the status of a discourse which borrows from a heritage the resources necessary for the deconstruction of that heritage itself. A problem of economy and strategy.²⁸

If considered in this light, Lévi-Strauss, claims Derrida, is less than critically rigorous in remaining committed to the endeavour of science and the provision of a universal - 'humanist' - discourse: in seeking still to explain the indefinite 'play' of the sign in terms of some ground or origin that escapes the sign, and that is discovered in a 'science' which necessarily returns us to Western culture as the privileged culture of reference.²⁹ But the difficulty here is whether one could begin to discriminate between more or less ethnocentric positions in the way that Derrida acknowledges we can, and should - for, as he says, not all the ways of yielding to ethnocentricity are of equal pertinence - without some recourse to the 'scientific' objectivity we are here asked to forego. In other words, if structuralism is at risk of resorting to Western culture in the midst of its effort to transcend its reference point, post-structuralist critique tends to a position of such extreme cultural relativism that it risks conflating the very differences it would seek to sustain between theories that are more or less blind to the problems of ethnocentric bias. Western science and anthropology have indeed been guilty of bringing many culturebound assumptions to their studies of 'humanity', but they have also, as Derrida notes, developed discourses that

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have sought to expose that guilt and avoid its errors; and it is difficult to see how we could finally distinguish between the two while denying that there is anything that can be said to be common to all human beings. Whether or not we are convinced by the arguments of Chomskyan linguistics or structuralist anthropology, it would seem perverse to argue in ways that might appear to assimilate their pursuit of scientific objectivity to the forms of ethnocentric bias they have sought to avoid: More generally we may argue that there are no grounds at all for assuming that it is automatically more democratic or politically progressive always to respect cultural difference rather than to insist on sameness. Universalist discourses about 'humanity' are indeed at risk of introducing an ethnocentric bias into their view of what is common to us all; but discourses that would deny any shared structure of cognition, need and affectivity may also license a callous political neglect of the sufferings and deprivations of others. At a theoretical level, moreover, they necessarily undermine the very basis of their own critique, since to pursue an entirely relativist approach to human cultures is to define them all as equally ethnocentric, and Western culture can no more be called to account at this level than can any other. Indeed, if we deny the applicability of any form of 'humanist' discourse, it is difficult to see what it could even mean to move the charge of 'ethnocentricity', let alone assert its 'oppressive' character. It is, then, important to be scrupulous in laying charges of ethnocentric bias against Western discourses on the humanity-nature distinction, and to recognize the extent to which those discourses have themselves been the vehicle of its exposure. In pointing to ways in which Western metaphysics has conceptualized humanity on the model of its own culture, I do not mean to imply that any attempt to speak in universal terms about the nature or condition

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of humanity is to be resisted. My point, rather, is that Western culture has arrived at its normative conception of the 'human' in the light of its own development, and that this concept remains residually in play in the very terms in which it condemns its cultural record. Western thought invokes a notion of 'civilized' values drawn from its own self-image even when it is most critical of the 'brutality' or 'barbarism' of its treatment of other cultures. I am not here simply drawing attention to the actual historical

record of Western colonialism and to the ways in which the identification of 'humanity' with 'civilized' humanity has been used to justify the historical oppression, and even extermination, of 'savage' or 'primitive' communities. The extent to which Western society has historically constituted itself through the denial of the 'other' and violent oppression of whole constituencies of the human species is indisputable and today increasingly well-documented. So, too, is the process through which it began to question these exclusions, and to open itself to the possibility that these 'others' had been illegitimately excluded. The point I am making here is not that Western society did in fact treat other groups and cultures as if they were less than human, but that its thought has been reliant on an implicit assimilation of the 'being' of humanity at large to the being of 'civilized' man; and that there is a legacy of this in the very discourses with which it criticizes the suppressions and abuses, whether of its own species, or of animals or of inorganic nature, that have been perpetrated in the name of 'civilization'. When Western society condemns its own 'savagery' or 'inhumanity', it does so from a perspective that has already conceptualized what it is to be properly human in the light of its own modes of comportment. When we speak of 'humanity's' alienation from, or dominion over, or destruction of, nature, we are talking in ways that implicitly assume the greater

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propinquity to nature of primitive or non-industrialized societies. Even if we accept, as Martin Bernal has argued we should, that Western civilization has involved extensive suppression of its non-Western Afro-Egyptian origins, this point remains valid, since the dispute about origins is essentially a dispute about which acts of colonization are to be credited with laying the foundations of Western culture, rather than a dispute about its 'civilized' quality.³⁰ Bernal's challenge to the conventional picture of the 'white' roots of Western culture is itself conducted within a conceptual framework that privileges the achievements of 'civilized' humanity and views them as an advance over primitivity.

In fact, to ask what it would have been for 'primitive' cultures to have provided the standard by which developed societies historically judged the degree of their own 'humanity' is rather like asking what it would have been for man to have been constituted the subordinate 'other' to woman. Such questions are literally utopic, outside the time and space of history. Entertainable though they may be in the sense that we can understand the rhetorical force of their posing, in another sense they take us beyond the bounds of conceptualization. For we have no resources other than those supplied us in the actual course of history for thinking these hypothetical scenarios; yet those resources themselves inform us that such putative alternatives cannot be thought within the framework of historical actuality. For them to have been possible in history would be for history as we have known it to have been impossible. Had the 'savage' or the 'primitive' been regarded as the norm of humanity, the 'civilized' or the 'developed' as the anomaly, then the record of humanity-nature relations would also, we may surmise, have been very different. When Western thought reflects on the record of its relations to nature, it necessarily thinks in a vocabulary that has presupposed that 'civilized'

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man is representative of the 'humanity' that is nature's antithesis.

Notes

1 R. G. Collingwood, *The Idea of Nature* (Oxford University Press, Oxford, 1965), pp. 29-30. For an extended account of conceptions of nature in classical antiquity, see C. J. Glacken's monumental work, *Traces on the Rhodian Shore, Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (University of California Press, Berkeley and London, 1967); see also Louis Dupré, *Passage to Modernity: An Essay in the Hermeneutics of Nature and Culture* (Yale University Press, New Haven and London, 1993), chs 1, 2. I owe the concise and apt expression of the 'self-occurring' to my son, Jude Ryle.

2 Immanuel Kant, *Critique of Judgement*, Book II, 43, 304, ed. James Meredith (Clarendon Press, Oxford, 1952), p. 163.

3 Ibid.

4 'A spider conducts operations that resemble those of a weaver, and a bee puts to shame many an architect in the construction of her cells. But what distinguishes the worst architect from the best of bees is this, that the architect raises his structure in imagination before he erects it in reality.' Karl Marx, *Capital*, vol. I (Lawrence and Wishart, London, 1954), ch. VII, i, p. 174.

5 See Dominique Lecourt, *L'Amérique entre la Bible et Darwin* (PUF, Paris, 1992).

6 Stephen Horgan, *Nature and Culture in Western Discourses* (Routledge, London, 1988), pp. 108-9.

7 Marshall Sahlins, *The Use and Abuse of Biology: an Anthropological Critique of Sociobiology* (University of Michigan Press, Ann Arbor, 1976), p. 61.

8 Claude Lévi-Strauss, *The Elementary Structures of Kinship* (Eyre and Spottiswoode, London, 1969), pp. 24-5. Elsewhere, Lévi-Strauss speaks of the incest taboo as the 'scandal' which is both 'natural' in being a universal and spontaneous feature of human society, and 'cultural' in being normative, *The Raw and the Cooked* (Harper and Row, New York, 1969), pp. 5-6. As Jacques Derrida points out, however, there is no scandal 'except within a system of concepts which accredits

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the difference between nature and culture' - a difference which the incest taboo may be said to both escape and to ground. See *Writing and Difference* (Routledge, Kegan Paul, London, 1978), pp. 283-4.

9 Lévi-Strauss, *The Raw and the Cooked*, p. 8.

10 I confess I have been unable to trace this reference. Perhaps I have dreamt it.

11 See Stephen Clark entry on 'Animals', J. O. Urmson and Jonathan Ree (eds), *The Concise Encyclopedia of Western Philosophy and Philosophers* (Unwin Hyman, London, 1989), pp. 14-16.

12 Naom Chomsky, *Language and Responsibility* (Harvester, Sussex, 1979), pp. 96-7.

13 Naom Chomsky, *Language and Mind* (Harcourt, Brace, Jovanovich, New York, 1972), pp. 66-7; cf. 'Review of Verbal Behaviour by B. F. Skinner', *Language*, 35, 1959.

14 Naom Chomsky, 'Review of Skinner', *passim* and p. 30, note.

15 Chomsky, *Language and Responsibility*, p. 77.

16 Cf. Paul Hirst and Penny Woolley, *Social Relations and Human Attributes* (Tavistock, London, 1982), p. 87f.

17 Ibid., p. 82.

18 Konrad Lorenz, *On Aggression* (Methuen, London, 1966); Robert Ardrey, *The Territorial Imperative* (Collins, London, 1966); Desmond Morris, *The Naked Ape* (Cape, London, 1967), and *The Human Zoo* (Cape, London, 1969).

'Pop ethology' is a term coined by Stephen Gould - see Kamin and Lewontin, *Not in Our Genes* (Penguin, Harmondsworth, 1984), p. 239.

19 The founding works are those of E. O. Wilson, *Sociobiology* (Harvard University Press, Cambridge, Mass., 1975); *On Human Nature* (Harvard University Press, Cambridge, Mass., 1978). See also Richard Dawkins, *The Selfish Gene* (Oxford University Press, New York, 1976).

20 For a clear and succinct discussion of Wilson's account of exogamy, and of the criticism it has evoked, see Hirst and Woolley, *Social Relations*, pp. 66-91 (who here draw largely on Marshall Sahlins's 'classic' critique of sociobiology in *The Use and Abuse of Biology*). See also A. L. Caplan (ed.), *The Sociobiology Debate* (Harper, New York, 1978); S. Rose (ed.), *Against Biological Determinism* (London, 1982); L. Kamin and R. C. Lewontin, *Not in Our Genes*. For a critique of determinist approaches to the study of human intelligence, see S. J. Gould, *The Mismeasure of Man* (Norton, New York, 1981). For some

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astute comments on the ways in which current revivals of biological determinism feed into the New Right's sanctification of possessive individualism, see Andrew Ross, *The Chicago Gangster Theory of Life* (Verso, London, 1994), ch. 5, esp. pp. 250-9.

21 Hirst and Woolley, *Social Relations*, p. 75.

22 As evidenced, for example, in R. L. Trivers, 'Parental Investment and Sexual Selection' in B. Campbell (ed.), *Sexual Selection and the Descent of Man 1871-1971* (Aldine, Chicago, 1972); Richard Dawkins, *The Selfish Gene*. For an exposition and critique of sociobiology's determinist approach to human sexual behaviour, see Janet Sayers, *Biological Politics* (Tavistock, London, 1982), chs 4, 5; cf. Linda Birke, *Women, Feminism and Biology* (Harvester, Brighton, 1986); Donna Haraway, *Simians, Cyborgs and Women: the Reinvention of Nature* (Free Association Books, London, 1989).

23 Kamin and Lewontin, *Not in Our Genes*, p. 173.

24 *Ibid.*, p. 28.

25 See Ted Benton, 'Humanism = Speciesism? Marx on humans and animals', *Radical Philosophy* 50, pp. 4-18 and other works cited in chapter 3, note 39.

26 See chapter 5, note 7.

27 For two excellent guides to what is distinctive to Lévi-Strauss's anthropological argument, see E. R. Leach, *Lévi-Strauss* (London, 1970, rev. edn, New York, 1974) and Dan Sperber, 'Claude Lévi-Strauss' in John Sturrock (ed.), *Structuralism and Since* (Oxford University Press, Oxford, 1979), pp. 18-51.

28 Derrida, *Writing and Difference*, p. 282.

29 *Ibid.*, pp. 288, 292.

30 Martin Bernal, *Black Athena: the Afroasiatic roots of classical civilisation* (Free Association Books, London, 1987).