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University of Cape Town

THE NATURE INDUSTRY

Reflections on Culture at the End of Nature

Louise Green

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Abstract

At the end of the twentieth and the beginning of the twenty-first century the concept of nature assumes a new visibility. I argue that this visibility, which takes the form of an anxiety about 'the end of nature', can be linked to a sense of crisis surrounding the possibility of life in late capitalist society.

An understanding of the 'end of nature', I suggest, can best be achieved by returning to the work of Theodor Adorno. In particular, the figure of the constellation seems to offer a effective mode of analysis for addressing the complexities contained in this cultural phenomenon. The cultural texts I have chosen to juxtapose are drawn from a series of seemingly unconnected areas of cultural life: a parkway, a utopian novel, an exhibition of chimpanzee paintings, a dystopian novel, a series of popular films and a number of philosophical essays and cultural commentaries. I say seemingly unconnected because my thesis attempts to show how the general sense of 'the end of nature' emerges in different ways in these different discursive forms and representational arenas.

What emerges from this constellation of elements is an image of nature as that which holds and conceals the irreducible contradictions of living in consumer society. The image makes visible how things like landscapes, animals and human bodies, become marginalized and/or reduced to commodities sometimes even in the very act of trying to conserve them.

What also becomes evident in the phenomenon of the end of nature is an inflation in the value of the concept of 'nature'. If in some ways, the new value acquired by nature seems simply to repeat an earlier movement, in which reified nature becomes the desired alternative to the degraded landscape of industrial production, this interpretation does not sufficiently account for the extent and intensity of recent interest in nature. This inflation in the value of nature is not only a turn away from history. It also involves recognizing something about the agency of what is not human. Nature returns as a sign of loss and of value not only because of real environmental concerns, but also because, in a lived condition of increasing abstraction, it contains the promise of something outside.

Declaration

I declare that this thesis is my own original work.

Signed

Signed by candidate

Date

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Introduction

The Problem of the Remainder

> *Mammoth.* –... The more purely nature is preserved and transplanted by civilization, the more implacably it is dominated. We can now afford to encompass ever larger natural units, and leave them apparently intact within our grasp, whereas previously the selecting and taming of particular items bore witness of the difficulty we still had in coping with nature. The tiger endlessly pacing back and forth in his cage reflects back negatively, something of humanity, but not the one frolicking behind the pit too wide to leap. ... The fact however that animals do really suffer more in cages than in the open range, that Hagenbeck does represent a step forward in humanity, reflects on the inescapability of imprisonment. It is a consequence of history. The zoological gardens in their authentic form are products of nineteenth century colonial imperialism. They flourished since the opening-up of wild regions of Africa and Central Asia, which paid symbolic tribute in the shape of animals. The value of the tributes was measured by their exoticism, their inaccessibility. The development of technology has put an end to this and abolished the exotic. (Adorno 1978: 115-116)

The Possibility of Life

Towards the end of the twentieth century, the concept of nature enters a new moment in its history. It enters the imagination of an emerging global culture as something which is ending. Whatever the literal truth of such a claim might be, if indeed such a claim can be measured in literal terms, it holds considerable rhetorical force. This is in part because nature, variously defined, has, in the history of western political thought, always acted in some way as a measure of the 'good life.'[1] It has designated a reference point outside human society against which norms and customs might be held so as to establish their relative values. Whether distance from or proximity to nature was considered desirable depended on geographical location and politics but the independence of something which went by the name of nature remained unchallenged.[2]

In the late twentieth century nature assumes a new visibility. Approximately two hundred years of cumulative transformations to the material landscape wrought by industrialization and modernization confront a new global culture which is profoundly divided over what might constitute the 'good life.' Nature enters this culture as a fragile and enigmatic concept, one with a protean ability to change its shape to fit every different context and yet to always leave a remainder. In its metabolic interaction with global culture it is both that which is totally dominated and that which is left over, what eludes domination by the very fact of its being merely a remainder.

The extract from Theodor Adorno quoted above begins with a reflection on the discovery of a well-preserved dinosaur in the state of Utah, the remains of a creature whose existence points to a moment which precedes human domination. The popular fascination with the monstrous, with unimaginably huge creatures such as the dinosaur, reflects, Adorno suggests, an attempt to assimilate the 'monstrous total state,' (perhaps now in the early twenty-first century, the monstrous global system), something which in its sheer scale defies human experience. But the impulse to imagine primeval creatures goes beyond this. Adorno argues that: 'the desire for the presence of the most ancient is a hope that animal creation might survive the wrong man has done it, if not man himself, and give rise to a better species, one that finally makes a success of life' (1978: 115). The 74th aphorism of Minima Moralia, '*Mammoth,*' provides a fitting starting point for this thesis which attempts to unravel some of the complexities of the concept of nature in late twentieth and early twenty-first century culture.

The use of the complex terms 'nature' and 'culture' requires qualification. Both are 'already inhabited', to use Bakhtin's suggestive formulation, by many different voices, many contradictory impulses.[3] In the context of this investigation the term 'culture' offers itself more easily to explanation. It is tempting to rewrite the earlier sentence, to write that this thesis focuses on the place of nature in late twentieth and early twenty-first century Western culture. In some ways this is accurate since the texts it engages with are predominantly European and American. Yet living outside of both these locations makes it very clear that what is essential to 'western culture' is its refusal to remain tamely within the borders of the 'west'. Since the days of colonialism certain aspects of European culture have been aggressively imposed on other cultures, and in the late twentieth century, as Fredric Jameson has noted, popular culture has become one of America's largest exports.[4] This thesis then begins to address the new 'global culture,' while acknowledging that this concept defines something which does not, as yet, exist, or which exists only as an imagined totality, the imagined disappearance of anything that has not been touched, restructured and reordered by the compelling logic of late capitalism.

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[1] The phrase comes from the very origins of western philosophy in the respective discussions and descriptions of the task of philosophy as the search for the good life. See, for instance, the various discussions of *eudaimonia* in Plato's Republic,(1955) and Aristotle, The Nichomachean Ethics (1985). See also discussion on 'well-being' in Bernard Williams (1985: 30-53).

[2] See discussion in Raymond Williams 'Ideas of nature' in Problems in Materialism and Culture (1980), and The Country and the City.(1973) Also Kate Soper 's discussion of Williams in What is Nature? (1995).

By using the term 'global culture' I want to draw attention to the fact that 'culture' at the end of nature is inescapably a global concern both because the way of life in first world countries has a direct and often overwhelming impact on the lives of everyone else, but also because attempts to rethink life on the earth in a more ethical and sustainable way frequently draw on traditions which are not western. The 'culture' I attempt to engage with in this investigation is thus not conceived of in a way which presumes homogeneity; it consists rather of fragments and incomplete narratives that mark moments in which certain aspects of the current anxiety about the possibility of life on the planet have become crystallized.

Historically, I take the Second World War as a significant reference point and the texts I focus on are predominantly those produced in the second half of the twentieth century. This is not to suggest simply that the war itself had a transformative impact on people's conception of nature, although the development and use of the nuclear bombs at Hiroshima and Nagasaki clearly escalated the possibility of the destruction of the world in previously unimaginable ways. Rather the war offers a manifestation of concentrated violence, a material and psychical disruption which in the intensity of its

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[3] Bakhtin (1981) writes language 'is not a neutral medium that passes freely into the private property of the speaker's intentions; it is populated – overpopulated – with the intentions of others' (quoted in Higgins 2001: 93).

[4] See discussion in 'Marxism and Postmodernism' in Jameson (1999). For an incisive overview of Jameson's positions see Perry Anderson (1999).

trauma, opens up aspects of Western culture which were previously hidden. It reveals, among other things, the intractable centrality of technology to human relationships.

I am not suggesting that in the period after the war anything like a coherent and unitary response to nature emerges. I recognise that there are significant differences between the modes of imagining nature in the atomic age, and those of the environmental movement of the 1970s and 80s, and the technotopian or dystopian visions of the 90s and early twenty-first century associated with the new technologies of genetic modification. Yet all of these cultural responses seem to me to have something in common – an overwhelming sense of something called 'nature', although defined and described in subtly different ways, which is fragile, disappearing and finally lost.

The war is significant because afterwards the material and social landscape is altered but it is, as is always the case with historical markers, an imagined and imaginary boundary. What happens in the second half of the twentieth century to the way nature is imagined in 'global culture' is part of a tradition which begins in the nineteenth century and which is inextricably interwoven with the trajectory of modernity. The term 'nature' is defined, and redefined in relation to the colonial project, the 'opening up of wild regions of Africa and Asia', and the resulting zoological gardens with their barred cages are concrete manifestations of a particular relationship to nature, one in which, as Adorno argues, nature retains the power to disturb. The pacing tiger 'reflects back negatively, through his bewilderment, something of humanity.' With Hagenbeck and the redesign of zoos in the early part of the twentieth century to create an approximate simulation of freedom, this power to confront and disturb is lost.[5] Preserving nature, the designation of purely natural spaces, Adorno suggests, indicates the fact that nature has been relentlessly and successfully dominated more clearly than any destruction.

The focus of this investigation is on 'nature' as it enters imagination after its domination. Hagenbeck's zoo in 1907 marks a small shift in thinking about nature. The impulse to lessen the suffering of captive animals is not only a shift towards a more humane treatment it is also a sign of the position 'nature' occupies in society. The animals, no longer threatening and different, become merely interesting. They enter the entertainment industry as commensurable elements to be kept as happy as is possible under the circumstances so that they are able the better to perform their function. As representatives of what is wild and outside of culture they become entirely absorbed into culture.

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[5] Carl Hagenbeck (1844-1913) was a German animal dealer and zoo owner who developed a new system for displaying animals, using moats rather than barred cages, which gradually spead to other zoos around the world.

After the war, this process of assimilation accelerates. Not only animals, but the human body, and even natural spaces become delimited as signs of themselves, as what was substantial about them, their resistant materiality is reordered and brought under ever greater control. As various 'side effects' of modernization emerge in the form of environmental crises, 'nature' assumes a new significance. It enters the imagination as something which is lost or which is in the process of being lost. What exactly is lost, although concrete in its particulars – forests, species, the ozone layer – remains at a general level, enigmatic, like the word nature itself.

One attempt to define what the general implications of this loss might be can be found in cultural critic and environmentalist Bill McKibben's book, The End of Nature, published in 1990. In it he documents how at a material level, nature, defined as that which is external and independent of human existence, has been destroyed through the practices of industrial society. Nothing remains untouched by human activity; everything is to a greater or lesser degree altered. This book had a significant popular impact and was translated into a number of different languages.

There are a number of problems with McKibben's account, not least of which is the way he describes as 'human', behaviours, practices and attitudes which are in fact American.[6] Many people have also taken exception to his definition of nature as that which excludes humans, pointing to its history as part of the romantic American tradition from which Native American engagement with the land has been erased. Viewing nature as external nature, and seeing human engagement as always negative, it has been argued, makes imagining a more positive relationship with the environment difficult.

Yet despite these drawbacks the book remains useful to this project because it articulates some of the inchoate unease surrounding the possibility of life in the late twentieth and early twenty-first century, and how this unease is bound up in material and psychical ways with something which is not so much defined as gestured towards in the term 'nature'. It is useful not so much for its analysis, although it provides interesting details about the far reaching and often hidden consequences of human actions, but for the way the text reveals, in its struggle to express what has been lost, something of the opacity of the concept of nature.[7]

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[6] A criticism which he acknowledges is fair. Conversation with the author, San Francisco, 2003.

The book, written from the standpoint of McKibben's personal experience, attempts to bring together the immediacy of the everyday with the almost ungraspable complexity of the global system. Its endeavour, the anxiety it expresses and the conclusions it comes to reveal precisely the problem of the apparently autonomous subject who finds in his life, his interpretation of that life and his attempt to express himself that he has nowhere to go. McKibben is not alone in articulating this sense of unease, and suggesting that 'nature' has something meaningful to offer beyond the consumer culture of contemporary America which is rapidly if unevenly expanding to incorporate the world. Nature has become the new catchword to signify value in innumerable different contexts, from the New Age movement, to advertising, to deep ecology, to academic research.[8] My own use of the phrase 'the end of nature' is, therefore, not quite the same as McKibben's. I use it less to express something about the material world, than as a short hand to describe the anxiety and dis-ease of which his book is one preeminent example.

Minima Moralia

Central to the argument of this thesis is my claim that the writing of Adorno provides a useful new approach to the phenomenon of nature which begins to emerge after the Second World War and which finds direct expression in this dis-ease which I am calling the end of nature in the 1990s and beyond.[9] In making a claim for the relevance of Adorno's work to the analysis of contemporary modernity, I am following the lead of Fredric Jameson who suggested in 1990 (the same year that McKibben proclaimed the end of nature), that Adorno, though writing from the 1930s to the 1960s, may turn out to be, presciently, the best analyst of the late twentieth and early twenty-first century.

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[7] Raymond Williams traces some of the history and complexity of the concept in 'Idea of Nature' (1980).

[8] The New Age movement's fascination with nature is discussed in the intriguing first chapter of Andrew Ross' Strange Weather: Culture, Science and Technology in the Age of Limits (1991).The urgency of this concern is indicated by the quantity of research into questions relating to people's relation to nature in the human and social sciences in the last 10 years. It has become the focus for a large number of interventions in a wide range of disciplines, sociology (Dickens 1996; Simmons 1993), politics (Bennett & Chaloupka 1993), woman's studies (Plumwood 1993), social geography (Gregory, Martin & Smith 1994; Wilson 1992), anthropology (Clifford 1988) and literary studies (Ross 1991; Kerridge & Sammells 1998) . This represents a very small sample in a rapidly expanding field.

[9] Theodor Adorno (1903-1969) ,was a German intellectual and member of the Frankfurt Institute for Social Research. He went into exile in the United States during the Second World War and returned to Germany to teach at the University of Frankfurt in 1949. For interesting intellectual biographies and discussions of his work see Buck-Morss (1977) Rose (1978) Jay (1984) and Jameson (1990) . More recently also Varadharajan (1995) ,Nicholsen (1997) and Bernstein (2001).

As Jameson suggests: 'there is some chance that he [Adorno] may turn out to have been the analyst of our own period, which he did not live to see, and in which late capitalism has all but succeeded in eliminating the final loopholes of nature and the Unconsciousness, of subversion and the aesthetic, of individual and collective praxis alike, and with a final fillip, in eliminating any memory trace of what thereby no longer existed in the henceforth postmodern landscape' (1990: 5).

Jameson argues that Adorno's critique of positivism translates with peculiar ease into a critique of postmodernism, despite the fact that the glossy outward manifestations of the postmodern are apparently so different from the nineteenth century petty-bourgeois philosophy of science out of which contemporary consumerist society emerges. Positivism becomes postmodernism, Jameson suggests, after it has fulfilled its own logic, one aspect of which is the abolition of the subjective – the 'hesitations, deliberations and civilities' (Adorno 1978: 40) that form the material of subjective engagement.

In particular he suggests that in the contemporary culture of political despair/quietism in which the logic of global capital appears inescapable, Adorno's insistence on theory – of tracking through the concrete experience of the everyday the minute movements of domination and oppression which indicate towards the compelling yet invisible totalizing logic of the global system – provides a highly significant model of engagement.

If in the early twenty-first century postmodernism – at least in its more celebratory aspects – no longer seems an adequate formulation to encompass the complexity of the world system, this is because its tendency toward the hollowing out of everything to leave nothing but the skin or surface is now partially countered by a new interest in authenticities, of which I would argue, the inflated interest in nature is one manifestation. This rejection of the postmodern, in some cases, articulated as a rejection of post structuralism, (or sometimes the rejection of theory as such) locates in nature a new realm of authenticity. Nature appears as an opening for the immediate, the concrete and the subjective as well as contradictorily for a new grasp on the certain and the objective.[10]

Adorno's writing, I argue, provides a particularly useful way of engaging with the phenomenon of nature as the realm of the authentic not only because of his rigorous and stringent critique of the 'jargon of authenticity' but also because of his thoughtful and delicate tracings of the subjective, its impulses and its impossibilities. A characteristic of all his writing, it is perhaps best exemplified in Minima Moralia, in the short crafted elaborations of moments, thoughts, experiences from which emerge intangible glimpses of what Adorno sometimes calls 'life', the trace that escapes domination in the fabric of domination itself.

In the dedication to Minima Moralia, he writes:

> The melancholy science from which I make this offering to my friends relates to a region that from time immemorial was regarded as the true field of philosophy, but which, since the latter's conversion into method, has lapsed into intellectual neglect, sententious whimsy and finally oblivion: the teaching of the good life. What the philosophers once knew as life has become the sphere of private existence and now of mere consumption, dragged along as an appendage of the process of material production, without autonomy or substance of its own. (1978:15)

Adorno's description of his project makes it clear that what he is attempting goes beyond simply an analysis of the conditions of everyday existence. He is concerned not only with the possibilities of life, but the possibilities of an ethical life, the ways, albeit limited, in which the subject can live, can engage with the world and understand his or her own deformations. He insists on the subjective and the validity of experience while warning in the same breath that they cannot be trusted. It is this aspect of his writing, this attempt to articulate the relationship between the subject and the world, between the materiality of domination and the equally material if ephemeral moments in which something escapes, not life perhaps, maybe only the residue of life, but something

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[10] At the 2003 ASLE (Association for the Study of Literature and the Environment) conference in Boston one participant remarked that post structuralism had run its course and it was now time to return to biology as the basis for understanding human nature, and therefore, as the basis for the interpretation of cultural texts. Compare Eagleton's recent views, in The Illusion of Postmodernism, on Nature in postmodern culture: 'It is indeed remarkable how the epoch of postmodernity has been characterized at once by a veering away from Nature and a sharp swing towards it. On the one hand everything is now cultural; on the other hand we must now redeem a damaged Nature from the hubris of civilization. These opposed cases are in fact secretly at one: if ecology repudiates the sovereignty of the human, culturalism relativises it anyway' (1996: 70).

important nevertheless, that seems to me to make Minima Moralia so relevant to the recent discussions of nature. Not only does he address the question of nature directly in several of the segments, he does so without reducing nature to the any of the forms through which it might be captured - the biological, the romantic, the economic, or the psychoanalytic.

In this thesis, I make use of an extract from Minima Moralia as the starting point for each chapter. Each one provides both an oblique entry point into the aspect of the contemporary phenomenon of nature I wish to discuss, and a model of a mode of engagement which avoids reducing things to their concepts.[11] They suggest the possibility of an approach which would not seek to define 'nature' and its various uses, but rather might permit it to emerge in all its incoherence as a manifestation of precisely the contradictions which capitalism imposes not only on the structuring of the social but on the substrate, the material landscape, itself.

For Adorno, the domination of nature is not something separate from other forms of oppression. In this he departed from the more established marxist tradition in which 'material progress' constitutes one of the preconditions for revolution.[12] Instead, in Dialectic of Enlightenment, Horkheimer and Adorno argue that the process of enlightenment, while it increases the power of human beings over nature, does so only at the cost of their own alienation. They write that: 'Nature, stripped of qualities, becomes the chaotic stuff of mere classification, and the all-powerful self becomes a mere having, an abstract identity.' (2000 [1947]: 6) The domination of nature cannot be separated from the domination of human nature, from the transformation of the subject herself into an object.

Natural Capital

Adorno and Horkheimer's comments predate the sense of environmental crisis that becomes part of the public imagination in the 1960s and 70s, but they remain peculiarly apt. They describe the beginning of a process of reification which results in the translation of nature into commodity. The concept of 'natural capital' developed by bourgeois ecological economists to ascribe market prices to ecological resources represents a total assimilation of nature to the logic of exchange. Ecological resources tend to refer to external nature, to raw materials, and ecosystems used or acted upon by industry. But the process of reification, already evident in the treatment of animals, and in the uses of the human body, in the early twenty-first century is extended, at least in the imagination, to subjectivity, to the reorganisation of what constitutes the possibilities of subjectivity itself, to the reorganisation of what constitutes the possibility of subjective engagement, the genetic codes and chemical balances believed to influence, if not determine, thought, emotion, intelligence, health.[13]

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[11] In Negative Dialectics, Adorno writes: 'The name dialectics says no more, to begin with, than that objects do not go into their concepts without leaving a remainder, that they come to contradict the traditional norm of adequacy. (1973: 5)

[12] Ted Benton suggests that the role of 'material progress' is one of the concepts that requires revision in the 'greening of marxism', its rethinking in the light of the new politics of the environment. (1996: 10) See also Joan Martinez-Alier '"Environmental Justice" (Local and Global)' and David Harvey 'What's Green and Makes the Environment go Round' both in Jameson & Miyoshi (eds.) (1999: 312-326; 327-355).

Marxism's engagement with environmental concerns emerges in response both to the growth of environmentally-based political movements and to the practical effects of environmental damage on the workings of capital. For some, the announcement of a global ecological threat was seen to represent a further elaboration of an ideology of nature, one designed to protect bourgeois privileges. Hans Magnus Enzensberger, in his early critique of ecology, writes that:

> the ecological movement has only come into being since those districts that the bourgeois inhabit have been exposed to those environmental burdens that industrialization brings with it. What fills their prophets with doom is not so much ecological decline, which has been present since time immemorial, as its universalization. (Enzensberger 1996: 25)

Yet even he admits that the inescapablity of damage suggests not merely a quantitative increase but a qualitative shift which cannot be ignored. The notion of natural limits is not only ideological; it exists also as a material reality, one with profound impact on the structure of contemporary capitalism.

So profound is this impact that certain theorists have suggested that it constitutes a 'second contradiction' of capitalism which works in a way analogous to the first contradiction between the forces and relations of production.[14] This 'second

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[13] The international trafficking in human organs seems to represent yet further evidence of the ultimate fungibility of the human body, its translation into a collection of saleable parts. See Lawrence Cohen (1999) and Nancy Scheper-Hughes (1996) on the trafficking of human organs and the ethics of organ transplantation.

[14] This idea was first elaborated by James O'Connor in 1988. The article, 'Capitalism, Nature, Socialism: A Theoretical Introduction', was initially published in Capitalism, Nature, Socialism 1 Fall 23; and was reprinted in Benton (1996: 197-221).

contradiction' is between the forces (and relations) of production and the conditions of production and also tends towards the generation of crises. James O'Connor suggests that:

> Examples of capitalist accumulation impairing or destroying capital's own conditions, and hence threatening its own profits and capacity to produce and accumulate more capital, are many and varied. The warming of the atmosphere will inevitably destroy people, places, and profits, not to speak of other species of life. Acid rain destroys forests lakes, and buildings and profits alike (1996: 207).

If the first contradiction gives rise to crises of overproduction and results in the labour movement, the second contradiction gives rise to a crises of underproduction which in turn gives rise to social movements able to limit capitalist accumulation and potentially transform the mode of production.

Yet what seems remarkable about capitalism in the twenty-first century is both its capacity to ignore environmental damage through exporting industry to third world countries and its protean ability to turn even the damage of nature into an opportunity for profit. Not only do projects of environmental restoration generate profits[15], but in the sphere of consumption, a huge market is opened up for goods which purport to restore health, or harmony with nature. Part of the phenomenon I am calling the 'end of nature' is its startling return in the form of commodities, organic foods, natural fabrics, not to mention natural health products of various kinds.[16] This is not to argue that such products are not (in most cases) genuine attempts to restore the damage done to the human body by modern conditions of existence. But the fact that such acts of restoration take the form of products, that healing the damage caused by consumer society requires further consumption indicates the peculiar power of late capitalism to absorb elements of opposition. The fact that such products are also invariably more expensive not only turns access to 'nature' into a middle class privilege, it also points to the peculiar way in which nature operates as a sign of value.

This is not to argue that the politics of nature in the late twentieth century and early twenty-first century is merely about consumption. The name 'environmental justice' has emerged to describe political movements which in various ways oppose the environmental impact of global capitalism on local communities. Such movements 'draw attention to the ways disparate distribution of wealth and power often leads to correlative social upheaval and the unequal distribution of environmental degradation and/or toxicity'(Adamson, Evans & Stein 2002: 5).

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[15] Hans Magnus Enzenberger quotes a newspaper report which claims that 'at least a million dollars is pocketed in the course of the elimination of three million dollars' worth of damage' (1996: 27).

[16] Andrew Ross describes a special pedestal, known as the Welles Step, which adapts the modern toilet to allow people to squat while using it. Advertising for this device suggests this promotes a more healthy posture because it is 'nature's way' (1991: 55-56).

Environmental justice and the forms of analysis it gives rise to reject what is sometimes expressed as 'Nature', the reified concept of nature as wilderness. Instead Evans' definition of nature includes 'the entire realm of the actual, living world' (Evans 2002: 182). This formulation positions 'nature' (with a lower case) as the opposite of the abstract, dead world of the commodity, and sees it instead as a place of engagement. Nature remains a signifier of value - the value of the actual and the living, of that which resists commodification.

What is at stake in these conflicts over definition? Why is it that nature holds such a central place in the global imagination? One answer to this might be that 'nature' has come to occupy a position as a measure of the material estrangement or alienation of people under late capitalism. Whether this measure is set up in individual and spiritual terms as the lost wilderness (of middle-class male America), or in material terms as the damaged health or livelihoods of peripheral communities in toxic environments, nature strangely becomes the sign of freedom, of what might escape domination, the subjective condition of being alive, of escaping the abstract identity of 'mere having'.

Nature and Interpretation

In the contemporary context, when the domination of nature extends beyond simply the commodification of external nature, beyond even the manipulations of animals and the human body, into the realm of subjectivity itself, can the term nature retain any sort of oppositional force? Bill McKibben's most recent book, Enough (2003), focuses on developments in technologies of genetic engineering and nanotechnology and suggests that, if such technologies become widely used, the analytic force of the concept 'nature' might be lost altogether. He expresses anxiety about what might happen to people's understanding of themselves when unnaturalness and artificiality are no longer meaningful designations.

In some ways the problems of genetic technology, of engineering more intelligent, healthier, stronger children appears a remote one, distant from the everyday concerns of the majority of the world's population. The laments of McKibben (2003) and Fukuyama (2002) over the loss of a defining humanness appear strangely naive given the particularly shifting nature of the term 'human', which has historically often facilitated the exclusion of anyone whose gender, race, or class did not match that of those controlling the definition.

Yet I would argue that the question of genetic engineering is a particularly vital one although not precisely in the ways described by McKibben and Fukuyama. It is vital because it forces a confrontation between different interpretations of human nature. Feminists, and post structuralist theorists more generally, have argued against essentialist notions of human nature, suggesting that what is described as 'human nature' is the result of social rather than natural processes.[17] What genetic engineering promises, (with what justification it is at this point impossible to establish), is that, in a particularly alarming way, this might become literally true. Subjectivity itself might be formed by social determinants, not through the process of socialization but through the break down of subjectivity into market-related commodities so that moods, likes, dislikes and abilities might become so many units of modification permitting better social adjustment. The 'inescapablity of imprisonment' means that the subject must be reconstituted to recognise this imprisonment as freedom.

The complexity of the relationship between genotype and phenotype, between genetic material and its manifestation in traits and behaviours suggests that the technotopian vision of a completely reconstituted human subject is not imminently realisable. Yet the very fact that such a vision exists as a goal of scientific research signals that the end of nature is intimately bound up with the problem of the subject.

Psychoanalysis, which Adorno calls 'the last grandly-conceived theorem of bourgeois self-criticism' (1978: 66) had, of course, already explored the relationship between the subject and nature conceived of in biological terms. Sigmund Freud's famous declaration, that anatomy is destiny, marked a particular moment in which the subject's relationship to nature appeared fixed at least on the axis of gender.[18] Yet what is interesting about the work of Freud is not so much his systematic formulations of the complexes which form human animals into social subjects but his observations about those disruptive moments in which the precariousness of the subject is revealed. If at the end of the twentieth century and the beginning of the twenty-first century Freud no longer seems applicable, this is perhaps because the body is no longer permitted to register the signs of distress and resistance that were the material of the practice of psychoanalysis (Adorno, 1978: 58). Yet psychoanalysis, I argue, remains an important reference point precisely because it documents so carefully both the discomforts of the social body and the healing effects of language. My use of Freud's writing is less an application of psychoanalytic principles than the introduction of some of Freud's insights as significant elements in the constellation of concepts which surround the concept of nature in the second half of the twentieth century.

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[17] For some examples of critiques of essentialism see Judith Butler (1990), and Foucault (1978) For direct criticism of sociobiology see Ruth Bleier 'Science and Gender' in Sneja Gunew (1991:249-256).

Culture at the End of Nature

This thesis examines texts from four domains in which people enter into relations with nature. First, the domain of external nature in the spaces that surround them; second, the interface between people and animals, specifically the imagined kinship with apes, and the proximate relations with dogs; third, the nature and culture of the human body; and finally the concept of human nature. I have selected texts not with any intention of providing an exhaustive survey, anyway an impossible task for a field of study of this magnitude, but rather because I observed in them particularly fascinating elaborations of the the phenomenon I am calling 'the end of nature.' The cultural texts that I have chosen are drawn from a series of seemingly unconnected areas of cultural life: a parkway, a utopian novel, an exhibition of chimpanzee paintings, a dystopian novel, a series of popular films, and number of philosophical essays and cultural commentaries. I say seemingly unconnected because my thesis attempts to show how a general sense of

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[18] The phrase appears in 'Dissolution of the Oedipus Complex' first published in 1924 and forms part of his discussion of penis envy. The phrase in context reveals something of the fascinating complexity of Freud's thinking: 'Here the feminist demand for equal rights does not take us far, for the morphological distinction is bound to find expression in differences of psychical development. 'Anatomy is destiny', to vary a saying of Napoleon's. The little girl's clitoris behaves just like a penis to begin with; but, when she makes a comparison with a playfellow of the other sex, she perceives that she has come off badly and feels this as a wrong done to her and as a ground for inferiority' (1986: 399).The relation between anatomy and psychical development described here moves between detemination and interpretation, between the objective facts of anatomical difference and the girl's subjective interpretation of what these differences might mean.

'the end of nature' emerges in different ways in these different discursive forms and representational arenas. It takes as its starting point the fact that although 'the whole is false' (Adorno 1978: 50), global culture represents the attempt to articulate a totality, although one which, as Jameson suggests, is becoming increasingly difficult to conceptualize.[19] Part of this difficulty, I argue, has to do with the increasingly problematic status of nature as an external reference point. An adequate understanding of the concept of nature in contemporary society, I suggest, can only be reached through detailed reflection on its representation in diverse elements brought into productive juxtaposition.

The first chapter, 'Theoretical Reflections,' examines Adorno's use of the figure of the constellation as an approach which enables such a productive juxtaposition. For him, the act of defining a concept is inherently a limiting and reducing process, one which frustrates rather than enables the depth of comprehension required for dealing with complex terms. Instead he proposes drawing the concept into a series of relationships with others so that in the moment of juxtaposition the whole forms a temporary but illuminating constellation. The first part of the chapter investigates some of the theoretical elements of this approach; the second focusses on a specific example of a constellation, 'Man and Beast,' one of the longer notes appended to Dialectic of Enlightenment. My analysis of 'Man and Beast' serves two purposes: firstly, it enables me to investigate in some detail the structural elements involved in setting out a constellation; and secondly, it provides an interesting foregrounding of some of the main thematic concerns of this thesis.

Chapter two examines in some detail McKibben's claim that the end of the twentieth century coincides with the end of nature and explores some of the ways in which 'nature' in his criticism of modern America comes to stand for a lost value. I contrast his dystopian vision, which precludes any possible reconciliation, with the socialist vision of William Morris, a hundred years earlier.[20] Morris's utopia involves not only the abolition of an economy based on exchange but also the undoing of modernity, the removal of all industry which damages the natural landscape. Although in some ways naively optimistic, Morris' account provides a useful indicator of what can no longer be thought in the late twentieth century – utopias in the late twentieth century

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[19] This point is made in Jameson (1990:especially 52-54).

[20] William Morris' (1890) novel, New From Nowhere, through describing an imagined future utopian society provides an in interesting critique of nineteenth century industrial culture.

and early twenty-first century take the form of technotopias, as if a positive reconciliation with the material world, an unestranged condition, is no longer conceivable without a thorough reconstitution of the human subject.

This chapter takes as its starting point the American countryside at the moment at which the expansion of the system of roads undertaken by the Federal Highway Programme begins to transform the land into a landscape glimpsed from the window of a moving car. In particular, the Blue Ridge Parkway, a road through the Appalachian mountains, becomes one of the first examples of the preservation of the nature and its transformation into a sign of itself. The Parkway, established in the 1950s, created around the road a vista of restored indigenous vegetation and significantly excluded from view any signs of poverty or work by screening out evidence of the local inhabitants.

The second part of the chapter briefly traces some of the history of the different uses of the term nature and the way in which shifts in usage can be linked to shifts in the organisation of the social landscape within Western Europe and America. I discuss the profound way in which paradigms developed during the scientific revolution of the seventeenth century structure the possible ways in which people's relation with nature can be thought – what Horkheimer and Adorno characterize as the 'amputation of the incommensurable' and the introduction of 'universal mediation,' the subordination of everything to the logic of exchange which finds its most recent elaboration in the concept of 'natural capital'.

My third chapter discusses the figure of nature as it is manifested in imagined relations with animals. It takes as its starting point an unusual exhibition held at the Institute for Contemporary Art in London in 1957. [21] Arranged by biologist Desmond Morris, this exhibition presented a series of paintings done by two young chimpanzees, Congo from the London zoo where Morris worked, and Betsy a chimpanzee from a zoo in Baltimore. This exhibition, I argue, is particularly interesting because it represents a moment of intersection, when the boundaries between 'science' and art become blurred. If the shift from the pacing tiger to the one 'frolicking behind a pit too wide to leap' provides evidence of the increasing assimilation of nature, the progress of apes in the period after the Second World War suggests an intensification of this process which leads ultimately to a point at which the concept of nature becomes altogether displaced.

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[21] Paintings by Chimpanzees Exhibition Catalogue, Tate Gallery Archives, London. For an ironic review of this exhibition see Anthony Powell's 'Chimpism' in Punch October 2 1957. A more serious discussion of Desmond Morris' work , 'Young Man at the Zoo', appeared some years later (Punch February 7 1962).

I use Donna Haraways's (1989) influential text on the history of primatology in the twentieth century, Primate Visions, to discuss the shift that occurs in the paradigmatic framing of apes in the period after the Second World War. While before the war apes acted as the measure of the naturalness of humans, modeling the apparently 'natural' structures of dominance and hierarchy, after the war the focus gradually moved to a model based on 'communication networks,' on apes being seen as 'natural-technical' objects within complex systems.

Yet at the same time as apes (and other research animals) are losing their status as natural and becoming merely components within the modern systems of capitalist research technology, apes are also perceived as intermediaries in another way. Projects to teach apes Ameslan (American sign language) suggest a desire to find in apes people's lost connection to nature. Animals, displaced by technology from the everyday life of most people in developed countries, become objects of a peculiar fascination, both abstractly through an attempt to establish a kinship with apes, and actually in the practice of keeping pets.

While the first half of the chapter focuses on apes, the second explores in some detail the position of dogs in the global culture of late capitalism. In this context I discuss Russell Hoban's dystopian novel, Riddley Walker, which was published in 1980.

In chapter four I move on to representations of the body as that which constitutes what is 'natural' or biological in people. In particular I focus on the idea of adaption, and the way stress emerges in the second half of the twentieth century as a way of interpreting people's relation to their environment.

Environmental justice movements have drawn attention to the side-effects of modernity, the consequences of ever expanding industrial production. In particular, they focus on the impact such practices have on the bodies of those who live or work in proximity to toxic environments generated by production processes. This impact can only partly be registered in the objective language of science, in the irreducible facts of ill health and disease. In telling their own stories, people bear witness to the devastating effects of capitalist industry.[22] Subjectivity is regained through the experience of suffering, as if only the damaged body can speak the truth which otherwise cannot be articulated – the real violence of the system which insists that material abundance and the freedom to enter the market economy are the universal standard of the good life. Only in the body's damage, its inability to adapt to its environment, can the actual effects of a culture of consumption be registered. The subject's sickness points to a limit, a disruption of the body's capacity for life.

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[22] For an excellent example of this see Adriana Petryna's (2002) investigation of the impact of the Chernobyl disaster on people's lives.

This chapter focuses not on the speaking subject of environmental activists but on the muted body that makes its appearance in popular cinema in the 1980s. It examines the representation of a particular kind of body in popular action films which, I argue, exteriorize some of the contradictions of the body's relation to the environment. These bodies, I suggest, also articulate something of the damage done to the human body in the culture of late capitalism but they do so covertly, in the same way as hysterical bodies can use symptoms both to express and conceal an awkward truth. I take as exemplary the muscular bodies of film stars Arnold Schwarzenegger and Jean Claude Van Damme which, in their aggressive representation of the body's invincibility indicate, I argue, a profound insecurity not only about health, about the possibility of adapting to a damaged environment, but also about the status of the body in a world dominated by technology.

The fifth and final chapter looks more closely at the philosophical implications of the 'end of nature' and the possibilities of being 'at home' in a world in which the domination of nature has been extended to the modification not only of the body, but of subjectivity itself.

This chapter discusses two recent critiques of genetic technology, Francis Fukuyama's Our Posthuman Future (2002) and Bill McKibben's Enough (2003) and suggests that they are limited by their inability to conceptualize the relationship between nature and history. I argue that Adorno's (1932) lecture, 'On the idea of natural history' provides a useful way of approaching the complex interactions between nature and history in a way which avoids the reduction inherent in debates around definitions of what is human and natural.[23]

What is at stake in the definition of 'nature' and 'the human' is always in some sense the world itself, the way it might be mapped, interpreted and ultimately controlled. Adorno's approach wishes to avoid reiterating the deformations of positivism, and instead allows back into the complex equation, the living creature, the subject of experience. But this subject of experience is not the autonomous subject who uses reason to apprehend the world in its totality.

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[23] This speech, addressed to the *Kantgesellschaft* in Frankfurt, was never published by Adorno. (Buck-Morss 52). It was published in English translation in Telos vol.60 1984: 111-124.

At the end of *Mammoth*, Adorno suggests that: 'only in the irrationality of civilization itself, in the nooks and crannies of cities, to which the walls, towers and bastions of the zoos wedged among them are merely an addition, can nature be conserved. The rationalization of culture, in opening its doors to nature, thereby completely absorbs it, and eliminates with difference the principle of culture, the possibility of reconciliation' (1978: 116). Adorno's comment draws attention to the fact that the act of conservation is always also an act of control. What is conserved is unavoidably drawn into the culture of commensurability, assigned a value within a system of values which does not permit the recognition of remainders. This is not to argue that in the late twentieth and early twenty-first century projects to protect environments from the expanding reach of global capitalism are unimportant. Instead it suggests that to abandon nature to its reified existence in reserves would be to miss the way in which the remainder returns to trouble culture. The phenomenon I am calling the 'end of nature' is, I argue, part of the twentieth century's complex and contradictory response to that remainder and this thesis is an attempt to trace some of the strange constellations through which culture manifests these contradictions.

Chapter 1

Theoretical Preliminaries

> The constellation illuminates the specific side of the object which to a classifying procedure is either a matter of indifference or a burden. (Adorno 1973:162)

This thesis aims to investigate what figure of nature emerges in the cultural domain of the second half of the twentieth and early twenty-first century. Its project is not to classify and define the term 'nature' and its various uses, but rather to discover, through the placing of certain concrete cultural texts in relation to each other, what image of nature might become visible. The word 'image' colonized by photography tends to bring to mind the idea of a direct and accurate representation of a segment of the real, a reflection. But the word 'image' also has an earlier meaning, associated with painting – the idea of a likeness. A likeness exists not in the photographic accuracy of the representation but rather in the way various concrete elements placed together in a particular relationship capture the object and make it visible in a new way.
Theodor Adorno often uses the term 'constellation' or 'configuration' to describe this approach and his work provides the conceptual framework for this investigation.[24] The main body of this introduction is a discussion of what constitutes a constellation and a survey of the forms of argument peculiar to it. Before embarking on that, however, I will provide a brief outline of some of the elements of the particular constellation of this thesis.

What elements does nature draw into its field at the turn of the twenty-first century? And when considering them in relation to each other, when placing them in a spatial juxtaposition, in a constellation, what figure emerges? What surprises one in the imagined lines that link the elements together? One element that nature draws into its field is simply the concept of outside. This is not simply external nature or landscape, but also that which might be defined as outside of culture or outside of the administered world, that object which, in the condition of post modernity appears to become harder and harder to locate. Outside also refers to lost matter or materiality, the redemption of which has become the subject of 'thing theory' and Judith Butler's work on bodies which matter.[25] The body too occupies a position which is at least partly outside, although in some way it operates like a skin, the contested, fought over border between what is inside and what is out. Nature in this historical moment cannot escape a connection with the breath of fresh air which, Adorno suggests, authentic artworks step toward in his aesthetic theory. [26]

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[24] Adorno discusses the theoretical approach described by the figure of the constellation in his inaugural lecture, 'The Actuality of Philosophy' [1931]. It was never published in his lifetime. An English translation is included in The Adorno Reader, (Ed.) Brian O'Connor (2000: 32-36). The later essay, 'The Essay as Form' [1958], also included in the Reader, contains a further elaboration of Adorno's thoughts about the relation between form and content (2000: 92-111).

Tracing the figure in the opposite direction, nature draws into its field what is inside, inescapable yet enigmatic human nature itself whose authority is derived almost solely from the fact that the level of its abstraction makes it possible to encompass almost anything. Calming this 'nature' within is the domestic space, home, which in setting itself as the very antithesis of what is wild, invites in certain elements of nature to maintain its impression of health and goodness and vitality. From here a short line runs to concepts of moral or ethical judgment, those concepts of goodness which are associated with health, and even with the concept of life itself.

This provides a preliminary sketch, some faint lines indicating the paths I wish to follow through the complex force field surrounding the concept of nature. I have chosen the form of the constellation rather than a more conventional discursive form because of the demands of the object under investigation. This is not to say that useful and interesting work has not been done in defining the concept of nature. Kate Soper's classic text, What is Nature? serves as an excellent example of the fruitfulness of what

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[25] See Judith Butler (1993) and Haraway (1997). On Thing Theory see Bill Brown (2001). See also John Noyes review of Gender Trouble, 'The Utopian Subject: Judith Butler's Gender Trouble' (1995:227-230) and Karen Barad's discussion of Butler, Haraway and others in 'Posthumanist Performativity: Towards an Understanding of How Matter Comes to Matter' (2003: 801-831).

[26] Adorno writes: 'Authentic artworks, which hold fast to the idea of reconciliation with nature by making themselves completely a second nature, have consistently felt the urge, as if in need of a breath of fresh air, to step outside themselves. Since identity is not to be their last word, they have sought consolation in first nature...The extent to which this taking a breath depends on what is mediated, on the world of conventions, is unmistakable. Over long periods the feeling of natural beauty is intensified with the suffering of the subject thrown back on himself in a mangled and administered world...' (1997:63).

might be called the classificatory mode of approaching the question of nature. My project, however, is different. The aspect of the object that I wish to investigate is not that which can be located in the various discursive moments when the concept of nature can be held still long enough to define. Instead I am interested in the concept of nature in its instability, in its formlessness and changeability. I wish to approach not by way of existing definitions, but through finding the way in which concrete social and cultural experiences in their particularity repeatedly project and disturb the image I am trying to see and to make visible. The form of the constellations makes it possible to avoid hierarchies and the assumption of relationships between things in advance.

My use of the conceptual form of the constellation does not mean that I will avoid a more discursive method of argumentation altogether. Rather the constellation describes the project of the thesis as a whole; within it different aspects will lend themselves to different kinds of argument and discussion.

This rest of this introduction will consist of a discussion of constellations and the significance of form in Adorno's analysis of contemporary culture. The first part investigates the concept and his method at a more abstract level, while the second focuses on a particular piece of writing 'Man and Beast', one of the notes attached as a selection of notes appended to Dialectic of Enlightenment (2002 [1947]: 203-212). This piece not only provides an exemplary instance of writing which takes the form of a constellation, but also addresses many of the central questions of this thesis. I have chosen to discuss it in some detail both in an attempt to unravel some of the complexities of the dialectical method and because it provides a historical image against which my own figuring of nature, sixty years later, might be read.

Constellation

In order to understand Adorno's approach it will be useful to consider a number of different elements. Firstly, the figure of the constellation itself. This complex figure needs to be brought into sharp focus before the precise sense in which it is used in Adorno's writing can be established. Secondly, the constellation needs to understood in relation to its constituent parts, the concrete elements which make up the individual stars or groups of stars within the figure as a whole. It also would not be possible to fully grasp the workings of the constellation without some sense of Adorno's implicit theory of language. Finally, the constellation as a deliberate departure from more conventional modes of analysis reflects not a theoretical position to be imposed on phenomena from without but rather a response to the demands of the object itself and reflects a considered reaction to the particular historical situation in which both interpreter and object are located. This final point will be touched on only briefly here. This relation between subject and object forms a central concern of my investigation as a whole and it is one I will continually return to throughout the thesis.

A constellation, literally a combination or coming together of stars, refers to a pattern discovered in the myriad fragments of light emitted by cosmic bodies. As such it implies a particular viewpoint, seeing a pattern in a group of stars which, after all, only from earth appear in a that particular relationship. What makes a constellation is precisely the suspension of the depth of field, the bringing of stars into a relationship on an imaginary flat celestial surface.

Constellations are both markers in space, modes of dividing up the visible universe and mythological images, the concrete signs of archaic narratives. Finding the image in the arrangement of stars is not simply a matter of perception. The stars mark only the bare bones of an image which must be reconstructed by the eye. The eye must try and see a figure whose lines were first traced in a context remote from our concerns and cultural formation. Thomas Kuhn writes that:

> Many of the constellations used by modern astronomers are named after mythological figures of antiquity. Some can be traced to Babylonian cuniform tablets, a few as old as 3000 B.C. Though modern astronomy has modified their definitions, the major constellations are among our oldest traceable inheritances. How these groups were first picked out is, however, still uncertain. Few people can 'see' a bear in the stars of the constellation Ursa Major; other constellations present similar problems in visualization; the stars may therefore originally have been grouped for convenience and named arbitrarily. But if so they were very strangely grouped... (1985: 14)

Constellations, therefore, provide an interesting figure for the analysis of phenomena. They contain images which are not not simply visual outlines, but rather are likenesses in the broadest sense of the term, fleeting impressions that are in no way comparable to the photographic image. The way they are 'picked out' is not unequivocal. They are between 'convention' and 'resemblance', both arbitrary and mythologically determined.

They are linked through history to astrology and although in Stars Down to

Earth Adorno unequivocally dismisses modern astrology as 'commercialized occult' incompatible with modern forms of rationality, this does not mean that the astrological aspect of constellations is irrelevant.[27] Constellations have always been interpretative devices with a bearing on human actions; they have always been about modes of making both the natural *and* the social world legible, and mediating their relationship. Adorno writes: 'People always wanted to learn from occult signs what to expect and do; in fact superstition is largely a residue of animistic magical practices by which ancient humanity tried to influence or control the course of events' (1994: 37).

The term constellation contains a divinatory residue. It is a word already inhabited and although the fateful aspect of the constellation is certainly not part of Adorno's use, constellations are in his formulation of them, in a different way, interpretative tools – figures which readjust perception so that new possibilities are opened which ultimately relate in some way, if not in the direct way of the oracle, to changes in the way things might be done.

In her useful study, Susan Buck-Morss divides Adorno's method into two stages: the first a 'conceptual-analytic' stage in which phenomenal elements are broken down, and viewed as a language or code which might be deciphered by using 'key categories' from the conceptual language of Marx and Freud; the second, the stage of 'trial combination' in which the elements of the phenomena 'fall into a figure'. This is a moment of stillness, not because all antagonisms have been overcome but because certain contradictions have been illuminated (1977: 102).

The idea of the constellation as a form through which phenomena might be understood originates with Walter Benjamin and is first articulated in The Origin of Tragic Drama.[28] Brian O'Connor writes that:

> Benjamin's theory posits the idea of constellations, a metaphor which expresses the practice of philosophical truth. In this practice the subject mediates phenomena, striving to arrange them in such a way, in 'constellations,' that they

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[27] Adorno writes: 'It should be stressed that in former periods, superstition was an attempt, however awkward, to cope with problems for which no better or more rational means were available at least so far as the masses are concerned. the sharp division between alchemy and chemistry, between astrology and astronomy, is a comparatively recent achievement. Today, however, the incompatibility of the progress of the natural sciences, such as astro-physics, with the belief in astrology is blatant' (1994:37).

[28] In a letter to Adorno in July 1931 Benjamin comments on Adorno's description of the task of philosophy: 'I subscribe to this position. Yet I could not have written it without referring to the introduction of my book on Baroque Drama, where this entirely unique and, in the relative and modest sense in which such a thing can be claimed, new idea was first expressed' (1999: 9).

> might reveal their idea. Importantly ideas are neither generalizations nor subjective reconstructions in that they are the very intelligibility and truth of phenomena...In a constellation particular phenomena are not subsumed under universals. Rather the meaning of any phenomenon can emerge only when the phenomenon is understood as configured with certain other phenomena. (2000: 4)

What is significant about Benjamin's conceptualization of the constellation is its emphasis on an arrangement of phenomena which avoids hierarchical ordering. The particular is never simply an example of a general rule. Phenomena instead become intelligible only in relation to other phenomena. The constellation allows seemingly incommensurable things to be placed alongside each other without reducing them to a relationship of equivalence. It makes visible the contradictory aspect of the real; introduced awkward material complexity into the smooth logic of any systematic organization.

Constellations of phenomena, unlike stellar constellations, are always provisional. The elements are constantly rearranged until the moment when the image emerges. It introduces what Fredric Jameson refers to as a 'pseudo-totality'. He writes:

> Pseudo-totality: the illusion of the total system is aroused and encouraged by the systematic links and cross references established between a range of concepts, while the baleful spell if the system itself is then abruptly exorcised by the realization that the order of presentation is non-binding, that it might have been arranged in an utterly different fashion, so that, as in a divinatory cast, all the elements are present but the form of their juxtapositions, the shape of their falling out, is merely occasional. This kind of *Darstellung*, which seeks specifically to undermine its own provisional architectonic, Benjamin called configuration or constellation... (1990: 50)

In Adorno's formulation in 1931, he favours the term 'historical image' over Benjamin's notion of the 'idea' (Buck-Morss 1977: 102). Historical image emphasizes both the contingent and the material quality of whatever might emerge from the constellation as well as the fact that the image itself is not intuitive or metaphysical but rather produced by human subjects through analysis. Adorno links the emergence of the constellation to the process of riddle-solving. In 'The Actuality of Philosophy', Adorno suggests that in a constellation those contradictions which precipitated or gave form to the riddle question have been illuminated in such a way as to liquidate the question, to make it irrelevant . Adorno describes the process in these terms:

> Just as riddle-solving is constituted in that the singular and dispersed elements of the question are brought into various groupings long enough for them to close together in a figure out of which the solution springs forth, while the question disappears - so philosophy has to bring its elements, which it receives from the sciences, into changing constellations, or to say it with less astrological and scientifically more current expression, into changing trial combinations, until they fall into a figure which can be read as an answer, while at the same time the question disappears. The task of philosophy is not to search for concealed and manifest intentions of reality, but to interpret unintentional reality, in that, by the power of constructing figures, or images, out of isolated elements of reality it negates questions, the exact articulation of which is the task of sciences, a task to which philosophy always remains bound, because its power of illumination is not able to catch fire otherwise than on these solid questions. (2000 [1931] : 32)

According to Adorno, the task of philosophy is preeminently the task of interpretation. He contrasts this with the idea of research, which he argues, is the task of science. (2000 [1931]: 31) The two are intertwined since, as he asserts in the extract quoted above, philosophy cannot separate itself from the materiality of life as it is presented to consciousness both through experience and through the findings of scientific research. What in science is regarded as a conclusion, becomes an element to be placed in relation to other elements, to be interpreted through the form of the constellation. What philosophy takes as its object, however, is not the discovery of the hidden 'intentions' of reality, the identification of a concealed meaning or order, but rather the analysis of overlooked moments of reality. Adorno refers to these unguarded moments as 'unintentional reality.'

The phenomenal elements which make up the constellation are, Buck-Morss suggests, 'codes' or 'ciphers' of social reality, seemingly insignificant things like a popular song, fleeting events such as a concert and easily overlooked details such as certain fragments, images or metaphors in a philosophical text. In themselves, she explains, such phenomenal elements have no fixed value. They might be judged positive in one constellation, negative in another (1977: 99). They become meaningful/intelligible only in relation to the other elements in the constellation.

In this thesis, to the codes or ciphers mentioned above I would add advertisements for cars, exhibitions, the bodies of film stars, the imagined lives of certain animals, the historical development of roads, tourism, the human genome project, ecological movements, a concept of the human. These phenomena are some of the concrete elements which present themselves to an investigation of the figure of nature at the end of the twentieth and the beginning of the twenty-first century. They represent the fragments of 'unintentional reality' which brought into productive juxtaposition might allow a new image of nature to emerge.

A constellation is perhaps best seen as an attempt to articulate something for which there is no communicative language. This is not because the phenomenon is, in principle, inexpressible but because it is, in practice, historically new and has not yet been brought within the traditions and forms of established discourse. Shierry Weber Nicholsen describes this well by saying that for Adorno:

> ...a philosopher who wants to express a new truth – a truth appropriate to the current historical moment – can neither express it directly in the old, inadequate words nor explain it by means of those words. Rather, as we saw, his only hope is to "place these words around the new truth in such a way that their configuration alone yields the new truth." And as we saw, this "configurative language" effectively altered the words used, creating a "unity of concept and thing that is dialectically intertwined and cannot be disentangled through explication." The kind of unity created is thus analogous to that in a work of art. (1997:91)

A constellation or configuration, therefore, results in a particular kind of truth, one which it is not possible to express in another form. To understand fully the implications of this position, it is useful to consider Adorno's understanding of language as a complex object.

Nicholsen suggests that:

> A central tenet of Adorno's implicit theory of language is that language has two distinct but inseparable dimensions. One of these he refers to as the communicative dimension and the other as (among other terms) the poetic or expressive dimension. A second tenet of the implicit theory is that a historical process of deterioration has taken place in which the communicative dimension, through its involvement with social domination, the market, exchange and other processes loosely associated with the development of capitalism, has overrun or colonized the poetic dimension, so that for instance, in the twentieth century Borchardt is dealing with 'a language devastated by commerce and

> communication, by the ignominy of exchange ' ('Borchardt,' 194). (1997: 66)[29]

Communicative language, and the discursive explication that it favours, are for Adorno, fundamentally implicated in principles of commercial society. This is not to say that poetic or expressive language escapes this altogether but rather that it works against the processes of abstraction and 'identity-thinking' characteristic of the language under the spell of exchange.

Alfred Sohn-Rethel, a contemporary of Adorno, Benjamin and Bloch, argues that the 'commodity abstraction' has a direct relationship with the form of thought which emerges in societies based on the principle of exchange. It is not possible here to go into Sohn-Rethel's argument in depth but one point seems particular significant to an understanding of the constellation as a form which attempts to work against the 'commodity structure' and its associated forms of thought.[30]

For Marx the commodity abstraction is about the labour which is embodied in commodities and which determines their value. Sohn-Rethel approaches the question from a slightly different angle because he wants to examine the epistemological implications of Marx's argument. If, he asserts, we accept Marx's premise that social being determines consciousness, then the abstraction of thought can be argued to originate within society, with real human interactions. These, he suggests, are the interactions which take place in the acts of using and exchanging. In a society based on exchange, the act of exchanging interrupts use. It must be kept entirely separate from use and this separation 'has assumed the compelling necessity of an objective social law' (1978: 25). He writes:

> There, in the market-place and in shop-windows, things stand still. They are under the spell of one activity only; to change owners. They stand there waiting to be sold. While they are there for exchange they are not for use. A commodity marked out at a definite price, for instance, is looked upon as being frozen to absolute immutability throughout the time during which its price remains unaltered. And the spell does not only bind the doings of man. Even nature

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[29] Adorno discusses the work of Rudolf Borchardt , a German poet and writer, in'Charmed Language: On the Poetry of Rudolf Borchard' (1992). Adorno is particulalrly fascinated by Borchardt's relation with language: 'In everything he wrote he made himself an organ of language...Language murmurs and rustles through him like a stream' (Adorno 1992: 193).

[30] In the preface to his book, Sohn-Rethel remarks on his obssesive desire to unravel the relationship between the commodity structure and the 'transcendental subject'. He writes: 'Only a few isolated spirits, outsiders like myself, had kindred ideas in their mind, and none more sympathetically so than Adorno, who in his own manner was on the same track. We checked up on this together in 1936' (1978:xiii).

> herself is supposed to abstain from any ravages in the body of the commodity and to hold her breath, as it were, for the sake of the social business of man. Evidently, even the aspect of non-human nature is affected by the banishment of use from the sphere of exchange. (1978: 25)

What Sohn-Rethel describes here is the process of reification but the specific terms in which he does so are interesting. In a very concrete way objects described in this extract are arranged in a spatial relation to each other. In the market-place or shop they are in a particular configuration yet they are entirely isolated from each other. They can only enter into a relationship through the mediation of money. Through prices they enter a relationship of equivalence in which each object, however, materially different can stand in for another. For Sohn-Rethel, the act of exchange imposes a particular form on relations between people and things. It dominates not only the physical relationship but also the way in which things can be thought about.

It is perhaps noteworthy that when Ferdinand de Saussure describes the structure of language in the early part of the twentieth century he uses money as an analogy. De Saussure argues that all systems of value involve both something dissimilar for which the coin or word might be exchanged, (an object or idea respectively) and something similar to which the coin or word might be compared (another coin or word). He writes of a word that: 'Its value is therefore not determined merely by the concept or meaning for which it is a token. It must also be assessed against comparable values, by contrast with other words. The content of a word is determined in the final analysis not by what it contains but by what exists outside it. As an element in a system, the word not only has meaning but also – above all – a value' (de Saussure 1983: 114).
For de Saussure what is important is the systematic character of language For Adorno, in contrast, what both language and money do is hide the real incommensurability of objects. As systems each draw in only that portion of the object they can represent, and what is outside the system becomes invisible.

The form of the constellation is about making visible, or perhaps more accurately, making intelligible, what cannot be represented by the system. As the quotation at the beginning of this introduction suggests it is concerned with that part of the object which 'to a classifying procedure is either a matter of indifference or a burden.' It does this in a number of different ways which are best elaborated through a detailed discussion of a text, such as 'Man and Beast', which approaches its object using the form of the constellation. In the exposition which follows both structural and thematic aspects will be examined so as to come to some understanding both of the workings of the constellation as a mode of analysis and of the particular relation between subject and object which, within Adorno's writing as a whole, the object of nature demands.

'Man and Beast'

Jameson argues that '... if virtually alone among Western Marxists the Frankfurt school has a meditation on the domination of Nature and can be counted among the philosophical ancestors of the ecology movement, it also made its contribution to animal rights. The long note on 'Man and Animal' appended to Dialectic of Enlightenment ... is surely one of the central 'constellations' of that work...' (1990: 96) The note 'Man and Beast' though centrally concerned with animals and their place in human society, does not closely resemble more conventional contributions to writing on animal rights. Its tone is polemical but its form prevents any simple movement from theoretical understanding to practice. Instead it is precisely the difficulty of praxis, the indissolubility of contradictions that emerges.[31] Deliberately avoiding the 'objective' tone of discursive writing, it is nevertheless rigorously about the object. The structure is in flux so that there is no commanding and central authority which would situates the reader in relation to the text. Instead the elements shift in relation to each other as the text shifts, not aimlessly, but always with a specific end in view – the discovery of an ethical and liveable position in relation to a world which at every turn appears to preclude such a possibility.

At first reading 'Man and Beast' appears random and disorganized since it proceeds not by way of linear argument but through provocative or suggestive juxtaposition. In fact the text strenuously resists any attempt to systematise its various elements. However a close reading does reveal three main topics. Firstly, Horkheimer and Adorno address the question of 'the animal' in the Western philosophical tradition. Secondly, with no obvious causal link, they discuss the history of the association between woman and nature in Western thought. Thirdly and finally they look at elements of resistance, those moments when dominated nature is not entirely occluded but becomes visible in its broken form. What links the diverse elements both within each topic and across topics is less thematic content than a mode of analysis in which familiar and apparently insignificant objects become illuminated by their relations with others.

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[31] In Marx, praxis is 'understood as transformative action on the world'. It is discussed in Marx's 'Theses on Feuerbach', which includes their urge to praxis in Thesis 11: 'Philosophers have only understood the world in various ways. The point is to change it' (Marx 1977:158).

'Man and Beast' begins with an antithesis, one of the founding oppositions of Western thought – the definition of human through its opposition to animal. Yet its object is not to resolves this antithesis. Instead it leads the reader through a number of elaborations on this theme, a number of propositions and reversals until it reaches a point where the initial opposition is no longer relevant, where its founding logic can no longer exert a controlling influence and limit the possibilities of thought.

The relation between 'man' and 'beast' is, in the initial opposition, an abstract one. It concerns the definition of categories through their relation to other categories. But as the section quickly makes clear such categories can never free themselves entirely from the particulars which they claim to subsume. Instead at each point the particular returns to trouble the clarity or definition of the concept, pushing it in different directions. The concrete elements are arranged and rearranged so that each figuration demands a new perspective, a new mode of looking or apprehending.

The first set of concrete elements introduced to trouble the man/beast opposition are those surrounding behaviourism, not because behaviourism itself rejects that opposition but because it appears to do so. The claim of behaviourism, that both people and animals can be brought to react mechanically to stimuli, apparently nullifies the opposition between 'man' and 'beast,' drawing both into a subordinate relation with what is outside, the stimuli which through repetition and reward produce a particular result. In the text, Horkheimer and Adorno here shift away from abstract categories. In their narrative man and beast at this point enter into a concrete relation to each other in the space of the laboratory. The laboratory is one moment of confrontation, one location in which abstract categories find themselves in actual and literal opposition. The 'expert' and the 'bound victim' confronting each other in the space of the laboratory, Horkheimer and Adorno suggest, produces only a relation of mutilation and violence. Furthermore, they argue, the knowledge generated in this particular engagement can only ever reflect the conditions of its production. Expert and victim come to resemble each other, both conditioned by the form of experiment into 'mechanical, blind, automatic' gestures. But the expert performs these acts voluntarily, while the animal can only respond to what is acted upon it since its one true impulse which would be to flight is prevented.

What becomes invisible, Horkheimer and Adorno argue, is 'the actual life of animals' who exist outside the various paths of human reason. What this might be remains enigmatic but at least in this first elaboration, it is contrasted to the lives of humans who in their domination of nature have inadvertently divided themselves from any such experience. It is certainly not something which can be made available to consciousness through psychology, despite the fact that psychology takes human life as its domain. As a mode of explanation, human psychology is described in 'Man and Beast' as either 'impertinent' when applied to others or 'sentimental' when applied to oneself. These terms refer psychology back to a relationship between people; they are words which draw into the field social judgments and the specificity of actual interrelationships. 'Impertinent' in particular acts rhetorically to reduce psychology's claim to authoritative, scientific knowledge, suggesting the incongruity of supposing the other to be open, explicable, without any private or hidden life at all.

If human psychology in this formulation can only explain human behaviour once they have already been reduced to objects, 'animal psychology, meanwhile, has lost sight of its object; engrossed with the chicanery of its traps and labyrinths, it has forgotten that to speak of and acknowledge a psyche or soul (*Seele*) is appropriate precisely and only in the case of animals' (2002: 204). This controversial claim becomes explicable if we refer to an older inflection of the term 'soul' which refers not to something which survives life but instead to the quality of being truly alive, of 'animate existence.' This is precisely what is lost in humans living under conditions of modernity who no longer have access to this sort of being. Ontology, Adorno argues elsewhere, becomes irrelevant, when humans no longer have the power of thought to grasp the totality of the real, when existent being is no longer accessible (2000 [1931]: 111).

Yet the next paragraph makes clear that this is no simple celebration of unreason and the unthought life against the alienation of a reasoned one. If on the one hand animal life is the life of the soul, truly animate life which is lost to humans in the deforming context of commercial society and something to which humans might wish to aspire, on the other, it is insubstantial and 'dreary' because animal's lack concepts and language. Horkheimer and Adorno at this point describe the relation between 'man' and 'beast' as it is articulated in a Walter Benjamin in 'On Language as such and on the

Language of Man.'[32] In the tradition Benjamin describes, the muteness of nature is initally a blissful one and the relation between people and animals is one defined by the act of naming. After the fall, however, something happens to language. It no longer has the power to name things. Walter Benjamin describes the process in these terms:

> After the fall, which, in making language mediate, laid the foundation for its multiplicity, it could be only a step to linguistic confusion. Since men had injured the purity of name, the turning away from that contemplation of things in which their language passes into man needed only to be completed in order to deprive men of the common foundation of an already shaken language-mind. (1978: 328)

It is in the context of this reduced language that the muteness of nature becomes something painful. Benjamin writes that: 'Now begins its [nature's] other muteness, which we mean by the deep sadness of nature. It is a metaphysical truth that all nature would begin to lament if it were endowed with language' (1978: 329). This representation of animal's relation with language is included in 'Man and Beast' without comment but it placement in relation to the previous and following paragraphs and the very structure of the exposition mean that it enters the narrative in a particular way. In this context it is enigmatic and this very quality requires the reader to regard it critically.

One of the reasons why this is the most puzzling section of the constellation is that it contains almost no concrete elements. The discussion of animals and their relationship with language and time remains almost entirely at the level of generalities. The blankness of the animal's world viewed from this perspective is mirrored in the blankness of the text itself which is also without specificity. The text speaks with a strange authority of the experiential life of animals without providing any reason beyond the absence of the concept for these conclusion. To say of animals, 'to escape the gnawing emptiness of existence some resistance is needed, and its backbone is language,' appears as a direct contradiction to the previous comment about the the lives of animals as animate existence. (2002: 205) Animals appear to be located in an existential emptiness, which suggests not simply that they are without language but rather that language has been lost to them. Their muteness is not 'natural' but indicates instead that the power of expression has been taken from them.

The referent of the term 'animal' here appears strangely opaque. Does it refer to domestic animals as opposed to wild animals, or to all animals in which case, and perhaps most importantly, does it include humans, or at least obliquely gesture toward the conditions of human animals who have in modern society lost the power of expression.

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[32] For a critical discussion of Benjamin's essay see Jacques Derrida (2002) the whole essay but particularly 387-389.

In this opposition between language and silence or speech and muteness, muteness is associated with an almost uncanny horror. Transformation into an animal, in the realm of fairy tales, is Horkheimer and Adorno argue, a 'recurring punishment' (2002: 05). They write: 'every animal recalls to them (humans) an immense misfortune which took place in primeval times.' Once again the operation of memory predominates. Animals act as reminders, bring back into consciousness something which has been forgotten. Its proximity to the previous comment about language suggests a connection – that animals stand in for a kind of amnesia, the forgetting of language and reason, which in turn makes them into blank forms for humans to act on and interpret according to their own 'pitiless paths' of reason. Or is it humans themselves who have suffered this fate alongside the animals whom they sought to dominate?

The essay at this point makes an interesting shifts away from the life of animals to the position of women in Western civilization. The pivot which links these two elements is domesticity, the household which at least at one time included the unreasoning animal. Women, Horkheimer and Adorno argue, excluded from the realm of production, occupy an significant position in the relation between man and beast. In fact, the 'man' of man and beast turns out in this new configuration not to be the genderless representative of humanity but the gendered representative of a patriarchal order.

The following three paragraphs outline by now familiar arguments about the complex power dynamic at work in woman's association with nature, yet they do so with an interesting inflection. Written in the 1940s, they represent an early elaboration on what was to become a central theme of feminism's critique of patriarchy in the 1970s and 1980s. [33]

The first of these paragraphs focusses on the church and the suppression of the matriarchal or mimetic stage of development, the second looks the dynamics of woman's association with nature in bourgeois culture. Horkheimer and Adorno here

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[33] See for instance another reflection on the process of naming in Denise Riley's Am I That Name (1988) which describes the history of feminism and its resistance to the processes through which women come to be named as 'women.' ..

draw on a category from Freud to interpret the historical development of the notion of a particularly 'feminine' virtue and modesty. A 'reaction-formation' is a defensive procedure (usually associated with obsessional neurosis) in which a disturbing, instinctual element instead of being repressed is allowed to be present but only in a distorted form.[34] The disturbing element appears as the over investment of energy in its opposite. This whole paragraph is concerned in some way or other with these sorts of formations, with a series of reflections and masks in which what is mirrored back is always a distortion of the object. Woman's defeat appears as spontaneous submission; her 'violated heart' as 'the loving breast'. The violence of the suppression of woman and nature, their existence in 'broken form', is masked by the forms through which they are represented. Art, morality, sublime love provide 'the gift of speech', but what has been excluded can only return in a distorted form, as its opposite. The expressive image at the centre of this section is that of the serpent: 'beauty is the serpent which displays the wound where once the fang was implanted' (2002: 207).

What becomes clear is that for Horkheimer and Adorno, nature itself cannot be represented. It can only be referred to obliquely through making visible what has happened to it – its mutilation. The serpent is an interesting image because of its place in religious history – its role in that moment of intimate and fateful communication between woman and beast. Showing its wound, it shows not only nature defused but also perhaps its own punishment for being a talking animal.

Broken nature, Horkheimer and Adorno argue, is concealed in the planned cultivation of beauty. In consumer society, one form this takes is the rational subjection of the body, particularly but not exclusively, the woman's body to a regime of skin care and hygiene. Significant concrete elements here are lipstick and powder which seem to take on a life of their own. The products themselves act, 'rejecting their origin among courtesans', to enter the flattened world of universal advertising where all things enter into a relation of equivalence, of commensurability. Things move and in their movement not only seem more life like than those who use them, but also shift their meaning. From being signs of autonomous sexuality, powder and lipstick become signs of assimilation into patriarchal culture and even the meaning of sexuality itself shifts so that both

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[34] The entry in Laplance and Pontalis describe 'reaction formation as follows: 'Psychological attitude or habitus diametrically opposed to a repressed wish, and constituted against it. ...From a clinical point of view, reaction-formations take on a symptomatic value when they display a rigid, forced or compulsive aspect, when they happen to fail in their purpose or when – occasionally – they lead directly to the result opposite to the one consciously intended (1973: 376-377).

modesty and promiscuity become at different historical moments demonstrations of a 'subordination to the dominant reason' (2002: 207).

If this paragraph is dominated by a sense that 'nothing can escape', in the following one elements of resistance emerge. These are in no way outside the administered world but through their refusal of or inability to enter into its consolations, they act against it and bear its distortions visibly. The first is, significantly, a kind of woman named after an animal, 'the shrew'.

Horkheimer and Adorno comment that: 'the oppressed woman as Fury has outlived her time, continuing to display the grimace of mutilated nature in an age when domination is molding the well-trained bodies of both sexes, in whose uniformity the grimace has been effaced. Against the background of such mass production, the scolding of the shrew, who at least retained her own distinguishing face, becomes a sign of humanity, her ugliness a trace of spirit.' (2002: 208) The grimace, the furrowed brow, the face marked by experience, is of particular significance for Adorno. It is what is effaced as commercial interests work to assimilated the human body completely into consumer society[35] .

For Horkheimer and Adorno, although the shrew reflects a trace of life, she cannot find a direction for her resistance but is drawn instead to the occult, to 'rackets, sects and hobbies.' Although she expresses a legitimate anger, the paths open to her dissipate the force of the resistance channeling it into institutionalized morality, 'good works' and the irrational. In the place of the animal protection league, exemplary domain of good works, Horkheimer and Adorno place the Pekinese:

> whose distorted visage, now as in early paintings, remind us of the physiognomy of the court jester left behind by progress. Like the hunchback's ungainly leaps, the little dog's features still represent mutilated nature, while mass industry and mass culture have learned to prepare the bodies of breeding bulls and humans according to scientific method. (2002: 208)

The body of the Pekinese represents broken nature, the intersection between nature and history. It is a body marked by centuries of selective breeding but it differs from the moulded body of late twentieth century people and animals not only because it is not a product of 'scientific method' but also because the it is marked by a different historical context. The form of the dog is decorative not efficient, part of an older tradition of contact between man and beast, centered in this case around the Chinese court as far back as the eighth century. The animal, like the court jester, reflects back a different relationship with nature, one in which it is not entirely subjugated. The Pekinese is a manifestations of distorted nature which, like the shrewish woman, does not fit comfortably into the standardized form of consumer society. If by the end of the twentieth century, in the world of breed shows, the Pekinese has been thoroughly transformed into product, this does not entirely efface its origins in an entirely different context, the historical residue it carries although in another constellation (one concerned, for instance, with breeds, industry and display) it might indicate something completely different.

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[35] In Minima Moralia , Adorno returns to the idea of the moulded human body. The expressive body is lost. Health becomes possible because ill-health with which the body indicated its discomfort, its failure to adapt, has been prevented. He writes: 'the inner health of our times has been secured by blocking the flight into illness without in the slightest altering its aetiology' (1978:59). Adorno's position, and suppression of the body in consumer society more generally, is discussed in detail in Chapter four of this thesis.

The second last paragraph deals most directly with contemporary conditions and brings a new set of elements into play. One of these elements is the culture industry itself and its effects on the possibility of expression. Language, Horkheimer and Adorno argue, is being reduced to its purely communicative function:

> In this society there is no longer any sphere in which domination can profess its contradictions, as it does in art; there is no longer any means of duplication by which the distortions might be expressed. But in earlier times such expression was called not only beauty but thought, intellect, language itself. Today language calculates, designates, betrays, initiates death; it does not express. (2002: 209)

This description of the flattening of art into the mass produced images of the culture industry leads to the next element which is the notion of adaption. In a sense this is a continuation of the earlier point about the conditioning of the human body only this time its is human behaviour which is at stake. The film star, described as an 'expert,' becomes the embodiment of what appears as natural behaviour, the model of what gestures might animate the moulded and preconditioned body. Adaption indicates modification to particular conditions; the conditions in the particular case described here are those of fascism and the gestures are all those to do with domination and submission.

The reference to 'earlier times,' a phrase which occurs relatively frequently as a contrast to contemporary conditions, is a significant part of Horkheimer and Adorno's understanding of the present. Its lack of specificity suggests less a nostalgic view of a historical period free of domination but rather that, at least in once sense, the progress of domination had been incremental and that the present represents a state of extreme or crisis. What was different about 'earlier times' was that domination was localized; it extended over a particular domain. Beyond the boundaries of state or feudal manor or city was a space which escaped or was simply neglected by domination, and even within those limits, the body of the subject was only ever partially controlled. Domination resulted in painful distortions but those distortions were visible and in them the contradictory and precarious nature of domination was revealed.

In the contemporary world, Horkheimer and Adorno argue, the spaces which escape or are neglected by domination are disappearing. In the context of fascism, whose project is total control, what is distinctively human, our relation with animals, our 'animate existence,' becomes precisely that which is regarded with horror: 'The distinctive human face, which humiliatingly recalls our origins in nature and our enslavement to it, irresistibly invites expert homicide. The caricature of the Jew has always relied on this, and even Goethe's aversion to apes marked out the limit of his humanity' (2002: 210). To become specialists in death is to appear to exert control over it; to reduce it to a matter of technological and administrative expertise.

The final paragraph perhaps most directly addresses the question of praxis, of adopting a position from which to articulate a concern for animals when certain oppositions appear already immutably established. On one side the support of Goring, racism and the fascist folk-lore lovers, on the other, behaviourism and vivesection. Like the shrew, the intellectual who wishes to avoid these choices, is in danger of being diverted into sects and petty rackets, utopian, anarchist or spiritualist. Perhaps at the centre of this section is the claim, presented as incontestable fact, that 'the real is rational.'[36] Both in its form, the uncompromising assertion of identity and in its content, this declaration perhaps represents for Horkheimer and Adorno most completely, the shuttting down of thought which characterises the administered world, the exclusion of the possibility of contradiction.[37]

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[36] The source of the phrase is Hegel's Elements of the Philosophy of Right, though the standard translation differs. Hegel writes: 'What is rational is actual; and what is actual is rational' (1991: 20). For useful comments see Allen Wood, 'Editor's Introduction' in Hegel (1991: viii-ix).

Conclusion

The final sentences of 'Man and Beast' attempt to articulate precisely what is lost by formulations such as that one quoted above, ('the real is rational'), which insist on the reduction of things to a single identity:

> Nature in itself is neither good, as was believed by the old Romanticism, nor noble, as is believed by the new. As a model and goal it signifies anti-intellectualism, lies, bestiality; only when apprehended as knowledge does it become the urge of the living towards peace, the consciousness which, from the beginning, has inspired the unerring resistance to *Führer* and collective. What threatens the prevailing praxis and its inescapable alternatives is not nature, with which that practice coincides but the remembrance of nature. (2002: 211-212)

As a conclusion these final sentences both fulfil and fail to fulfil the function of closure. They begin with a form which suggests summing up and final clarification, 'Nature, in itself, is...' but the definitions are only negative, what nature is not. In the place of identity, Horkheimer and Adorno leave the reader with a remembrance. The word remembrance suggests something more active than memory, more implicated in the present. It includes both the act of recalling and the object as reminder.

Throughout 'Man and Beast' things move in and out of memory, in and out of visibility as each arrangement of concrete elements either clarifies or blurs the emerging image. The series of oppositions with which the section begins – man and beast, reason and unreason, mechanical object and animate life, language and silence, man and woman form a series of overlapping and sliding definitions which cannot be mapped onto each other. Instead each one partially overlays the previous one so that the similar and diverging lines start to form something entirely different.

In a discussion about Benjamin and the working of memory in Proust, J.M. Bernstein suggests a distinction between 'factual remembering' and 'involuntary memory' (2001: 119). While factual remembering involves, he asserts, a fixing of the past in the past, involuntary memory bring the past back into the present. In The

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[37] Varadharajan writes that: 'The irreconcilability of concepts and reality enables one to penetrate the reified appearance of reality while questioning the adequacy of concepts which capture reality. the real cannot coinincide with the rational in thought unless an objective reconciliation of social contradictions can be foreseen. The principle of non-identity reveals itself in the process of thinking that enacts what Adorno calls a "logic of disintegration"' (1995: 62).

Remembrance of Things Past, the taste of the madelaine 'becomes a promise (and site) of happiness' (Bernstein 2001: 120) in which the past, in the form of memories of childhood, intrudes to touch with life an otherwise alienated existence. Perhaps the remembrance of nature operates in a similar way. What Horkheimer and Adorno reveal in 'Man and Beast' is precisely the impossibility of experiencing nature in its immediacy. Instead, they suggest, it can only be 'apprehended as knowledge.' This formulation, I would suggest, refers not to knowledge of nature as system but rather nature mediated by thought, specifically mediated by the kind of thought presupposed by the constellation. Bernstein writes: 'Only the 'shock' of the fragment which breaks the uninterrupted flow of lived instants can synthetically produce the experience of the loss of experience' (2001: 120). Although this ending leaves the question of praxis open, it does suggest that any realization of the utopian potential of nature needs to recognise that broken nature cannot simply be made whole again. The involuntary memory or remembrance of nature brings back to mind the memory of a different relation between subject and object and so makes possible a recognition of the limits of human instrumental rationality, and the conceptualization, however tenuous or threadbare, of what might be outside the totalizing effects of the administered world.

Of course it may be as with so many acts of remembrance that they come into focus only at the edge of disappearance as the memory image comes to replace the things remembered. It is the deepening dynamics of this disappearance of nature that I will be exploring further in the next chapter.

Chapter Two

The End of Nature

> *Paysage* – The shortcoming of the American landscape is not so much, as romantic illusion would have it, the absence of historical memories, as that it bears no traces of the human hand. This applies not only to the lack of arable land, the uncultivated woods often no higher than scrub, but above all to the roads. These are always inserted directly in the landscape, and the more impressively smooth and broad they are, the more unrelated and violent their gleaming track appears against its wild, overgrown surroundings. They are expressionless. Just as they know no marks of foot or wheel, no soft path along their edges as a transition to vegetation, no trails leading off into the valleys, so they are without the mild, soothing, un-angular quality of things that have felt the touch of hands or their immediate implements. It is as if no-one has ever passed their hand over the landscape's hair. It is uncomforted and comfortless. And it is perceived in a corresponding way. For what the hurrying eye has seen merely from the car it cannot retain, and the vanishing landscape leaves no more traces behind than it bears upon itself. (Adorno 1978: 48)

In the introduction I suggested that emerging global culture formulates its anxiety about the possibility of life at the turn of the twenty-first century in terms of a crisis in the continued existence of nature. The phenomenon I am calling 'the end of nature' encompasses a number of complex and contradictory elements, both the material destruction of nature, its preservation and commodification in managed units and its centrality as a sign of what might constitute the outside, a positive value against which to measure life in consumer culture.

In this chapter I will discuss how these contradictions are manifested in people's relationship with external nature. The first part of this chapter, 'Traces of the Human Hand,' takes the car as its central point of reference since in the material transformation of the landscape it holds such a pivotal position. The car and the infrastructure it demands rearranges the social life of people: on the one hand creating the blank, uninhabitable spaces of highways and industrial parks and on the other offering the means to escape them into a newly accessible and carefully-preserved nature.[38] The car generates new relationships with space and over time contributes to the processes which result in global warming. It is a significant factor in the universalization of damage which means that such an escape may already no longer be possible.

This chapter discusses Bill McKibben's anxious vision of 'the end of nature,' a world in which no place is free of traces of human activity, and compares it with William Morris' socialist utopia one hundred years earlier in which worked nature is imagined as the defining ground of an egalitarian and rational society. Morris' utopia provides an interesting point of comparison both because of his rigorous exclusion of technologies which separate people from a sensuous engagement with the world and because of his insistence on the value of the worked object and the worked landscape, in which traces of the human hand are visible.

The first part of this chapter looks at a concrete object and the way it acts as a link in the various related processes which contribute to the phenomenon I am calling the end of nature; the second part traces the history of the relationship between subject and object at a more theoretical level. It examines the process of reduction that takes place, the stripping away that is necessary to prepare an object for scientific scrutiny and the subtle way in which the concept of nature comes to conceal the nakedness and the incompleteness of the scientific object and enables its return to the realm of experience.

TRACES OF THE HUMAN HAND

A World of Things

Theodor Adorno wrote the extract quoted at the start of this chapter while in exile in California. I can imagine him comparing the European landscape with the American landscape and refusing the popular interpretation of the difference: the colonial land as a land without history.[39] Adorno is struck nevertheless by a real difference, the absence of what he describes as 'traces of the human hand or its immediate implement'. The road has a long history in human society but the kind of road described here has a particular connection to the damaged life Adorno was reflecting upon.

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[38] See Jane Jacobs ' Erosion of Cities or Attrition of Automobiles'; 'Jane Holtz Kay 'The Asphalt Exodus' and Christopher Pinney 'Automonster' all in Wollen (2002).

The project of modernization, with its emphasis on mobility and the breakdown of parochial concerns and traditional, settled lifestyles celebrated the road as a means of breaking down the barrier of distance, of extending horizons and making everywhere accessible. The kind of road that enables this sort of transformation is, of course, not the country lane or even the city street. It is the variously named expressway, highway or freeway that makes previously unimaginable connections between places possible.[40] The development of this type of road is linked not so much to the invention of the car in the early part of the century as to its increasingly widespread distribution during and after the Second World War. Adorno's comments on American roads predate the vast Federal Highway Programme which transformed the American landscape in the 1950s, but they appear curiously prescient.

Roads and cars are significant to the discussion of people's relationship with external nature for two reasons. Firstly because cars and the infrastructure they generate constitute such a significant and lasting transformation of people's experience of their environment. In a very direct and immediate way they rearrange not only physical landscapes but also the ways in which people can occupy space. Cultural critic, Peter Wollen, argues that the car has fundamentally transformed everyday life through a 'proliferation of side effects – roads and associated construction work, parking lots and structures, rising oil prices, geopolitical rivalries, broad-ranging environmental issues, industrial manufacturing, life-styles, marketing, population movements, congestion, the growth of suburbia, increased levels of travel and tourism, patterns of crime, the epidemiology of violence and death' (2002: 11). The car and its side-effects not only

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[39] Thomas Cole in 'Essay on American Scenery' comments on this attitude towards the American landscape. 'There are those who through ignorance and prejudice strive to maintain that American scenery possesses little that is interesting or truly beautiful - that it is rude without picturesqueness, and monotonous without sublimity - that being destitute of those vestiges of antiquity, whose associations so strongly affect the mind, it may not be compared to the European scenery.' in Harrison, C., Wood, P. & Gaiger, J., (1998: 136).

[40] In describing the changes brought about to New York by Robert Moses, Marshall Berman suggests that: '...Moses' great constructions [of expressways] in and around New York in the 1920s and 30s served as a rehearsal for the infinitely greater reconstruction of the whole fabric of America after World war Two. The motive force in this reconstruction were the multibillion-dollar Federal Highway Programme and the vast suburban housing initiative of the Federal Housing Administration. This new order integrated the whole nation into a unified flow whose lifeblood was the automobile' (1982: 307.).

create the shape the world in the second half of the twentieth century, but also influences the possible ways in which it might be experienced.

Secondly, more covertly, cars signify the inextricable implication of most societies, particularly in industrialized but also in developing countries, in a lifestyle based on fossil fuels and contribute directly to what McKibben argues is the most significant indicator of 'the end of nature,' the transformation of the world through global warming.

The car leaves a particular sort of trace on the external world. Through its side effects, it draws the lines which describe the specific forms of human habitation and social organisation of the second half of the twentieth century and beyond. The first part of this chapter explores the paradoxical ways in which these lines extend and curtail people's relationship with external nature, both allowing people access to previously remote 'wilderness' areas and at the same time transforming the experience of nature into one of structured consumption. I discuss the way in which McKibben formulates his claims about the 'end of nature' and how his formulation relates to the wider unease about the manner in which more and more of external nature appears to be drawn under human control and management.

The practical management of nature, its insertion into the economic, social and political networks of the emerging global culture, involves, almost exclusively, a particular kind of knowledge – that developed within the paradigm of Western science. In the second part of this chapter I discuss some of the ways in which the concept of nature as object of science emerged and the peculiar power this concept has had to displace other ways of thinking about the external world. Like cars, such forms of abstract thought extend people's abilities to control their environment. Yet both cars and the science that enables such technological developments involve a reduction in the relations between subject and object, an exclusion of a range of other possible modes of engagement. In the second half of the twentieth century, science confronts human subjects with an increasingly abstract nature, the contours of which are less and less possible to grasp. Nature as an object of science disappears into the proliferating and increasingly specialized branches of knowledge which characterise post-modern scientific investigation.[41]

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[41] For an interesting discussion of the relation between alienation, the division of labour, and the associated divisions between knowledges in see Peter Dicken (1996).

In his reflection on American roads, Adorno notes the abstract quality of their relationship with the landscape. There are no paths, no marks of foot or wheel, things which might interrupt the blankness of the road's surface and situate it in the space it occupies. It is almost as if the road itself is merely passing through the landscape like the cars which travel on it. Although roads are a human construction, they are built by machines and designed to accommodate machines not people. The road constructs a landscape which is empty not only of people but even of traces of human use and human care.

Alexander Wilson, an American theorist of the environment, describes the immense expansion of road networks in the 1950s as cars became the dominant form of transport for most Americans. 'Before the car', Wilson notes, 'most roads took care of all manner of traffic. But once the car was in general use, traffic had to be functionally separated: trucks and cars from pedestrians and bicycles, local and feeder traffic from intercity travel (1992: 29). The right of uninterrupted mobility that the car comes to represent takes precedence over earlier rights of way so that pedestrians, bicycles and other forms of transport have to give way. They have no place in the logic of the freeway.

The road passing through the uncultivated land represents for Adorno a space of extreme discomfort, an expression of the violence of modern life which in its rational reorganising of the landscape constructs spaces which people can only occupy fleetingly. The violence done to the land by running a road through it as if it were only a blank space to be passed through, meaningless in itself, is equalled by the violence done to the viewers, who separated by speed and glass from the world outside, find in themselves a corresponding blankness.

Adorno's concern with roads and their place in the American landscape is central to the project which he undertakes in Minima Moralia to redirect the attention of philosophical investigation to what, he suggests, was in the past its true field: 'the teaching of the good life' (1978:15). The neglect of this area of study has to do, he explains, with the form life takes in contemporary society. Life, he maintains, has been reduced to involvement in the practices of consumption. To understand the deformations this imposes, he argues, it is necessary to reflect upon those minute details of everyday experience that give form to contemporary life. He writes: 'He who wishes to know the truth about life in its immediacy must scrutinize it in its estranged form, the objective powers that determine individual existence even in its most hidden recesses' (1978:15).

Although the objects of scrutiny here are the 'objective powers', in a sense it is the 'hidden recesses' that seem to engage Adorno's attention most thoroughly. He explores the neglected and incomprehensible details of everyday life which form the surface of day-to-day interactions: the complexities of things like roads, marriage, homelessness, gifts, lying and technology, to mention just a few. Adorno's comments on technology articulate some of his concerns about living in a world dominated by things: '*Do not knock.* – Technology is making gestures precise and brutal, and with them, men. It expels from movements all hesitations, deliberations, civility. It subjects them to the implacable, as it were, ahistorical demands of objects' (1978:40). The utter transformation of the texture of life in the developed world after the Second World War had a lot to do with technological developments, with the entrance of technical devices of all kinds into private homes. Historian Eric Hobsbawm (1994) has noted the total reformation of the conditions of living brought about by 'plastics' (developed in the inter-war period), radios, televisions, synthetic furnishings, commercially produced food, domestic electronics and labour saving devices.[42] The Golden Age of economic prosperity experienced by the developed capitalist countries in the decades following the war, he suggests, was fueled in part by technological revolution, by the fascination of consumers with technological novelty.

> The new technologies were,' he writes, 'overwhelmingly, capital intensive and (except for highly skilled scientists and technicians) labour-saving, or even labour replacing. The major characteristics of the Golden Age was that it needed constant and heavy investment and, increasingly, that it didn't need people, except as consumers (Hobsbawm 1994: 266).

For Adorno, things, entering into the substance of everyday living, transform human communities. They change people's experience of the world at a visceral level, adjusting the movements of the body so that the simple acts of opening doors or windows, impose a particular interaction with the world. He writes:

> The new human type cannot be properly understood without an awareness of what he is continuously exposed to from the world of things about him, even in

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[42] See Hobsbawm (1994: 263-268).

> his most secret innervations. What does it mean for the subject that there are no more casement windows to open, but only sliding frames to shove, no gentle latches but turnable handles, no forecourt, no doorstep before the street, no wall about the garden? And what driver is not tempted, merely by the power of the engine, to wipe out the vermin of the street, pedestrians, children and cyclists? (Adorno 1978:40).

The spaces created by a world dominated by a particular type of object, one directed entirely towards a specific purpose, are not spaces that promote human communality. Civility and the rituals of human engagement, which include 'deliberation' and 'hesitation' are lost to pure functionality.

An industrial society, motivated by principles of profit and expansion, creates uncomfortable spaces and reduces the habitability of the world.[43] This thesis is an exploration of some of the dimensions of that discomfort. Discomfort is an experience of the body, although it is usually the effect of thought, as well as of physical spaces. The subject occupying space feels herself not to occupy that space easily, as if there is something difficult in the relationship, in the condition of being in a particular place and time. It is in the context of this discomfort, I argue, that the concept of nature become charged with a peculiar intensity. Nature, not as a definite object, but rather as a sort of wild card, enters as a sign of what is already almost inconceivable – what might be outside the system.

In the comment on technology quoted above, Adorno makes a significant rhetorical move. He invites the reader to identify with the experience of the driver, ('...what driver has not...'), frustrated by the remnants of a different ordering of space, the slow moving pedestrian, children and cyclists. Yet at the same time this draws attention to the fact that the experience of technology is differential. Not everyone experiences technology in the same way, and while the driver is intoxicated by the power of the engine as an extension of his or her body, the pedestrians, children and cyclists can experience this power as violence. It contains within it a negation of their subjectivity, a continuing and in some places frequently realized threat to their ability to occupy space at all.

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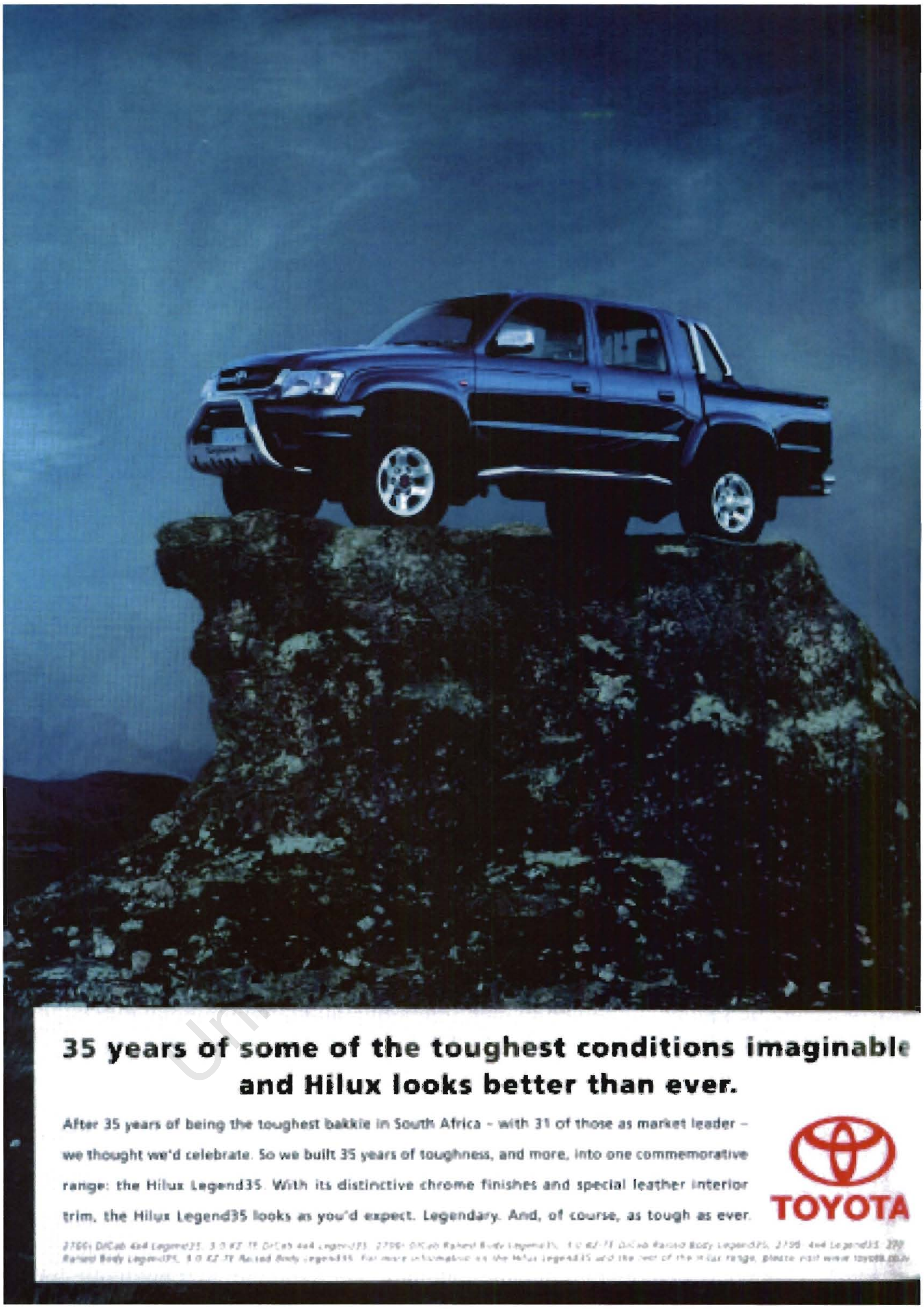
[43] This is not to argue that all pre-industrial societies generated comfortable, habitable conditions for all of their members. Only that different less deforming or alienated modes of engagement with external nature were sometimes possible. It is the loss of this sense of possibility, of a place outside the 'administered world' that is, I suggest, what chacterises culture at the end of nature.



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The act of driving implicates the driver in these particular relationships of power even if he or she does not give in to the demands and pleasure associated with the exercise of power and annihilate all those who occupy the space of modernity in a different way.

Approximately half a century after Adorno was writing, the dis-ease he articulates is expressed slightly differently. If we are no longer concerned about the loss of doorsteps, it is because the environmental movement is suggesting that the habitability of the world is being threatened on a much grander scale. Although the extent of the damage remains a subject of controversy, the sense of unease is unmistakable.

In this context, the sweeping use of the word nature or natural in the world of advertising attached to almost any product appears symptomatic. It suggests an anxious litany for something that is no longer accessible, a lack which generates desire. It is as if nature attaches value to products, as if what has been lost can be regained through the acquistion of commodities. The popularity of 4x4s (Sports Utility Vehicles) emerges at a time when the roads in most countries where people can afford such luxury vehicles have been tarred and most 4x4's never leave the city. Spaces where such cars might be useful are also rapidly diminishing. The new fragile nature cannot resist the destructive effects of the tyres. Instead it is almost as if the cars come to replace what has been lost. They come to stand in for a different way of life, a different relationship with the world, and act as potent signs of the rugged terrain which is no longer part of everyday life except in the world of advertising. The position of the 4x4 as an icon of nature is particularly ironic given the role of the car in the modern environmental crisis. Although in the twenty-first century, the internal combustion engine is old technology, the car, as I suggested earlier, still dominates the physical landscape, still forms one of the major industries world wide and dictates the texture of modern life.

For Adorno, what is missing from the American landscape is traces of the human hand; for McKibben, writing fifty years later, traces of the human hand can only be found in nostalgic reconstructions of the past. Compared to the destructive traces of industrial technology, they are merely reminders of a now inconceivable way of life. These two readings of the American landscape reflect not only the massive transformation of the land itself. They also constitute two substantially different ways of conceptualizing nature and its relation to the human world. In this chapter I explore some of the dimensions of these ideas about nature, their relation to the material transformations of the land and the social reorganisation of life after the Second World War in an attempt to understand the ambiguous and contradictory place of the concept in utopian and dystopian projections about the future.

Administered Nature

As mentioned earlier one of the visible traces of the transformation of human settlement in America is the extension of the network of roads. By the middle of twentieth century roads were cutting their way across even the remote mountainous regions of America. Some of these, unlike the highways dedicated to mobility in which the landscape is inconsequential, were built as part of the new industry of leisure and tourism, and relied on the landscape to provide the motorist with a meaningful and pleasurable experience.

In response to the unrelated and violent aspect of the road that has no connection to the landscape it passes through, the designers of these roads recreated the landscape around the road so that it would make sense to the fleeting glance of those passing through it. 'These parkways,' Wilson comments, 'are designed to present nature to the motorist in a way that sanctifies the experience of driving through it' (1992:34). Wilson describes how the parkways constructed nature around the road, adjusting it to make it more scenic, removing or screening evidence of poverty and the clutter of human settlement. In some areas the parkway administration bought what was known as 'scenic easement rights' from local landowners to provide them with total control of the motorists' experience of the road. He writes that 'the road allowed no trace of commercial society, save for the occasional nostalgic glimpse of a farm or mill, the shadow of economies which have given way to the single economy of tourism' (1992:36-37). Wilson quotes Stan Abbott, the landscape architect working on the Blue Ridge Parkway through the Appalachians as saying that he wanted to create 'a museum of managed American countryside'(1992:35).

Although the 'managed American countryside' in the 1950s still included some farms, already they were viewed nostalgically as traces of an earlier way of life. The agricultural population all over the developed world declined steadily after the war and if in the 1950s it still amounted to a quarter of the American population, by the 1980s it had fallen to three percent.[44]

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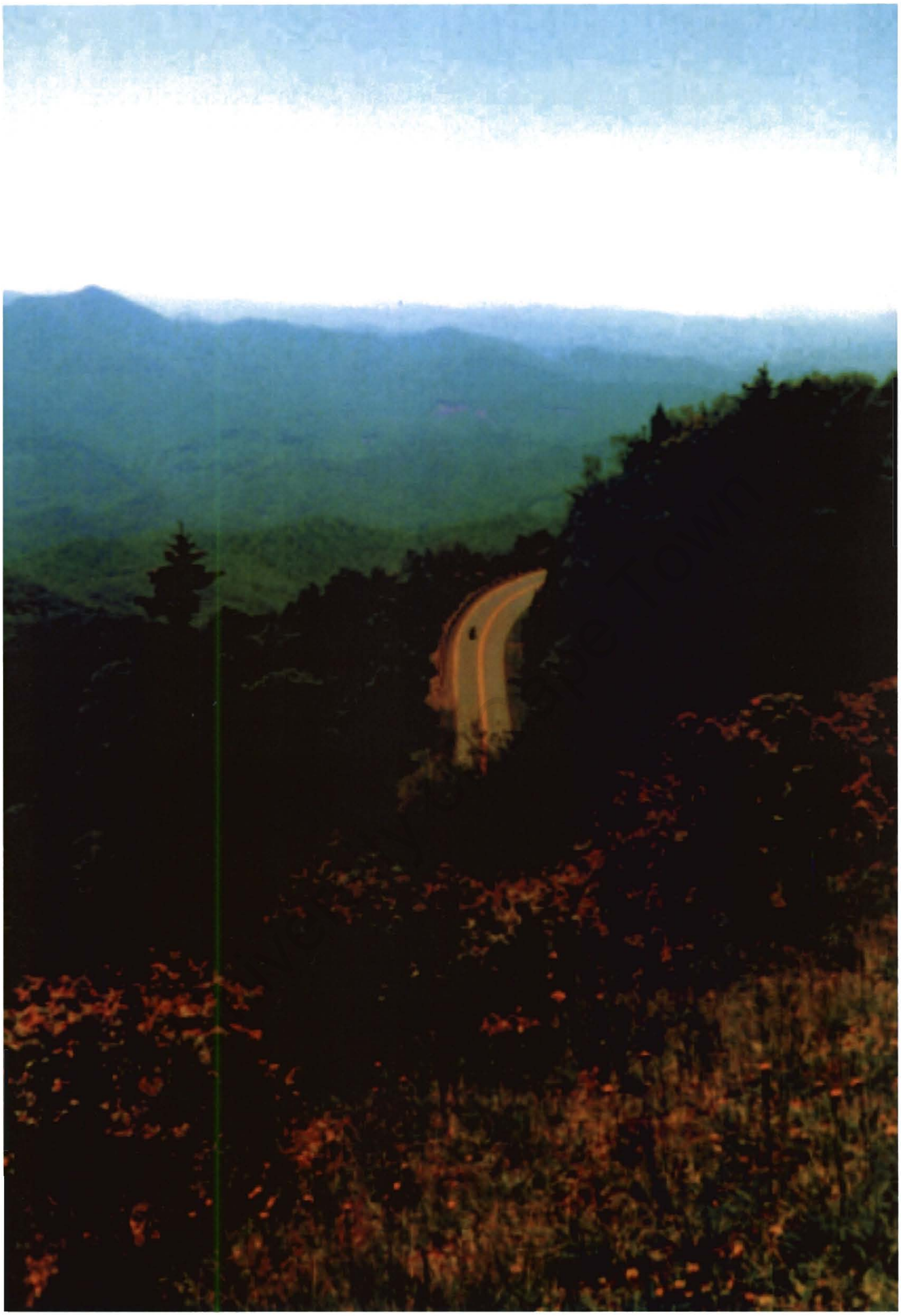
[44] Figure quoted in Hobsbawm (1994: 289).



Blue Ridge Parkway: A Reconstructed 'Natural' Landscape

Hobsbawm writes that:

> The most dramatic and far reaching social change of the second half of this century, and one which cuts us off for ever from the world of the past, is the death of the peasantry. For since the neolithic era most human beings had lived off the land and its livestock or harvested the sea as fishers. With the exception of Britain, peasants and farmers remained a massive part of the occupied population even in industrialized countries until well into the twentieth century. (1994:289)

American agriculture was transformed in the years after the war into agribusiness, a highly capitalised industry reliant on technology not people. The farm, like nature itself, was rapidly becoming something merely aesthetic, to be preserved in the museum of the parkway for the visual pleasure of the motorist.

Although in the prosperous years after the war little thought was given to the environmental damage caused by the massive expansion of industrial production, the words of Stan Abbott are prescient. The reconstruction of nature the parkway under his supervision undertakes, a reconstruction which included the reintroduction of displaced indigenous species, transforms nature into a museum. A museum suggests the preservation and exhibition of something already outside everyday experience. A museum also constructs its objects as untouchable, available only to be viewed under particular conditions. On the parkway, the car's windows separate the viewer from an external nature transformed into something beautiful but inaccessible, not because the car could not be stopped and the doors opened but because it is no longer clear what doing that might achieve. Hiking and the many other popular 'outdoor sports' attempt to solve the problem of what might be done in nature or perhaps with nature once it has been preserved but this only underlines the tenuousness of the connection – external nature preserved in this way can only be experienced as part of the regulated leisure industry.

The Blue Ridge Parkway represents an early example of what becomes by the end of the twentieth century and the beginning of the twenty-first century the huge industry of international tourism. Nature, preserved and packaged in various ways, is a central part of this industry, particularly in developing countries where natural landscapes and other signs of premodernity become the basis on which such locations are marketed.[45]

The idea that unspoiled nature could provide a refuge from the destructive effects of industrialization is not, of course, a twentieth century invention. The Romantic movement at the beginning of the nineteenth century in England and slightly later in Europe, and the transcendentalist movement in North America developed in response to the growing unease inspired by the reorganisation of the social and natural landscapes according to the demands of an industrial economy and the damage it inflicted on human communities. For a writer like William Wordsworth, nature provided a healing space for the rediscovery of human nature undistorted by the dislocated, regimented and damaged space of urban life.[46] Yet the nature he imagines is very different from that contained in twentieth century nature reserves. David Simpson suggests that, for Wordsworth, a model environment:

> had to be rural (indeed marginal), sparsely populated by both natural objects and other people, and governed by a subsistence rather than a surplus economy. A world in which there are few 'objective' elements for attention and distraction provides the necessary space and time for the 'second look' that provides the opportunity for the correction of improper figurations, and the modification of authentic ones...' (1987: 60)

It is not untouched nature but rather worked nature, and the poet, though not labouring on the land, is engaged in a particular kind of work – that of finding, through the imagination, the proper relationship between subject and object, between the ambiguously social and natural subject and socially worked upon nature.[47]

Industrialization, Raymond Williams suggests, reformed the category of nature to designate wild nature (1980: 77). The new industrial processes generate wealth which enables the purchase of estates and country retreats and effectively splits nature into unrelated parts, raw materials to be extracted and wild nature to be enjoyed. Williams

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[45] Dean MacCannell argues that this fascination with 'nature' can be linked to a desire to get outside of history. He writes: 'Postmodernity is itself a need to suppress the the bad memories of Auschwitz, Hiroshima and other genocides on which modernity was built. Of course it is not possible to repress the past without denying the future. Thus, the central drive of postmodernity is to stop history in its tracks, and the central drive of postmodernity is to discover places which seem to exist outside history: unspoiled nature and savagery' (1992:26).

[46] See the discussion of Wordsworth and Clare in Williams (1975: 158-174).

[47] Wordsworth was himself very concerned about the extension of the railways and the development of tourism in the Lake District because of the particular kind of interaction with the natural world he felt it would promote. See his comments in a letter to the Morning Post 'Kendal and Windermere Railway' collected in The Prose Work of William Wordsworth (1974: 337-366).

comments that:

> The real split perhaps, is in men themselves: men seen, and seeing themselves as producers and consumers. The consumer wants only the intended product; all other products and by-products he must get away from, if he can. But get away from – it really can't be overlooked – to treat leftover nature in much the same spirit: to consume it as scenery, landscape, image, fresh air. (1980: 81)

If there has been an intensification of the commodification of leftover nature in the twenty years since Williams made this observation, this is partly because this category, usually conceived of as wild nature, is increasingly a scarce resource. This is not only because of the direct effects of extending production into more and more previously non-industrialized regions. In fact in the developed world, industrial production has sometimes retreated as multinational companies move factories to developing countries. What have come to appear more significant are indirect effects – the projected changes to the environment caused by global warming.

It is these indirect effects which for McKibben represent the end of nature. In effect, he argues that there is no more leftover nature, not even in remote and inaccessible places, because all places have been affected directly and/or indirectly by human forms not only of production but also of consumption - most notably a prevailing lifestyle, in most developed and increasingly also in developing countries, based on the car.

Although scientists had long been aware that carbon dioxide was a by-product of fossil fuel combustion, and had speculated on the possible effects it might have on the global temperature, most concluded that the oceans would absorb any excess produced by human activity. In 1957, roughly at the time that Stan Abbott was designing the Blue Ridge Parkway, two scientists from the Scripp Institute of Oceanography in California, Roger Revelle and Hans Suess published a paper suggesting that, in fact, the oceans could absorb only a very small amount of the carbon dioxide being produced. 'Human beings,' they asserted, 'are now carrying out a large-scale geophysical experiment of a kind that could not have happened in the past nor be repeated in the future' (quoted in McKibben, 1990: 10).

What is Lost

This transformation of the world into a 'large-scale geophysical experiment' represents for McKibben a significant and irrevocable transformation of the relation between humans and nature. In his book, The End of Nature, published in 1990, he writes: 'we have changed atmosphere, and thus we are changing the weather. By changing the weather we make every spot on this earth man-made and artificial. We have deprived nature of its independence and that is fatal to its meaning' (1990:54).

It is perhaps useful at this point to consider some of the elements that cause McKibben particular concern. Global warming, he argues, is more important than the depletion of the Ozone layer, acid rain and even genetic engineering and it is qualitatively different from earlier forms of pollution which, though destructive, were clearly linked to specific actions and local in their effect. It is central because it is a global phenomenon and it destroys, once and for all, the possibility of there existing on the earth a place which is entirely untouched by human actions. The climate defines not only the weather, the length and intensity of the seasons, but also the distribution of vegetation, the places where specific species are able to flourish. A change in the climate has a direct impact on our experience of the world, not only of our day to day interactions with the weather but also with the way the world looks and even more so our sense of it as powerful, elemental and independent.

McKibben argues that the greenhouse effect undermines people's ability to predict changes in nature based on the past. The knowledge of the weather, for instance, developed through experience by farmers and engineers will no longer apply. 'The salient feature of this new nature', he suggests, 'is its unpredictability, just as the salient feature of the old nature was its utter dependability' (McKibben 1990: 96) Although the weather has always been difficult to predict over short time-spans, ultimately people could rely on the seasons, on Summer following Spring. On a larger scale, the uncertainty created by human intervention into natural processes is evident in the numerous different scenarios that scientists have come up with to describe the likely changes. No one can predict with any degree of certainty the effects of global warming. This uncertainty generates an uncertainty at every level of humans' interaction with nature, the effects on the availability of fresh water, the ability to produce sufficient food, the possible dangers of exposure to the sun, the rearrangement of the coastal landscape due to rising sea water.

The predominant response to this uncertainty is what McKibben calls 'the defiant reflex', an assertion of the immense potential of human reason to find solutions to problems that have come about as a result of the technologies people have devised. Unlike the crisis produced by extensive use of DDT documented by Rachel Carson in her book, Silent Spring (1962), the current crisis cannot be solved by a similar shift in practice.[48] The use of fossil fuel is too intimately bound up with the structure of industrial society at every level. McKibben writes that, 'at least in the West, the system that produces excess carbon dioxide is not only huge and growing, it is also psychologically all-encompassing. It makes no sense to talk about cars and power plants and so on as if they were something apart from our lives – they are our lives' (1990: 132). The response of those whose approach favours a 'muscular industrialism' is on adaption and adjustment. The earth is seen as a mechanism which needs to be managed skillfully in order to sustain the lifestyle developed and supported by extensive use of fossil fuels. Central to this strategy is the promise of the new technologies of genetic engineering to transform life on earth in as yet unimaginable ways. Genetic engineering is the ultimate tool of adjustment, able to alter and reconfigure genetic traits to make life forms better adapted to the changing environment. Yet, McKibben argues, the ultimate conclusion of this technological response is a world of total control, where anything is possible and there are no material limits to constrain human desires. He writes: 'we may be able to create a world that can support our numbers and our habits, but it will be an artificial world, a space station' (1990: 156).

Against this instrumental approach to the world, McKibben poses what he sees as the radical alternative, the notion that it might be possible for people to change their habits. It is clear, he argues, that the logic of economic growth is destructive to the natural world. Drawing on the ideas of 'deep ecology', a philosophy that asserts the intrinsic value of the natural world as opposed to its value as a resource for human use, he argues for a transformation in lifestyle. The rationale for this transformation would not, however, be utopian since its aim is not to make people happier and more fulfilled. Instead he describes it as an atopia, a place where 'our desires are not the engine', where the requirements of the natural world are placed before the desires of people. In the final lines of The End of Nature he takes consolation in the mystery and wonder of the stars,

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[48] See discussion of Carson and changes in the nature of the environmental crisis since the 1960s in Buell (2003: xii, 35, 182-183).

a realm still beyond the reach of human intervention. He writes:

> As I lay on the mountain top that August night, I tried to pick out the few constellations I could identify – Orion's belt, the dippers. The ancients, surrounded by wild and even hostile nature, took comfort in seeing the familiar above them – spoons, swords, nets. But we need to train ourselves not to see those patterns. The comfort we need is inhuman.' (McKibben 1990:200-201)

The end of nature for McKibben is not an apocalyptic vision of the end of the world although he argues that substantial changes to the physical environment are imminent. It is rather the end of a particular frame of reference, a particular way of understanding people's place in the world. McKibben's use of the term 'nature' to refer to wild nature is one with peculiarly North American resonances. The celebration of the 'untouched land' is part of America's pastoral tradition from the early naturalists like William Bartram through Emerson to the predominantly North American deep ecology movement. It locates in nature untouched by human intervention a source of value.

McKibben deliberately directs his arguments at an American audience, a fact which tends to be elided by his tendency to universalize the conflict into one between 'humans' and 'nature'. It is aimed at consumers, which is perhaps why both production and work seem to some degree incidental to its arguments. In some ways it participates in the form of ecological thinking that has been justly criticized by thinkers on the left such Hans Magnus Enzensberger who argue that: 'What fills these prophets with terror is not so much ecological decline, which has been present since time immemorial, as its universalization. To isolate oneself from this process becomes increasingly difficult' (1996:25). Yet the universalization of decline is in itself significant, suggesting a moment at which quantative increase shifts into qualitative difference.

More importantly McKibben's book signals an acute anxiety about ways in which the future might be imagined – about the possibility of imagining 'the good life'. It articulates a profound discontent about the possibilities of life in consumer society which he sees as characterised by a growing sense of the meaningless of being. Yet his conclusion is not about changing society. Instead it relies on a personal transformation, a change in lifestyle. What is lost ultimately, it appears, is not so much external nature in any physical sense but rather meaning, or the ability to produce meaning, the ability to occupy a position as subject.

Nature's role in this is interesting – it comes to occupy the position previously held by culture and tradition, as that which establishes and guarantees the meaningfulness of the existent. What is lost – predictability, authenticity, a context to structure the interpretation of experience – are elements that might appear to exist more accurately within the domain of culture. In discussing the question of ontology (in 1934), Adorno writes that: 'only when reason perceives the reality that is in opposition to it as something foreign and lost to it, as a complex of things, that is, only when reality is no longer immediately accessible and reality and reason have no common meaning, only then can the question of the meaning of being be asked at all' (1984: 112). The end of nature can be read in this way, as the end of a moment when reason was able to apprehend reality, with nature coming to stand simply for that which has been lost – an ordered, understandable reality.

An Unalienated Life

It is perhaps instructive at this moment to consider another theorist who almost a hundred years earlier articulated some of the same concerns as McKibben. William Morris, writing in the 1890s, also attempts to analyse contemporary conditions with the view to effecting a transformation of the way in which people live their lives. Morris, like McKibben, recognises the destructive nature of what is considered progress in modern society. He writes:

> Apart from the desire to make beautiful things, the leading passion of my life has been and is hatred of modern civilization. ...What shall I say of its mastery of and its waste of mechanical power, its commonwealth so poor, its enemies of the commonwealth so rich, its stupendous organization – for the misery of life! Its contempt of simple pleasures that everyone could enjoy but for its folly? Its eyeless vulgarity which has destroyed art, the one certain solace of labour. (Morris 1984: 244)

Morris's contempt is for an irrational society, a system based on commercial interests in which human needs and desires are not considered. The mastery of the natural world by mechanical power becomes the rationale for production, technology drives the production of things, the system of exchange structures human desires, and the 'simple pleasures' vanish. In this context alienated labour can provide no meaningful interaction with the world.

Morris' socialism provides him with a theoretical framework for a reimagining of the world according to what he argued was a more rational organization of society and work, one in which the mastery of mechanical power was subordinated to the needs of communities.

His 1894 novel, News From Nowhere, describes a society governed by what Morris considered to be the central ideas of socialism:

> a condition of society in which there should be neither rich nor poor, neither master not master's man, neither idle not overworked, neither brain-sick brain workers, not heart-sick hand workers, in a word in which all men would be living in equality of condition, and would managed their affairs unwastefully, and with the full consciousness that harm to one would mean harm to all – the realization at last of the meaning of the word COMMONWEALTH. (1984: 241)

In Morris' utopian vision 'the smoke-work with their smoke vomiting chimneys were gone' and instead a bridge over the Thames combines utility with beauty, an example of a form of architecture designed to create spaces of human well-being. In the absence of any formal system of exchange each article produced is considered only in terms of its use value and its aesthetic value. There is no division of labour and all work, entered into freely, is considered its own reward. Meaningless labour is transformed into creative self-expression.

Although set in the future, the model of society is in many ways pre-modern. If from the standpoint of the twenty-first century Morris' utopia reads like nothing so much as a blueprint for a Disney theme park of traditional English life complete with the elimination of such awkward elements as class conflict and poverty, this is at least partly because what he describes can no longer in any way attach to a reality. [49] The reconciliation with nature, which he sees as central to the project of human liberation, requires the undoing of modernization, the refusal of precisely those technologies which for McKibben have become such an inextricable part of life at the end of the twentieth century – those based on the burning of fossil fuels. Furthermore, for Morris it is still possible to imagine an arrangement of space unaffected by technologies which collapse vast distances. Although at the end of the nineteenth century the internal combustion engine was new technology and cars were barely invented,[50] the railway offered an example of how such technologies might transform human communities, and it was a transformation Morris prefered to exclude from his utopia.

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[49] The free and uninhibited sexual relations in Morris' utopia , unencumbered by institutions such as marriage, are perhaps the only element of Morris' vision which might not fit the idea of a the theme park reconstruction of the past.

For Morris, the pleasure taken in natural beauty is not separate from the business of living. Work, and in Morris' novel this is physical work, is the central element which forges connections between people and between people and the natural landscape. Work, the production of use-value, is what structures life.

Many of the historical events that contributed to the shift from Morris' utopia to McKibben's atopia are obvious; the transformation of agriculture through technology, massive urbanization, and the Second World War – both the evidence it provided of technologies of destruction in the atomic bombs, and the way in which it fundamentally disturbed the idea of modernity as progress, undermining confidence in rationality and human nature. In the second half of the century this was augmented by a growing sense of the irrevocability of environmental damage. These events, along with the collapse of the communist economies in the Soviet Union and Eastern Bloc countries, contribute to the difficulty of imagining an alternative to consumer society, of envisioning a rational society devoted to the pursuit of the common good. The phenomonon I am calling 'the end of nature' emerges, I suggest, partly as a response to this difficulty; the hypervisbility of nature serving to eclipse the irreducible contradictions of contemporary global history.

The Haunted House

If as Fredric Jameson suggests, postmodernism is characterised by a new form of interrelationship between time and space, in which the spatial comes to take the place of the historical, then it is not suprising that nature as a concept for organising space comes to assume particular importance.[51] Its material domination, the way in which it is drawn through various strategies for management more and more within the control of particular global and national administrative configurations goes hand in hand with a desire for it to make sense of the blank space which the demolition of the local, of place, has given rise to. Nature becomes a way of talking about a world, which because of its scale and the characteristic mode of moving through it, (obviously not only the car but also the aeroplane, the underground and other modes of rapid transport), can no longer be directly experienced.

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[50] The first four cycle compression engine was produced in Germany in 1876; the first car in 1893 (Wollen 2002: 10).

[51] Jameson writes ' it also seems to be plausible to return to the phenomenon of spatialization already mentioned here, and to see in all these varied Utopian visions as they have emerged from the sixties the development of a whole range of properly spatial Utopias in which the transformation of social relations and political institutions is projected onto a vision of place and landscape, including the human body' (1991: 160).

One very significant element in Morris' work and one which cuts us off forever from being able to imagine his utopia in the twenty-first century, is this insistence on place and locality. Moving through the land takes place only through the human labour of rowing or walking or through harnessing the power of the horse. For Morris, living the good or moral life means truly inhabiting a place – moulding your human life in metabolic interaction, to use an expression from Marx , with the natural world.[52] It involves pleasure in useful action, in the body's power to transform natural resources into useful (and for Morris, importantly, also beautiful) artifacts. This is a rational mode of existence for Morris because it involves acting in accordance with human nature – with the rational and positive potential within people which commercial society has deformed. Or in the formulation of Marx's early writing on estrangement, it represents the fulfillment of man's species-life.[53]

If in the 1960s (mostly in America and some other parts of the developed world) there is a revival of ideas about, and in some places concrete attempts to, 'return to nature', from the 1990s and into the twenty-first century, it appears, it is no longer possible to imagine such a return. Instead the referent of the term 'nature' has become increasingly difficult to locate. In the texts which I discuss in the following chapters there is a definite sense that it is no longer possible to recognise what it would mean to live in metabolic interaction with nature. This is not only because climate changes resulting from human actions are materially transforming the experience of nature. The transformations of modernity more generally construct a way of life inextricably implicated in technological practices, landscapes rearranged by technology, freeways, complex networks, and uninhabitable spaces.

Yet nature remains a term which seems to contain some residue of utopian

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[52] Alfred Schmidt (1971) discusses Marx's use of the idea of metabolism to describe the relationship between men and nature in the The Concept of Nature in Marx. He quotes from Capital vol.1: 'He sets in motion arms and legs, head and hands, the natural forces of his body in order to appropriate the material of nature in a form suitable for his own needs. By thus acting through this motion on the nature which is outside him and changing it, he at the same time changes his own nature' (quoted in Schmidt 1971:78).

[53] Marx writes: 'For labour, life-activity, productive life itself, seems to man from the outset to be merely a means to satisfy a need, the need to maintain his physical existence. But productive life is species-life. It is life-generating life. The whole character of a species, its species character, lies in the form of its life activity, and free conscious activity is the species-character of man' (1994:75).

promise. It seems to offer a way of imagining the whole, of reintegrating the fragmented elements of modern life. Yet nature, like culture, to which it is frequently opposed, is a term of immense complexity and ambiguity. In some ways the setting up of this opposition between nature and culture masks the fact that the two terms are not commensurable. Culture, as a set of human practices which includes the classification and demarcation of the world always contains nature as one of its categories. From this point of view nature can never escape into pure materiality, and the ways in which it has been categorized means that for many theorists, it is too fundamentally implicated in the legitimation a variety of oppressive practices to be useful.[54]

Despite, or perhaps partly because of its history, for many people the term 'nature' does still indicate towards something which is outside, at once somatic and irreducibly material, the otherness of animals and the human body, and spiritual or at least meaningful in a way that escapes the meanings imposed on the world by commodity culture. Emily Dickinson writes 'Nature is a haunted house – but Art – a house that tries to be haunted.' [55]

In the late twentieth century it is the word itself which appears in some ways haunted, the ghost of something that has, in at least one of its senses, ended. It is also haunted in another way, by the history of its past usages, the ways in which has been defined and redefined. The next section of this chapter traces some of the ways in which nature came to mean something for modernity, its multiple hauntings.

NATURE AND MODERNITY

Contesting the Domain of Nature

If in the second half of the twentieth century traces of the human hand vanish to be replaced by indirect and almost imperceptible, yet damaging, traces of an industrial culture, this is only one part of a wider argument concerning nature and its place in modern culture. In this section I explore briefly some of the ways in which 'nature,' in the second half of the twentieth century, becomes an extremely visible and contested domain. I suggest that the history of the construction of nature as an object of science is particularly significant in structuring the ways in which it is possible to think about nature at the end of the twentieth and the beginning of the twenty-first century.

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[54] This is particularly true of feminist theorists, who have good reason to be wary of it. See discussions in Soper (1995: 119-148), Haraway (1991) & Plumwood (1993).

[55] In a letter to Colonel Higginson (Dickinson 1958: 24).

In contemporary global culture the concept of nature is at the centre of a number of philosophical and political debates. McKibben's discussion which finds in the disappearance of wild nature a compelling argument for a reorganization of society and a decentring of human desires forms part of the wider deep ecology movement. Deep ecology forms one strand of the environmental movement that emerged in America in the 1970s. Unlike the more utopian sixties, the environmental movement in the seventies approached nature as something whose integrity was already substantially undermined.[56]

Codified in the work of Arne Naess, deep ecology is a form of moral philosophy in so far as it prescribes a certain way of 'right living' and argues for an alternative system, based in nature, for the ascription of value.[57] In some ways similar to the early nineteenth Romantic critique of industrial society, it insists on the absolute value of nature and the degrading effect of human activity. Nature is secure as a source of value only in the complete absence of human traces.

Against those who posit nature as a source of absolute value, a number of poststructuralist theorists have framed the disappearance of 'nature' from a different perspective. From the point of view of theorists such as Donna Haraway, nature as independent arbiter of human actions has a long history of being drawn into the dubious role of legitimating particularly oppressive political and psychic regimes. From this point of view, the disappearance of nature, or the rethinking of nature as a purely social construction can be interpreted as a positive and liberatory move.[58]

The social constructivist challenge to the authority of nature has brought it into conflict also with another powerful discourse on nature, that of the natural sciences. In the 1990s, only five years after McKibben had pronounced the end of nature, the concept re-emerged at the centre of a conflict between cultural theorists and scientists, in the 'Science Wars' issue of the journal Social Text. The inclusion of the now infamous hoax paper by professor of physics at New York University, Alan Sokal, and the subsequent public scandal, indicate that questions about nature, and the authority of those who consider it their domain, remain contested.[59] Nature remains unquestionably present in discourse, in the debates around science, technology, human health, animals, culture, and politics even as the precise outlines of its referent become harder to trace.

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[56] Richard White, unpublished paper presented at the Environmental Politics Colloquium, Berkeley, 2003.

[57] In a critique of deep ecology written in 1985, however, Richard Sylvan suggests that 'Although deep ecology was in origin part of a value theory, and basically concerned with environmental values, it has also been presented as a metaphysics, as a consciousness movement (and as primarily psychological), and even as a sort of pantheistic religion' (1985:2). For a critical discussion of deep ecology see Plumwood (1993:165-189).

[58] Soper (1995) has outlined in detail the often antagonistic conversation between what she calls the social constructivist approach and the approach of various strands of the environmental movement on the question of nature.

One way of characterizing a form of postmodern condition would be to see it in terms of an alteration in the relation between nature and society, encompassing both the hypervisibilty of nature and its disappearance as solid ground, as reliable framework. Anthony Giddens suggests that the idea of the 'environment' as opposed to that of 'nature' signifies a substantial transition:

> The environment, which seems to be no more than an independent parameter of human existence, actually is its opposite: nature as thoroughly transfigured by human intervention. We begin to speak of the environment' only once nature, like tradition has become dissolved. (1994: 77)

Fredric Jameson also speaks of nature in these terms as something which is lost in the 'homogeneously modern condition'. He writes: 'Everything is now organized and planned; nature has been triumphantly blotted out, along with peasants, petit-bourgeois commerce, handicraft, feudal aristocracies and imperial bureaucracies' (Jameson 1991: 31).[60] His choice of words is interesting. Blotting out suggests not that such things are entirely absent but that they are radically altered, no longer distinguishable from what surrounds them. What is natural is no longer clearly defined and the class of people whose livelihood meant a practical engagement with nature are no longer visible, although subsistence and small scale farming persists in most parts of the developing world.

Handicraft too persists, but not as a significant challenge to mass produced items. Instead in a saturated market handcrafted objects offer a particular form of value. They stand as nostalgic markers of a different and earlier relationship with the world. Although the handcrafted object at the turn of the twenty-first century bears a resemblance to the everyday objects Morris transformed into art, it no longer expresses the same utopian promise. Either imported from the developing world as signs from 'premodern' cultures, or produced in marginal enclaves in industrialised societies which reconstruct earlier methods and technologies, it enters the world of exchange in a particular way, as a sign of itself. The handcrafted object represents the commodified form of the 'traces of the human hand and its immediate implements' that have been lost in a society of mass production. This extreme form of reification that encompasses all things which in an incompletely modernized world remained incommensurable, is, for Jameson, one of the defining characteristics of postmodernity. It suggests a particular relation between people and things, subjects and objects, defined exclusively by the place each occupies within a single global system. It implies a particular way of apprehending the world, one which has its origins in complex and systematic practices of exclusion through which the object was constituted in Western modernity.

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[59] Ziauddin Sardar (2000) provides a detailed and thoughtful discussion of the hoax and its implications.

[60] For an interesting discussion of Jameson see Paul Bové (1996) who writes that: 'Nature ...has disappeared entirely within postmodernism...[This] is a basic claim within Jameson's now classical theory' (1996: 382).

The Book of the World

Although the history of the transition to modernity has been characterized in many different ways, in most accounts developments in seventeenth and eighteenth century Europe are recognized to have significantly altered people's relationship with the world and with each other. The 'wild profusion of existing things' is reordered according to a new framework of logic and the relationship between viewer and object is fundamentally restructured by new ways of interacting with nature.[61] Michel Foucault argues that:

> Up to the end of the sixteenth century resemblance played a constructive role in the knowledge of Western culture. It was resemblance that largely guided exegesis and the interpretation of texts; it was resemblance that organized the play of symbols, made possible knowledge of things visible and invisible, and controlled the art of representing them. (1970: 17)

Some time during the seventeenth century, Foucault suggests, a shift occurred in the epistemological field, in the conditions of possibility governing the way in which knowledge could be constructed. [62] What emerges, he argues, in the fields of natural history, general grammar and the analysis of wealth is not simply an accumulation and refinement of earlier knowledge but the development of an entirely new framework for apprehending the world.

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[61] This quotation, from Foucault (1970:xv.) is quoted in full and discussed later in this chapter.

[62] Foucault writes: 'what I am trying to bring to light is the epistemological field, the *episteme* in which knowledge, envisaged apart from all criteria having reference to its rational value or to its objective forms, grounds its positivity and thereby manifests a history which is not that of its growing perfection, but rather that of its conditions of possibility' (1970: xxii).

What occurs when natural histories start to be written, (as opposed to histories), is a reduction of the information which is considered relevant to the description of an animal or plant. Foucault writes that:

> Until the time of Aldrovandi, History was the inextricable and complete unitary fabric of all that was visible of things and the signs that had been discovered or lodged in them: to write a history of a plant or an animal was as much a matter of describing its elements or organs as describing the resemblances that could be found in it, the virtues it was thought to possess, the legends and stories with which it had been involved, the medicaments that were concocted from its substance, the food it provided, what the ancients recorded of it, and what travelers might have said of it. The history of a living being was that being itself, within the whole semantic network that connected it to the world. (1970:129)

It is this semantic network, the language of the animal's being which, Foucault argues, is removed as natural histories begin to trace a new taxonomic order in which all plants and animals can be tabulated according to a specific set of observations. Aldrovandi, writer of a History of Serpents and Dragons, Foucault suggests, 'was neither a better not a worse observer than Buffon; he was neither more credulous than he, nor less attached to the faithfulness of the observing eye or the rationality of things. His observation was simply not linked in accordance with the same system or arrangement of the *episteme*' (1970:129). Aldrovandi's descriptive categories (which include epithets, allegories and mysteries, hieroglyphics, coinage alongside anatomy, diet etc.) appear strange and chaotic because modern thought follows the seventeenth century naturalist Buffon in being shaped by a system of organisation that demands the exclusion of fable, legend and the whole semantic network which links the animal or plant under consideration to everyday experience.

The Living Creature

A parallel development in the investigation of the physical world is articulated by Galileo in The Assayer, published in 1623. Galileo suggests the need for a reduction of what information about physical objects should be considered relevant to the study of 'material or corporeal substances':

> I say that whenever I conceive any material or corporeal substance, I immediately feel the need to think of it as bounded, as having this or that shape; as being large or small in relation to other things, and at some specific place at any given time, as being in motion or at rest; as touching or not touching some other body; and as being one in number or few or many. From these conditions I cannot separate such a substance by any stretch of my imagination. But that it must be white or red, bitter or sweet, noisy or silent, and of sweet or foul odor, my mind does not feel compelled to bring in as necessary accompaniments. Without the senses as our guides, reason or imagination unaided would probably never arrive at qualities like these. Hence I think that tastes, odors, colors, and so on are no more than mere names so far as the object in which we place them is concerned, and that they reside only in the consciousness. Hence if the living creature were removed, all these qualities would be wiped away and annihilated. (Galileo 1954: 719)

Galileo's statement attempts to define the specific nature of the relationship between viewer and object, dividing attributes which are essential to the material or corporeal substance from those which are 'mere names' which 'reside only in the consciousness'. Imagination and reason, as oppose to the senses, he suggests, require a certain set of observations, those involving the establishment of the object's dimensions in geometrical space. These, unlike those qualities associated with colour, taste and sound will persist even after the removal of the 'living creature'. The role of the observer is to record only those conditions which will persist even in his absence.

The living creature, capable of a sensual apprehension of the world, needs to be removed in order for the material world to be known. This represents a cosmological shift away from Aristotelian physics which is based on sense perception and which takes as its starting point precisely that which Galileo wishes to circumscribe, the human experience of the world.

Galileo's investigation of the movement of objects in space, (in particular the trajectory of canon balls), exemplifies this approach. The law of inertial motion developed by Galileo, is Alexander Koyré suggests, one of the most basic and fundamental laws of modern physics. It states that 'a body, left to itself, remains in its state of rest or of motion as long as it is not interfered with by some external force' (1943: 334). He goes on to point out that 'the Galilean concept of motion (as well as that of space) seems to us so 'natural' that we even believe to have derived it from experience and observation, though, obviously, nobody has ever encountered inertial motion for the simple reason that such a motion is utterly and absolutely impossible' (1943: 336). Galilean space is not the place of human experience. It is a space empty of air, and in outer space, where such conditions prevail, observable objects move in an orbital rather than rectilinear fashion.

If the book of nature previously 'bristles with written signs; every page ... seen to be filled with strange figures that intertwine and in some places repeat themselves' (Foucault 1970: 27), the new geometrical space requires a more abbreviated notation. Galileo establishes, not an empirical description of the world of nature, but a paradigm, an allegorical reading of it in which the master narrative is mathematics. Galileo's famous claim, 'that the book of nature is written in geometrical characters' introduces into the space of nature a new set of signs, ones which reduce the multiplicity of natural phenomena to abstract lines, points and intersecting vectors. The observer, either a point on the grid of space or absent entirely, plots the movement of material or corporeal bodies without reference to their impact on the world through which they move or with which they collide.

Hans Blumenberg, in his analysis of the development of Western modernity, The Legitimacy of the Modern Age (1983), suggests that the mathematization of the world emerges as a response to the recognition of the impossibility of a true or complete knowledge of the world. He writes:

> Counting, measuring and weighing are the specific instruments of human knowledge of nature precisely because in their efficiency they simultaneously make evident the inaccuracy by whose means the spirit becomes conscious of the heterogeneity, in relation to its objects, of the parameters it produces. Arithmetic and geometry leave an unrealized remainder in every application to real objects. The ideal construction and the real datum are not reducible to one another without a remainder; however the difference is not between pregiven ideality and given reality but rather between the pretentions of the knowing subject and the knowledge attainable by it at any given time. (1983: 357)

In this description of the operations of counting, weighing and measuring, Blumenberg is referring specifically to the work of Nicholas of Cusa in the fifteenth century.[63] In order to justify the 'inquisitive instinct', Nicholas of Cusa makes a distinction between knowledge and wisdom. Blumenberg writes: 'The inexhaustibility of the desire for knowledge in any stage of realization that it can ever arrive at is the reason why we can achieve something more than knowledge, namely wisdom, the knowledge of what knowledge still does not know' (1983:356). Wisdom becomes the ability to recognise the remainder.

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[63] Nicholas of Cusa (1410-1464) a German theologian, scholar, and statesma n wrote extensively on philosophy, theology, mathematics, and astronomy. The ideas are discussed here occur in On Learned Ignorance (1440). See discussion in Blumenberg (1983:355-360 & 469-585).

According to Blumenberg, the unrealized remainder does not result from the gap between a Platonic ideal and its inadequate realization in the world but rather enters the equation in relation to the knowing subject. Perfect knowledege of the world is presumed to be possible but always deferred. For Nicholas of Cusa this meant that in every object there was hidden 'the unattainable transcendence of its "precision" ' (1983:356). But Blumenberg's emphasis on the temporal nature of this relation, suggests that the unrealized remainder could also be understood as the recalcitrance of the object in history. In one sense this can be understood in Kuhnian terms, that at every historical moment what is known about a particular object carries a remainder – a space of invisibility which is that which cannot be included within the current scientific paradigm.

Yet it can also refer precisely to the historicity of the object, or in other words the ways in which any object is situated in history by its relation to the range of human meanings which attach it to a heterogenous array of other objects and subjects.

At the turn of the twenty-first century, science relies on a formulation which invokes that which is not known yet as the solution for current crises. What begins as a modest claim for the limits of knowledge in relation to the world , the ultimate unknowability of nature, is transformed into an immodest assumption in which the perfectibility of knowledge in the future comes to displace the role of wisdom, the acknowledgement and recognition of what is not known.

Measuring the World

In Dialectic of Enlightenment (2002 [1947]) Horkheimer and Adorno argue that the failure of the emancipatory promise of Enlightenment reason lies not in some exceptional external coincidence of historical factors but is instead intrinsic to the process itself. They do this by tracing the history of its formation, not simply as far back as the scientific revolution but even earlier to the emergence of the autonomous subject out of the chaos of the mythic configuration of the world. This subject, whom they interrogate through the figure of Odysseus, perceives himself to be free from the irrational demands of a mythic order. In fact Enlightenment reason sets itself up in opposition to this unreason of the mythic order. Yet, Horkheimer and Adorno argue, this reasoning remythologises the world at the same moment as it is claiming to liberate it. They write that:

> The Enlightenment dissolves away the injustice of the old inequality of unmediated mastery, but at the same time perpetuates it in universal mediation, by relating every existing thing to every other. It brings about the situation for which Kierkegaard praised the Protestant ethic and which, in the legend-cycle of Hercules, constitutes one of the primal images of mythical violence: it amputates the incommensurable. (2002: 8-9)

This amputation is linked to the emergence of a society governed by the principle of exchange in which every object must be fitted into the system, so that everything can find its value through its place in the network of relationships that make up the market. The abstraction inherent in the exchange principle, they suggest, leads to a particular kind of reasoning, one in which what is qualitatively different is forced into an identity using a quantitative method. They take particular issue with the way in which modern science, in pursuit of knowledge with technical utility, abandons any commitment to theoretical understanding. They argue that:

> The reduction of thought to a mathematical apparatus condemns the world to be its own measure. What appears as the triumph of subjectivity, the subjection of all things to logical formalism, is bought with the obedient subordination of reason to what is immediately at hand. To grasp existing things as such, not merely to grasp their abstract spatial-temporal relationship, but on the contrary, to think of them as surface, as mediated by conceptual moments which are only fulfilled by revealing their social, historical and human meaning – this whole aspiration of knowledge is abandoned. (2002:20)

What is absent from modern science, according to Adorno and Horkheimer, is the ability to recognise things in relation to 'their social, historical and human meaning.' The incompleteness of knowledge perpetually postpones the need for an integrated theory which would depend on a total understanding of nature. In the meantime, greater and greater specialization makes the possibility of such an integrated theory unimaginable.

In the 1950s, when Thomas Kuhn was writing his Copernican Revolution, it was still possible to assert the unity of science. Science acted, he argued, as the modern cosmology, a way of understanding the world, of making people feel at home. By the end of the twentieth century, this argument is difficult to sustain. Not only because each field of knowledge increasingly demands its own methodological approach and vocabulary but also because the effects of applied science on the surface of things themselves means that nature itself cannot act as that which stabilizes the whole.

Ambitious Words

In the preface to The Order of Things, Foucault describes the text that provoked his interest in the way in which things are culturally and conceptually ordered in such a way as to form a sense of what is natural. He writes that:

> This book first arose out of a passage in Borges, out of the laughter that shattered, as I read the passage, all the familiar landmarks of my thought – our thought, the thought that bears the stamp of our age and our geography – breaking up all the ordered surfaces and all the planes with which we are accustomed to tame the wild profusion of existing things, and continuing long afterwards to disturb and threaten with collapse our age-old distinction between the Same and Other. This passage quotes "a certain Chinese encyclopaedia" in which it is written that "animals are divided into: (a) belonging to the Emperor, (b) embalmed, (c) tame, (d) sucking pigs, (e) sirens, (f) fabulous, (g) stray dogs, (h) included in the present classification, (i) frenzied, (j) innumerable, (k) drawn with a fine camelhair brush, (l) et cetera, (m) having just broken the water pitcher, (n) that from a long way off look like flies. (1970: XV)

The encyclopedia Borges describes is intriguing because it marks the limits of our thought. The 'exotic charm' of this other 'system of thought' demonstrates what Foucault refers to as the 'stark impossibility of thinking that,' the impossibility of thinking within these categories. This way of categorizing animals traces the outline of a form of thought that is alien to Western thinking. It refuses certain basic tenets of classification. It allows into the space of classification both temporal (the animal 'having just broken the water pitcher') and spatial considerations (animals 'that from a long way off look like flies') and refuses to accept an even and stable relationship between viewer and object.

The encyclopaedia is drawn from Borges' essay on John Wilkins.[64] In this essay Borges discusses Wilkins attempt to construct, in around 1664, a universal language which would 'organize and contain all human thought' and in which each word would define itself. In order to do this he divided the universe into forty categories, which were then subdivided into differences, sub divisible into species.[65] Like the encyclopaedia that caught Foucault's attention, Wilkins' categories are organised according to unfamiliar and at times startling principles of identification. Borges goes on to explain his interest in these forms of classification:

> I have noted the arbitrariness of Wilkins, of the unknown (or apocryphal) Chinese encyclopedist, and of the Bibliographical Institute of Brussels; obviously there is no classification of the universe which is not arbitrary and conjectural. The reason for this is very simple: we don't know what the universe is. ...We must go even further; we must suspect that there is no universe in the organic, unifying sense inherent in that ambitious word. If there is, we must conjecture its purpose; we must conjecture the words, the definitions, the etymologies, the synonymies of God's secret dictionary. (1973: 104)

The term 'nature' is in some sense like 'the universe' – what Borges describes as an ambitious word. It suggests totality, the containment of the infinite within something finite and intelligible and implies the conceptual ability to encompass radical diversity. Nature comes to stand in for what cannot be achieved by knowledge; it holds together what threatens to diverge completely. Yet in other ways it differs from the universe since nature refers not only to an abstract totality. It also implies immediacy and singularity, and in its materiality enters into the very substance of everyday life.

Perhaps part of the appeal of the word, its power, is its ability to link apparently disparate elements, the external world, and the inner experience of being. It hints at an existing relationship between the world of things, of which it is the sum, and the subjective experience of those things. It is also able to imply something more. In discussing the complexities in Kant's use of the term, Adorno suggests that although on one level nature is the concern of pure reason, the apprehension of the empirical world, (not practical reason which is the realm of freedom), at another level, nature cannot be excluded from the moral dimension. In fact it sometimes appears as 'the absolute that holds sway in us all and is supposed to indicate to us what is good and evil. And these indications are themselves equated with the good because they have their origins in what characterizes mankind as such, namely his reason' (2001: 93-94). Nature becomes in some way the guarantor both of reason and of morality.

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[64] The essay, 'The Analytical Language of John Wilkins' is included in Other Inquisitions 1937-1952 (Borges 1964:101-105).

[65] In Wilkins' language each class was 'assigned a monosyllable of two letters; to each difference, a consonant; to each species, a vowel. For example, *de* means element; *deb*, the first element, fire; *deba*, a portion of the element of fire, a flame' (1973:102).

Conclusion

I have argued, following Foucault, that one of the formative aspects of modernity was the way in which, in the emerging language of scientific rationality, what might legitimately and authoritatively be said about nature was reduced. One of the significant elements of this process was the exclusion of language, both in terms of the narratives which bound natural objects to the social world, and in terms of the idea that natural elements were signs, that the world was a book which could be read. Instead nature was considered to be best represented through the system of mathematics. Nature was matter, and although it revealed itself to have complex interlocking systems, these systems were organic not linguistic. This was important because, as John Wilkins recognised, languages did not define themselves. Arbitrary, inefficient, ambiguous, and irreducibly social they could not provide an analytic tool which could accurately describe the world.

Yet in the period after the Second World War, language took on a new significance in representing nature within the realm of the natural sciences. This took a number of different forms. In the next chapter I will look at one aspect of this in the renewed interest in the language of animals, especially that of the anthropoid apes. Earlier studies of primates had regarded language as being one, or perhaps the defining characteristic of humanity, the one which separated it absolutely from all other animals. Animals, part of the natural world, shared with it a kind of silence, an exclusion from language. Animals, like other elements in the natural world conformed to a set of natural laws, and in understanding them it was useful to consider the analogy of the machine. In the period after the war, however, the resemblance between nature and machine no longer appeared convincing. In the light of theories of quantum mechanics, and of genetics, the idea that organic systems behaved in a way similar to those in mechanical systems was replaced by the idea that organic systems more closely resembled languages, with all the complexities and ambiguities implicit in linguistic systems. The analogy of the book returns although this time the book of nature, imagined as a multiplicity of codes is conceptualized as incomplete, as something which it might be possible to revise. Yet the justifications for these revisions, the ethics of reconstructing what was previously considered to be complete, remain difficult to ground.

The phenomenon that I am calling the end of nature thus includes a number of contradictory elements, both the domination of nature – its commodification within reserves, and its translation into the raw materials and by-products of industry, and its elevation as precisely the value that opposes such a system. If the history of nature as an object of science has promoted an increasing abstraction, an exclusion of everything that might connect it to a human history, at the end of the twentieth century this exclusion suddenly appears as a source of concern, a sudden recognition that this conceptual exclusion of the living creature, the human subject, might have disastrously literal consequences. The problem then becomes how to return the living creature to a relationship with the object, how to make it possible for human subjects to continue to live in a world thoroughly transformed into product. As a word, 'nature', in the second half of the twentieth century and the beginning of the twenty-first century seems to acquire both indefiniteness and intensity. In the chapters that follow I try to trace some of the ways in which 'nature' as animals, bodies, and essence (or human nature) operates variously as a hinge, a symptom, and a screen in this desire to find a new relationship with the object.

Chapter 3

The Language of Animals

> The relation of children to animals depends entirely on the fact that Utopia goes disguised in the creatures whom Marx even begrudged the surplus value they contributed as workers. In existing without any purpose recognizable to men, animals hold out, as if for expression, their own names, utterly impossible to exchange. This makes them so beloved of children, their contemplation so blissful. I am a rhinoceros, signifies the shape of rhinoceros. (Adorno 1978: 228)

In the previous chapter, I argued that the phenomenon I am calling the 'end of nature' encompasses a complex set of interrelated processes. In relation to external nature, it involves both the literal destruction of habitats, including human habitats, through the globalization of the 'side-effects' of industrial production, the commodification of reserves of 'untouched nature', and an inflation of the idea of nature as a sign of value. This attachment to nature as value, I suggest, represents a real discontent with the levels of estrangement, with the 'damaged life' of late capitalism, but also a misunderstanding of the way in which nature might still be able to indicate something outside of consumer culture.

In this chapter I am going to look at how similar processes are at work in people's relations with animals. Animals, increasingly marginalized from people's lives, at least in the developed world and in urban centres world wide, enter into consumer society as commodities, most obviously as meat, but also as elements within the production of knowledge, as objects of research, and as pets. At the same time, there is a corresponding inflation of the idea of animals as valuable, both intrinsically and as mediators between people and nature perceived to be lost or extinguished. In order to follow the threads of this argument through the vast and extremely complex field of the global cohabitation of people and animals, this chapter will focus predominantly on how these processes emerge in people's relations with two species, apes and dogs. I have chosen these two because they represent two opposite extremes, one wild and literally distant yet perceived to be biologically proximate, the other domestic, proximate yet biologically distant.

APPROXIMATE RELATIONS

Animals and Their Remainder

It is perhaps significant that the entry in Minima Moralia on animals quoted at the beginning of this chapter comes under the heading *Toy shop* and relates to the relationship between children and the 'damaged life' of capitalist social relations. The idea that children have a special connection with animals is not new. One way in which they have been linked is through the idea of a natural origin for human culture.[66] A central element of this chapter is an exhibition of paintings by chimpanzees held in 1957. This exhibition, organized by biologist and painter Desmond Morris, was result of his work with a chimpanzee at the London zoo and marks an interesting moment in the history of thinking about relations between between nature and culture. A quotation from the exhibition catalogue provides an interesting example of one way the connection between animals and children has been articulated. The exhibition catalogue, written by Morris, states that:

> The patterns [in chimpanzee paintings] give us an important new source of information to help us trace the origins of human art. Much useful knowledge has been gathered in recent years from the study of the work of children, the art of primitive people, the pictures of the mentally unstable or deficient, and the remnants of prehistoric cultures. We now have drawings and paintings by our closest relatives the chimpanzees as further guides. [67]

A particular relationship to time marks the narrative that makes possible this particular grouping of subjects – children, primitive people, prehistoric cultures, chimpanzees and the insane. All of them are, from Morris' point of view, outside of historical time, and contain a trace of that connection with nature which has been lost in modern society.[68] The story of human relations with animals in Western culture since the nineteenth century is inextricably linked to the pursuit of secular origin stories.[69] Such stories are about an imagined past, but they are also about a political present, about identifying the truth about human's own nature, their species-life, and imagining a future.

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[66] For a discussion of apes and the origins of the human species see Jones (1994:118-136).

[67] Morris, D. 'Paintings by Chimpanzees' Exhibition Catalogue, Tate Gallery Archives, London.

The connection between children and animals that Adorno points to is quite different. For him, both are subjects whose existence cannot be contained within the purposes of consumer society. It is not so much that children are like animals, connected to some more natural condition, but rather that children perceive in animals something that eludes the reduction of things to commodities. Animals confirm children's suspicion that everything cannot be reduced to a relation of equivalence.[70]

Adorno suggests that for children all work is perceived to be undertaken for the 'pleasure of doing' whereas under capitalism all work becomes flattened under the pressure of 'earning a living' which 'commandeers all those activities as mere means, reduces them to interchangeable, abstract labour -time' (1978: 227).[71] This, he argues, has a profound effect on perception:

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[68] In his later work, The Naked Ape, Morris revises this opinion suggesting that contemporary 'primitive' or tribal societies (as studied by anthropologists) cannot provide useful information about 'natural forms of human behaviour because they represent a failed branches of the human species, ones which have 'gone wrong.' (1968:10) The same is true of the insane, the subjects of psychoanalysis. It is interesting to note this shift. In 1957, what interests Morris is the possibility of accessing something outside the modern condition. In 1968 only apes are left confronting humans as mirrors of natural human behaviour. Because of the focus of this chapter on animals, a discussion of the fascinating and troubling concept of 'the primitive' and its place in modern art and theories about nature could not included. See the thoughtful interrogation of the concept in (Price 1989).

[69] This is predominantly as a result of Darwin's writing and the growing influence of evolutionary theory; but John Berger suggests that the idea of animals as mediators between people and their origins is even older. He writes: 'What were the secrets of animal's likeness with, and unlikeness from man? The secret whose existence man recognized as soon as he intercepted an animal's look. In one sense the whole of anthropology, concerned with the passage from nature to culture, is an answer to that question. But there is also a general answer. All the secrets were about animals as an *intercession* between man and his origins. Darwin's evolutionary theory, indelibly stamped as it is with the European 19th century, nevertheless belongs to a tradition, almost as old as man himself. (1980:4).

[70] For a fascinating comparable discussion of the relations between children and animals see Alphonso Lingis' essay 'Bestiality' (Lingis 2000). Lingis suggests that as children we learn to make our feelings intelligible through our contact with animals. For example, he writes: 'They [children] pick up feelings of smouldering wrath from the chained dog in the neighbor's yard and they try out those feeling by snarling when they are put under restraints or confined.(Lingis 2000: 6).

[71] In this he echoes Marx's early writing on estrangement: 'In estranging nature from man and man from himself, from his own active function, his life activity, estranged labour estranges the *species* from man; for him it turns his *species-life* into a means to his individual life. First its estranges species-life and individual life, and then it makes the latter in its abstract form into the aim of the former, likewise in its abstract and estranged form.' (1994: 75) Adorno's actual reference is to Capital, to Marx's note on the 'equivalent form'.

> The quality of things ceases to be their essence and becomes the accidental appearance of their value.' Their value, that which marks their place in the system of exchange, displaces their quality, which becomes mere appearance, an attachment to catch the eye and sell the product. He suggests that: 'disenchantment with the contemplated world is the sensorium's reaction to its objective role as a 'commodity world'. Only when purified of appropriation would things be colourful and useful at once: under universal compulsion the two cannot be reconciled. (1978: 227-8)[72]

Children, Adorno argues, perceive the 'contradiction between phenomenon and fungibility that the resigned adult no longer sees' (1978: 228). In other words, they recognize that the quality of things cannot be contained within their value as articles of exchange. [73] Play, Adorno suggests, is the way in which children refuse to observe the rules of commercial society. He writes: 'In his purposeless activity the child, by subterfuge, sides with use-value against exchange value. Just because he deprives the things with which he plays of their mediated usefulness, he seeks to rescue in them what is benign towards men and not what subserves the exchange relation that equally deforms men and things' (1978: 228).

Play permits the child to evade the demand that things are real and useful only in so far as they fulfill a particular social purpose. Adorno uses the example of a little truck which is moved around in imitation of the actual movement of vehicles yet remains outside any real economy, a sort of allegorical fragment of the real. He writes: 'The unreality of games gives notice that reality is not yet real. Unconsciously they[children] rehearse the right life' (1978: 228). The utopian promise of animals is precisely of this kind – a stubborn existence outside of mediated usefulness. This is not to deny that animals have been made useful, incorporated in innumerable different ways into the practices of advanced industrial society, as product or image or research object. It is simply to argue that what children find fascinating about animals is the fact that they cannot be reduced simply to this, assimilated entirely to the purposes of man.

The following section focuses on some of the various ways in which apes are

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[72] This reconciliation is precisely what characterizes William Morris' utopian society, the combination of the aesthetic and the useful in things produced outside of any system of exchange.

[73] It is noteworthy that this element in children can itself be drawn into the realm of advertising. In a recent Master card advertisement on South African television, a list of children's toys and prices is read out while a child is shown ignoring the toys and playing with the a cardboard box they came in. The final line '...watching her play with the box instead, priceless. Some things money can't buy, for everything else, there's Master card' shows the ability of advertising to attach itself to anything which might still be considered a sign of value.

drawn into the purposes of man in the second half of the twentieth century – the story of people's approximate relation with apes. I use the term 'approximate' both to suggest the nearness of this relation but also to draw attention to the inexactness that characterizes attempts to define this connection. This exhibition by of paintings by chimpanzees is important not so much because, as Morris hoped, it provides insight into the origins of human art, but rather because it indicates a particular desire – the desire to know something about animals beyond that which can be read on their bodies or in observed behaviour. The project, which created the structural conditions for certain apes in captivity to paint, indicates an interest in finding a point of intersection between the species-life of apes and that of people. The paintings, or perhaps even more so the exhibition of these paintings, momentarily position apes as subjects of expression. It represents an early articulation of what becomes one of the defining interests of twentieth century primatology – the speaking animal.

Imagined Relations

Animals as subjects of fiction speak long before they do as objects of science. Before looking more closely at the exhibition of ape art itself, I will look briefly at some of the ways in which speaking apes had already been imagined. Franz Kafka's short story 'A Report to an Academy,' first published in 1917, provides perhaps the most substantial address by an ape to the world of science and I will look at it in some detail. But Kafka's story was not the first attempt to explore the new possibilities opened up by the theory of evolution and the gradual acceptance of apes as human's nearest animal relatives. As early as the eighteenth century the resemblance between certain apes, such as the orang utang, and human suggested a close relationship. H.W. Janson notes that:

> Those who regarded the *orang-outang* as human received support from the *Systema Naturae* of Linnaeus (1736), which classified the creature as a species of man and assigned it the name of *Homo nocturnus* of *Homo silvestris.* Rousseau and Lord Monboddo went so far as to place man and the *orang-outang* within the same species, and the latter author even asserted that language was not 'natural to man', since the capacity for speech must be inherent in both varieties of the species, even though only man happened to develop it to the point of actual use. (1952: 337)

Works such as Thomas Love Peacock's Sir Melincourt published in 1817, interpret kinship in terms of apes' *capacity* for humanness, and stress the infinite possibilities for transformation provided by education.

Evolutionary theory shifted the meaning of the resemblance between humans and apes. In the Middle Ages monkeys as distorted or defective reflections of humans mirrored the limitations, follies and vanities of the human condition. They reflected a particular aspect of the animal in humans; not the nobility of lions or eagles but the mockery of imitation.[74] In pre-modern societies animals existed in close proximity to people, not only in terms of physical proximity but also figuratively, in metaphors, in the way in which the world was described, in the way in which experience was articulated. Foucault describes how descriptions of animals shifts in the eighteenth century. He writes that 'the whole of animal semantics has disappeared, like a dead and useless limb. The words which have been interwoven in the very being of the beast have been unraveled and removed: and the living being, in its anatomy, its form, its habits, its birth and death appears as though stripped naked' (1970: 129). This 'naked' animal, placed in juxtaposition to other similar or dissimilar animals, forms the basis of the taxonomic project of natural history. In this period, Foucault suggests, 'creatures present themselves, one beside another, their surfaces visible, grouped according to their common features, and thus already virtually analyzed, and bearers of nothing but their own individual names' (1970: 131).

This shift to the age of classification, in which language and history are separated out from the descriptions of animals is followed in the late eighteenth and early nineteenth century by another epistemological shift, one which reintroduces time into the static frame of the catalogue, but in a very different way. For Foucault, History, with a capital H, is the 'fundamental mode of being' of modernity, the form which makes possible the empirical study of organisms.

At the same time, biological time, or the time of the organism, emerges in the nineteenth century as a time beyond the domain of human history. The age of the earth, as posited by geologists such as Charles Lyell in the 1830s, the slow gradual changes which made possible Darwin's theory of adaption creates a space for animals, including now human animals, to occupy what is at once in time and unconnected with or outside

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[74] For a detailed discussion of the iconography of apes in the Middle Ages see Janson (1952:199-237).

of human history.[75] Evolutionary time places humans and animals in a temporal relation, the relation of descent. In the second half of the nineteenth century, after Darwin's The Origin of Species (1859) and the Descent of Man (1871), this relation appears startlingly immediate. From being on opposite sides of the mirror, apes shift with evolutionary theory to occupy a relation of contiguity.[76]

In Kafka's story the ape who narrates the story has reformulated himself in order to enter a human way of life, but the path which brought him to this transformation is not innocent. Captured on the Gold Coast of Africa, he recognizes that to gain any sort of freedom he has to turn himself into a human. He does this through an effort of will – overcoming with difficulty his revulsion at human behaviour – but the physical freedom he gains as a result of his transformation has certain costs as he explains in his report. Becoming human means the determined giving up of his origins and as he enters further and further into the human world, his memory of his past diminishes. Becoming human, the story suggests, is a process of forgetting. In one sense Kafka's story foreshadows the work of Freud's theory of repression in Civilization and its Discontents (1930). But here the animal life is lost with regret. Humanness is marked by the violence it does to other forms of life. They become, the narrative implies, literally unthinkable.

The narrator of Kafka's tale is captured in Africa. The history of the relation between apes and western culture is, as Donna Haraway suggests, deeply implicated in the historical positioning of Africa in the global culture which emerges in the twentieth century. (1989: 18) Africa is the home of many, although not all, of the apes and monkeys which become the objects of western science. In 'Report to the Academy' the narrator is not destined for the laboratory but he is nevertheless part of the commercial trade in apes. He is captured to be sold and his ultimate end as star of the variety stage is only accomplished through his act of transformation. The variety stage, as a space of performance and illusion, provides a space for the ambiguous, those who do not fit easily into the categories of the society they inhabit.

In response to the Academy's request that he give them an 'account of the life I formerly led as an ape' he explains that 'the opening in the distance...through which I once came myself, has grown so small that, even if my strength and my will power sufficed to get me back to it, I should have to scrape my very skin from my body to crawl through.' (1983: 250) Although the ape, known as Red Peter, frames this return as a movement through time, he describes it terms of an actual, physical process – one which would involve the scraping off of his skin. It is as if the life he led as an ape remains inside him but it can only be accessed through a process which physically removes his skin, an image suggestive of the process of dissection. His life history can only be read in his dissected body, after he has been transformed from a speaking subject into an object of scientific knowledge.

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[75] Sir Charles Lyell (1797-1875) was a British geologist whose notion of 'uniformitarianism' suggested that the gradual processes shaping the physical world today, such as erosion, were what had, in the past, formed the earth into the shape it is today.

[76] Turning Haeckle's classic statement of evolution around, phylogeny was seen to recapitulate ontogeny and so apes were seen as children who with the aid of education attain a similar mature humanness.

His first word, spoken in a moment of triumph as he overcomes his revulsion for schnapps and takes his first drink, decides him on the line he is to follow. This process of overcoming revulsion is significant not only because it represents a triumph over the body, a subordination of its physical resistance to his will, but also because it marks the moment when the ape ceases merely to imitate human gestures of drinking and enters into the substance of the activity people are engaged in. The ape enters the substance of being human through an act of subordinating the body. His conscious decision to be human divides the mind and the body, which must from this time onwards always be subjected to his will, controlled and directed according to the conventions of human behaviour.

Red Peter emphasizes the pragmatic nature of his decision to become human. In the interest of attaining freedom in human society (and for no other reason) he embarks on a project of learning. During this process, he explains, 'my ape nature fled out of me, head over heels and away, so that my first teacher was himself almost turned into an ape by it, had soon to give up teaching and was taken away to a mental hospital (1983: 258).

His current life, as star of the variety stage, is a life of comparative freedom. He has achieved what he set out to do. Yet he comments:

> When I come home late at night from banquets, from scientific receptions, from social gatherings, there sits waiting for me a half-trained little chimpanzee and I take comfort from her as apes do. By day I cannot bear to see her; for she has the insane look of the bewildered half-broken animal in her eye; no one else sees it, but I do, and I cannot bear it. (1983: 259)

Having acquired human language and a position in human society he recognizes a separation between himself and other apes. The young chimpanzee is an animal bewildered by the conditions of a human way of life. Her ape nature has not fled out of her, and like the teacher who almost acquired the ape nature by mistake she is marked by a kind of insanity. Red Peter himself maintains his sanity only at a cost:

> You have done me the honor of inviting me to give your Academy an account of the life I formerly led as an ape.
>
> I regret that I cannot comply with your request to the extent you desire. It is now five years since I was an ape, a short space of time, perhaps, according to the calendar, but an infinitely long time to gallop through at full speed, as I have done, more or less accompanied by excellent mentors, good advice, applause, and orchestral music, yet essentially alone, since all my escorters, to keep the image, kept well off the course (1983: 250)

Within the context of human language, animals are enigmatic even to themselves. In Kafka's story, the ape, by learning the language of the academy, loses his connection with his own species being, his ape nature. He thus cannot be what the academy wishes him to be, a true 'native informant', who can speak from the other side of the nature/culture divide, restoring not only people's lost connection with nature, but providing also crucial information about the primate family and the mysterious origin of man. For much of the early part of the century, language within the Western philosophical tradition was considered one of the defining characteristics of humanness.[77] The failure of apes to learn human language was taken to imply a cognitive inability to master the complex symbolic abstractions that the use of language implies. From this it was deduced that as the ability to learn language is inherently human, the deep structures of syntax are genetically coded into human DNA.[78] Yet the fascination with the language of animal remained, evident in the development of projects after the Second World War both in the area of teaching apes sign language and in studying apes' communications with each other in an attempt to understand animal modes of communication. In Kafka's story it is the 'Academy' which is the silent yet very present audience of the narrative. This silent presence is what defines the possibility of speech because despite the narrator's evident facility with speech, he cannot tell them what they want to hear. He cannot speak to them from the position of animalness.

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[77] Cf. Hegel describing animals lives as 'separate and cut off from one another, with no universality of consciousness present in them' (1967: 703) does much to sum up the dominant Western tradition from Aristotle to Wittgenstein.

[78] This is the basic contention of the theory of Generative Grammar elaborated initially by Noam Chomsky in his books Syntactic Structures (1957); and Aspects of the Theory of Syntax (1965).

The History of the Academy

In the early part of the twentieth century, the idea of apes becoming humans, of occupying an actual continuity with humans (of being able to follow the evolutionary path within a single life time) was replaced by the idea of apes as models of natural human behaviour. Apes were seen to be both like humans in so far as they shared a similar physiology and unlike them, since they had not been deformed by culture. The study of apes was a study of what was natural in humans. Biologist and philosopher of science, Donna Haraway in her comprehensive investigation of primatology in the twentieth century, Primate Visions (1989), describes one of the first major primate research facilities in the USA, the Yale laboratories which were established in 1924 under Robert Yerkes. [79] Yerkes states explicitly that the aim of the study of the psychobiology of chimpanzees is ultimately directed towards improving human adjustment to their environment. He asserts that 'on every hand, lack of such an adjustment is exhibited in physical and mental diseases...and the discontent or unhappiness which exists in a large proportion of men and women in every walk of life' (Quoted in Haraway 1989: 72). The failure of humans to adjust to the stresses of complex modern society was considered to be a result of an insufficient understanding of their own natural drives. Primate studies provided the information to guide social practices, to establish a project of human engineering which would assist people's satisfactory adjustment to their environment. Not only did this framework of understanding naturalize certain social forms, such as the family, which was understood to be a biological norm among primates, it also shifted the responsibility for adjustment onto the individual and the society. Society and individuals were criticized for resisting the natural patterns of hierarchy and the biological division of labour. In what Haraway refers to as the 'Age of Biology', nature, in the form of our next of kin in the evolutionary line of descent is regarded as the primary measure for human behaviour. But this appeal to 'nature' is unlike the earlier Romantic appeal to nature as a corrective to the alienating effects of industrial society and the deformation of social relations it imposed. For the Romantics, access to nature was immediate and personal. For Yerkes and other primatologists, nature was something only to be revealed through rigorous scientific inquiry. The laws or truths of nature emerged after a complex series of tests, observations and repeated experiments.

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[79] Robert Yerkes (1876-1956) taught psychology at Harvard University from 1902 to 1917 and at Yale University from 1924 to 1944.

In describing his research at one of the early European primate stations at Tenerife, Wolfgang Kohler comments on the importance of experimental design in defining the meaning of animals' responses. In summing up the results of an experiment with a chimpanzee, Sultan, he writes: "we have performed one experiment, which, for a beginning, contains conditions too complicated to teach us much, and, therefore, we see the necessity of beginning the next examination with elementary problems in which, if possible, *the animal's conduct can have one meaning only*" (1957 [1925]: 16, my italics). In the experiment, which involved a basket of fruit hanging on a rope from the ceiling of the cage which was loosely anchored to a tree stump, Sultan always managed to get the fruit but never performed what Kohler suggests would be the 'best solution', simply removing the loop that anchored the basket and letting it drop to the floor. Sultan's behaviour (which involved breaking the cord) could not be translated into evidence for the presence or absence of particular cognitive processes. The experimental design had not successfully excluded the complexity of the world. Scientific research demanded a particular relationship with the apes, one which limited the possible meanings of any action until the action and meaning could have a one-to-one correlation.[80]

Thus, although non-human primates were seen as guides to what was natural in and for humans, human intervention was considered necessary. Yerkes explains in 1941 that:

> It has always been a feature of our plan for the use of the chimpanzee as an experimental animal to shape it intelligently to specification instead of trying to preserve its natural characteristics. We believe it important to convert the animal into as nearly ideal a subject for biological research as is practicable. And with this intent has been associated the hope that eventual success might serve as an effective demonstration of the possibility of re-creating man himself in the image of a generally acceptable ideal... .(Quoted in Haraway 1989: 64)

Evolutionary theory implied an infinitely malleable subject. If a creature could adapt to its environment, it could be adapted by a conscious intervention. It could be altered so that it more closely approximated 'an ideal'. The shaping of chimpanzees modelled the possible shaping of humans. Even in field studies, human intervention was considered necessary. Patterns of hierarchy and dominance were tested through 'defect experiments', the removal, for instance, of the dominant male to study the effects of this alteration on the social structure of a group.

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[80] For fascinating discussion of Kohler and of the question of the place of animals in modern culture morre generally see Coetzee (1999).

Haraway notes a shift in the conceptual framework which supported primate studies in the West after the Second World War . The nature of the war, and the way in which science was implicated in the war, had a profound effect on the way scientific research was practiced after the war. On the one hand, the war promoted the development of a national body for funding scientific research in the US, and showed a general willingness on the part of the government to invest in research. This meant that money was available for diverse projects (Haraway1989: 120-121). At the same time the potentially catastrophic results of scientific research were becoming evident for the first time. In The Age of Extremes, Hobsbawm suggests that:

> The idea that science equals potential catastrophe essentially belongs to the second half of the century; in its first phase – the nightmare of nuclear war – to the era of superpower confrontation after the 1945; in its later and more universal phase, to the era of crisis that opened in the 1970s. (1994: 534)

As late as the 1930s, it was possible for Nobel Prize winner, Robert Millikan, to write confidently in defence of scientific research that: 'One may sleep in peace with the consciousness that the creator has put some foolproof elements into his handiwork, and that man is powerless to do any titanic damage' (Quoted in Hobsbawm 1994: 534). Despite local interferences, nature as a total system was perceived to greatly exceed the power of applied science. The impact of applied nuclear technology, and later in the 1970s, the recognition of the effects of CFCs and carbon dioxide on the structure of the atmosphere effectively destroyed this certainty. In different ways, postwar primatology responded to this recognition of nature not as an invulnerable certainty, but as part of the damaged life of postwar society.

Before the Second World War, the silence of animals made them ideal surrogates for humans in a number of different fields – medicine, sociology, psychology as well as evolutionary biology. They communicated only through the experimental frame constructed by the scientist or the observer. The information they provided was contained in their conduct, in their behaviour, in their responses to the problems set out for them or, in medical research, in the responses of their immune systems to the problems of infection by disease. After the Second World War, although apes continued to act as models for understanding human behaviour and human society, they were entered into a new set of relationships influenced by the ascendance of communication theory (Haraway 1989: 102).

The discourse of communication theory involved reading all processes as part of a complex system of information exchange. Haraway argues that:

> A technological relocation of the principles of semiotics has been important in the transition from physiological to cybernetic logics in many biologies, including the biology of social behaviour. In transition, the organism as living responder to the sign vehicle lost its privileged position. The more powerful analysis of sign systems, cybernetics, dispensed with the need for a biological organism, in the same way that ergonomics considered a human worker as a technical system component whose status as a living organism was interpreted in strict communications engineering terms. Organisms appear in both ergonomics and machine theories of communication. What has gone definitively is the *privileged* status attaching to life or consciousness. Organisms become biotic components, highly interesting, but not ontologically special, in cybernetic systems sciences. (1989: 103)

Within this new explanatory framework, apes became what Haraway refers to as 'natural-technical objects within a number of different intersecting systems. This was most obvious in the space programme where apes, literally linked up to computers, became components of the complex system of the shuttle. But it was also evident in the new fascination with the language of apes. A new research emphasis focused on studying apes in their natural environment and recording the system of gestures and vocalizations understood as part of a complex system of information exchange. In the work of researchers like Jane Goodall and Dian Fossey, apes, studied in their natural habitat, became not so much models for human society but intermediaries. [81] They promised to provide the connection with nature which had been lost in modern, industrialized culture.

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[81] American zoologist Dian Fossey (1932-1988) studied the mountain gorillas of Virunga mountains in East Central Africa.. Her experiences are described in Gorillas in the Mist (1983). English zoologist Jane Goodall (b.1934) worked with Chimpanzees in the Gombe Stream National Park. See The Chimpanzees of Gombe: Patterns of Behavior (Goodall 1986).

At the same time, progress was being made towards teaching apes human language. The failure of earlier attempts to teach apes language was attributed to their lack of cognitive capacity, but the success of the Gardners in teaching the ape, Washoe, American sign language suggested that the problem had been physiological and not related to the capacity for syntactical thinking.[82] With Washoe, Koko and others animals were for the first time entered into the system of language previously considered to be the exclusive domain of humans. Haraway suggests that:

> Teaching apes human language and learning from them how they communicate with their own kind were both efforts to open the border inherited from the separation of nature and culture. Surrogates, rehabilitants, language students, and adopted children: apes modeled a solution to a deep cultural activity sharpened by the real possibility in the late twentieth century of western people's destruction of the earth. (1992: 132)

The Gardner's work with Washoe began in 1966, almost fifty years after the publication of Kafka's story. Slightly more than ten years before Washoe began to express herself in human language however, Desmond Morris began his experiment into the ability of apes to engage in human acts of self- expression.

Exhibiting Ape Painting

Morris was not the first person to experiment with apes' ability to draw. As early as 1913, Nadjeta Kohts had begun a comparative study with a chimpanzee, Joni, who was brought up alongside her own child for three years so that their respective cognitive development could be observed and documented (Lenain 1997: 61-62). Part of this study involved studying Joni's ability with pencil and paper. However, it was only in the 1950s, largely due to the work of Morris that ape art became significant beyond isolated scientific experiments. Art historian, Thierry Lenain, suggests that:

> There is no doubt...that we would not be talking about the 'ape art period' if Desmond Morris had not synthesized all these various experiments in his work at the London Zoo. Not only did his work at the zoo with Congo, the chimpanzee, either launch or directly influence everything connected with ape art from the late 1950s onwards, but the acceptance of ape art in cultivated circles was also due to his efforts. He was also responsible for gaining international

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[82] See discussion of the Gardner's work with Washoe in Linden (.1976). On research into chimpanzees and language see also Paul Hirst and Penny Wooley (1982: esepcially 76-84).

> status for ape art - beyond the milieux of the laboratories and the avant-garde art enthusiasts – this time in a way which was far removed from the traditional idea of monkey as caricature of man. (1997: 76)

The exhibition organised by Morris in 1957 displayed the paintings both of Congo, the chimpanzee he was working with at the London Zoo and of Betsy, a Chimpanzee engaged in a similar project at the Baltimore Zoo. In the exhibition catalogue, Morris explains the significance of his research. He writes: 'Recent research has shown that some chimpanzees are surprisingly ready to avail themselves of an opportunity to paint. Furthermore, the paintings the produce contain interesting abstract patterns.'[83] Morris notes that these abstract patterns bore a distinct resemblance to contemporary modern painting, particularly to the gestural art of painters such as Jackson Pollock and suggests that this correspondence raises interesting questions about the existence of an originary or natural form of expression.

Although the paintings were presented as 'scientific artifact,' part of a serious investigation into the relationship between biology and culture, they were received as works of art. In the book he published elaborating the findings of his research, The Biology of Art (1962), Morris writes:

> The Institute for Contemporary Arts was bombarded with requests to put the Congo paintings on sale and, in a weak moment, it agreed to do so. A rather high price was placed on them, so that only a few would go, to the I.C.A's most insistent visitors. A few days later it was decided that this was a mistake and that the selling of pictures would start a trend that would lead away from the scientific value of the work. To our horror, we found that it was too late, for, in those few days, practically every Congo picture in the exhibition (twenty-four Congos were on show) had been sold. (1962: 27)

This public fascination with and desire to possess painting by Congo even at a 'rather high price' suggests that people attributed a value to these paintings which went beyond their value as 'scientific artifacts'. The paintings by Congo and Betsy, moved from one context to another, were transformed from the results of a 'scientific' experiment to cultural artifacts within the complex value system of modern art. The exhibition, taken up as a manifestation of surrealism, became less an rational exposition of a scientific principle than a fascinating example of a kind of 'pure psychic automatism,'pure

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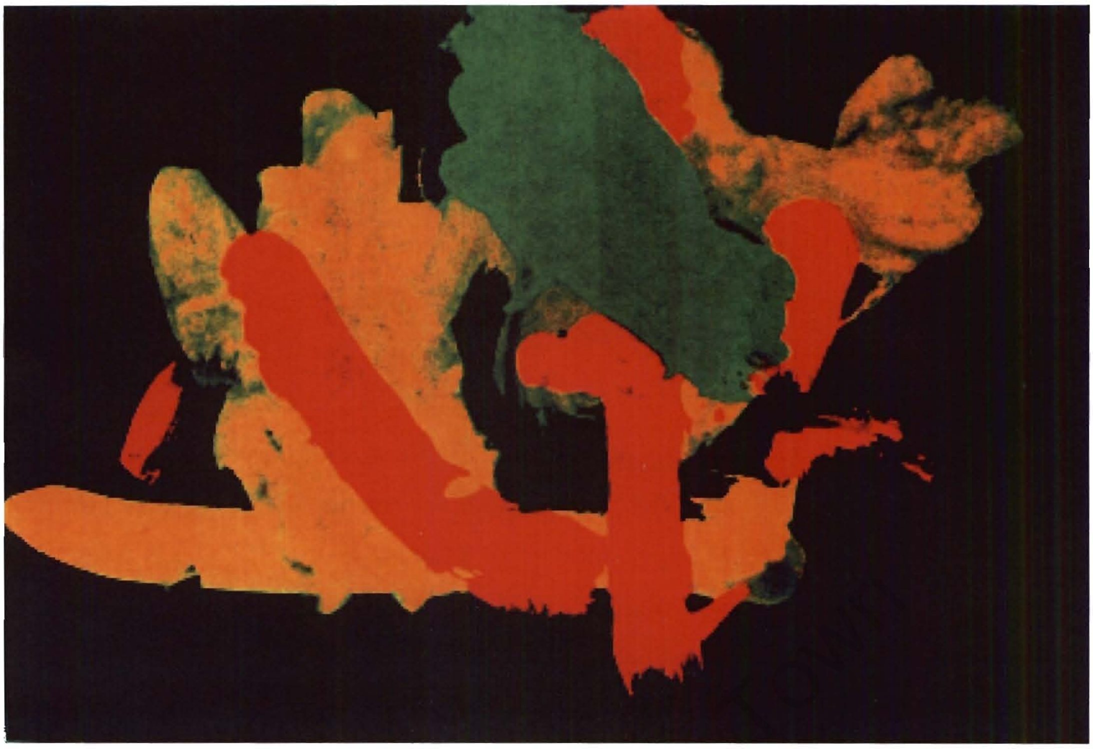
[83] Morris, D. 1957. 'Paintings by Chimpanzees' Exhibition Catalogue, Tate Gallery Archives, London.



Painting by Congo
From The Biology of Art Morris (1962)

expression without the deforming intervention of human reason.[84]

What is interesting about this confusion over the status of the paintings is that it suggests a moment of openness in which the ambiguities and contradictions inherent in the relationship between man and animal came temporarily to the surface. For a moment these concrete objects, 24 paintings by Congo, coexisted in two contradictory systems of value, as aesthetic commodities and as scientific artifacts, both objects of exchange and objects of knowledge.

If the contradictoriness of this position is not immediately apparent, this is because at the turn of the twenty-first century this opposition no longer exists. Science, in the era of biotechnology, no longer regards commerce as a contamination. In 1957, scientific knowledge still insisted upon its independence from commerce, its 'seriousness' as compared to the triviality of exchange. The Gallery and Morris's acknowledgment of that a 'mistake' has been made, indicates a recognition of the power of the market to reduce all objects even aesthetic ones to commodities and consequently to reduce their potential meaning to that which can be subsumed within the principle of exchange. As paintings, the fact of their singular mode of production is lost and they become no more than a surrealist sleight of hand.

Morris' attempts to interpret Congo's paintings, seeing in their similarity to modern styles of abstract painting the suggestion that there is a biological origin to art. Modern art he suggest, becomes more and more abstract as it loses it function as communication or rather as this function is taken over by photography. Abstract art becomes then 'pure aesthetic experiment' and in this way comes to resemble the painting of primates. However the abstractness of the categories that Morris is able to come up with suggests that Congo's painting represent a problem for interpretation which cannot be solved through relying on their superficial resemblances to modern abstract art. After mentioning the six basic principles of artistic self-expression, 'self-rewarding activation', 'compositional control', 'calligraphic differentiation', 'thematic variation', 'optimum heterogeneity' and 'universal imagery' he comments that: 'Any rules that are basic enough to apply to several related species, rather than to one species or (as is more often the case in art theory) to more than one epoch of one species, must indeed be fundamental to the activity concerned' (1962: 168). The ambiguity however lies in what precisely the 'activity concerned' is. In order to establish these categories, Morris too, has to elide one very significant aspect of their production: the fact that at no point do the paintings exist for Congo as product. It is up to the human facilitator both to provide Congo with paint, one colour at a time, and to remove the painting at a certain point before the painting is discarded and destroyed. The paintings are not abstract in the same sense as modern art is abstract because they are not a deviation from a previously representational form of articulation. What Congo is doing when he accepts the paint brush and marks the page remains enigmatic.

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[84] In the Surrealist Manifesto, André Breton define surrealism as follows: ' Pure psychic automatism, by which it is intended to express, whether verbally or in writing, or in any other way, the real processes of thought. Thought's dictation, free from any control by the reason, independent of any esthetic or moral preoccupation' (quoted in Read 1978: 132). In an interview, Salvador Dali claimed authoritatively to have paintings by sea urchins: 'I now have paintings by sea urchins. I shall soon be showing some of their work in New York. By nature they are all artists. Only some Chimpanzees can paint, but *all* sea urchins can. they paint with their tube feet and their art is genuinely informal. The hand of the chimpanzee is quasi-human – the hand of Jackson Pollock is almost animal' (1961: 84).

Congo, like Kafka's ape is asked to express his biological or originary self for the academy. The paintings which are the result of this request hold a peculiar fascination. They promise to express not only Congo's own self, but a clue to what might be originary and natural in humans. Of course, unlike Red Peter, Congo is not aware of the request concealed in the offer of paint and brushes.

INTERMEDIATE FORMS

The Form of Canine Lives

> We do not say that *possibly* a dog talks to itself. Is that because we are so minutely acquainted with its soul? (Wittgenstein 1958: 113)

In evolutionary biology, the phrase 'intermediate form' refers to those creatures which provide evidence of the transition between species. [85] The sense in which I am using it here is slightly different. In Philosophical Investigations Wittgenstein proposes a fundamental incommensurability between the form of life of humans and that of animals. He writes: 'If a lion could talk, we could not understand him' (1958: 223). Language, he suggests, does not signify independently of the practical activity of living. This is made clear by the preceding note:

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[85] In evolutionary biology, intermediate or transitional forms found in the fossil record , like the Archaeopteryx, appear to have a combination of the characteristics of living species suggesting the existence of a common ancestor .

> We also say of some people that they are completely transparent to us. It is, however, important as regards this observation that one human being can be a complete enigma to another. We learn this when we come into a strange country with entirely strange traditions; and, what is more, even given a mastery of the country's language. We do not understand the people. (And not because of not knowing what they are saying to themselves.) We cannot find our feet with them. (1958: 223)

I suggest that dogs, though animals, do not fall into the same category as lions. This is because they share at least partially, by virtue of proximity, the form of life that humans inhabit. Dogs are intermediate forms thus not by virtue of their anatomy but because of their form of life which is between, from the point of view of people, the incomprehensibility of wild dog life and the potential understandability of human life. This is not necessarily a distinction that Wittgenstein would agree with. However that dogs are more implicated in human forms of life is clear from the fact that they appear far more frequently in the Philosophical Investigation than lions. Dogs are troubling markers on the edge of human meaning. The questions he poses around dogs have to do with the question of how they enter human language games and where. Dogs appear as those who cannot be said to simulate pain or anticipate events in the future. Yet their place place within human forms of life means that they share at least some of elements of the subjectivity of that form of life. He writes:

> One can imagine an animal angry, frightened, unhappy, happy, startled. But hopeful? And why not? A dog believes his master is at the door. But can he also believe that his master will come the day after tomorrow? – And *what* can he not do here? – How do I do it? – How am I supposed to answer this? Can only those hope who can talk?' (1958: 174)

The commonality of a shared life is not sufficient to make dogs entirely comprehensible. Language, for Wittgenstein, is a mode of engagement with the world from which dogs are excluded and this absence of language has certain implications - a dog cannot be divided from its own immediate thoughts and intentions. Yet despite this exclusion from language dogs exists in relation to humans; they expect something from humans in a way which most other animals do not.

Commodified Forms

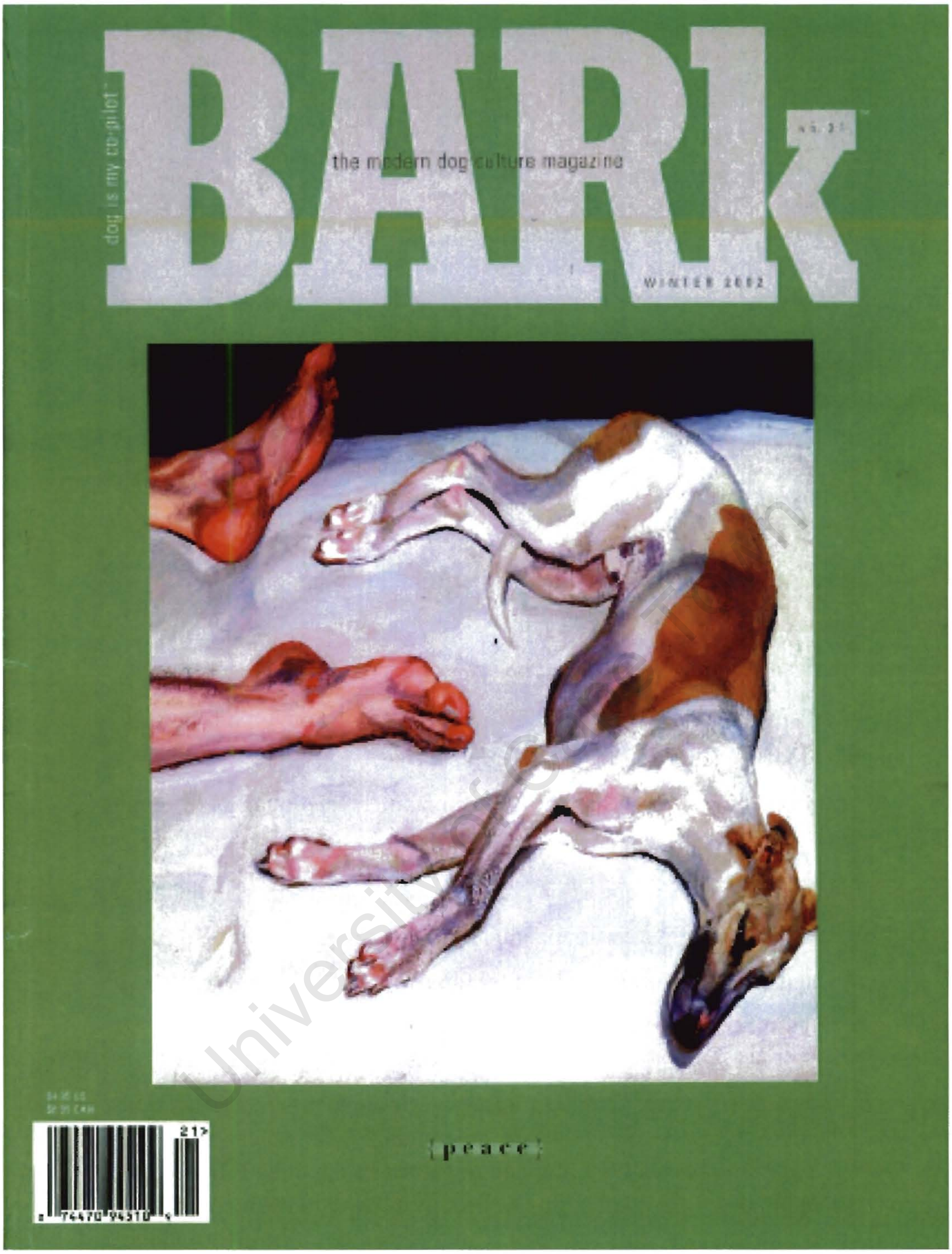
The physical marginalisation of animals from the work of living has resulted in their absence from everyday experience of most people in the developed world and in most urban centres in the developing world. The modern city is not a space designed to accommodate species other than humans. Although some other species thrive there, like rats, pigeons, cockroaches they do so without overt engagement in the lives of the people they cohabit with. They do not, on the whole, acknowledge people or expect to be acknowledged. Pets are the obvious exception to this trend towards the marginalization of animals. Dogs and cats multiply even in densely populated city environments.

The keeping of pets represents for John Berger an extremely reduced form of the relationship that once existed between humans and animals in pre-industrial societies where animals lives and human lives were bound by necessity. He writes:

> The practice of keeping animals regardless of their usefulness, the keeping, exactly, of *pets*... is a modern innovation, and, on the social scale on which it exists today, is unique. It is part of that universal but personal withdrawal into the private small family, decorated or furnished with mementoes from the outside world, which is such a distinguishing feature of consumer societies. (1980: 12)

Pets, Berger suggests, enter the household as 'mementoes' of the outside world. They are signs of something outside, of a different form of life to that permitted by a consumer society but at the same time their lives are entirely circumscribed by the limits imposed on them by their owner's implication in just such a society. Isolated, frequently sexually sterilized, limited in their movements and exercise, fed with artificial foods, they become, Berger argues, entirely 'creatures of their owner's way of life' (1980:12). This loss of autonomy means that they enter into a particular type of relationship with their owners. Berger writes:

> The pet offers its owner a mirror to a part that is otherwise never reflected. But, since in this relationship the autonomy of both parties has been lost (the owner has become the-special-man-he -is-only-to-his-pet, and the animal has become dependent on its owner for every physical need), the parallelism of their separate lives has been destroyed. (1980:13)


BARk
dog is my co-pilot
the modern dog culture magazine
WINTER 2002
peace

Modern Dog Culture
Front Cover of Bark

Kate Soper is equally critical of the practice of pet keeping and suggests that pets serve as screens onto which people project their own thoughts and desires. She writes:

> ...it is as if we use our pets in part to mitigate the inevitable elements of alienation that attach to a genuinely inter-subjective engagement. They allow us, as it were, to escape the strains and responsibilities of dealing with the other's autonomy. By transferring onto our pets a personality that we know in a sense to be a product of our own fantasy, we allow ourselves a privilege we cannot in our human personal relations: to feel confident that we are fully loved by a subject even as we gratify the urge for total – and necessarily objectifying – possession of the other. (1995:84)

One of the reason pets are ideally suited to perform this function is, Soper suggests, their lack of speech. Because they do not answer back, they are subjects who can recognize us without in any way threatening our subjectivity. 'For to the pet,' she writes, 'we can impute whatever understanding of ourselves we intend to convey' (1995:85).

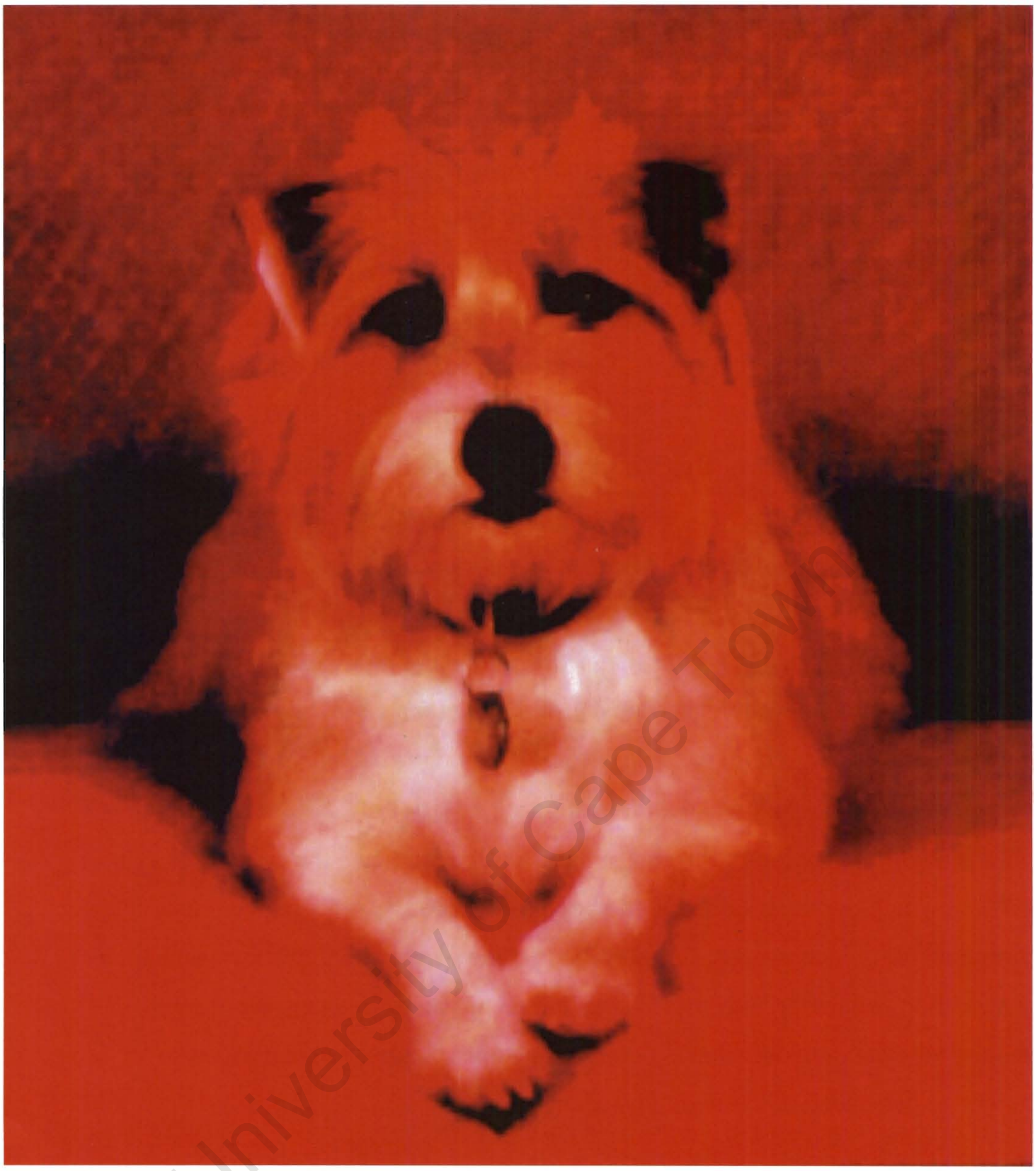
Haraway's latest manifesto challenges this interpretation of pet keeping. In a surprising move, one which seems to me fundamentally implicated in the phenomenon I am calling the end of nature, Haraway suggests that, in the early twenty-first century, the figure of the companion species might prove to be a more useful figure than that of the cyborg for generating 'liveable politics and ontologies in current life worlds'. She writes:

> I appropriated cyborgs to do feminist work in Reagan's Star Wars times of the mid-1980s. By the end of the millennium, cyborgs could no longer do the work of a proper herding dog to gather up the threads needed for critical inquiry. So I go happily to the dogs to explore the birth of the kennel to help craft tools for science studies and feminist theory in the present time, when secondary Bushes threaten to replace the old growth of more liveable naturecultures in the carbon budget politics of all water-based life on earth. (2003: 4-5)

Haraway does not seek to deny that practices of pet keeping are frequently profoundly commodifying. The idea, common in the United States (and other developed nations) that 'unconditional love' is what defines relations between dogs and people, is, she suggests, particularly dangerous since it implies precisely the sort of total subjugation that Soper describes. But she suggests that the idea of a 'companion species' provides an interesting way of understanding the complex and contradictory ways in which the lives of humans and animals intersect in modern North America. Her investigation is into something new which is emerging although many of its aspects, such as the development of breeds, have long histories. The California-based magazine Bark describes itself as a magazine of 'Modern Dog Culture' and this, perhaps, best describes the subject of Haraway's text – the network of institutionalized and individual practices and histories that link human and dog lives. Although she admits that many of them are commodifying and unreflective she also insists on a space for the autonomy of dogs and argues that reflecting on the mode of people's engagement with dogs could provide a useful model for re-imagining people's place in the complex ecology of the twenty-first century. Both Haraway's Companion Species Manifesto and the magazine Bark provide evidence of the phenomenon I am calling 'the end of nature.' They indicate the contradictory ways in which dogs are valued at the beginning of the twenty-first century. Simultaneously increasingly commodified in the world of breed shows and at the centre of an expanding industry of dog-related products, dogs also conversely acquire value as signs of what is outside consumer culture, as creatures who cannot be persuaded of the logic of exchange.

Autonomous Dogs

Dogs, at the turn of the twenty-first century are in evolutionary terms, the second most successful predator on the planet, second only to humans themselves. To say they are successful in evolutionary terms mean that they are numerous, that they at least, among animals, are in no danger of becoming extinct. It does not describe their quality of life, or their political standing, or the success of individual dogs in specific situations against other predators, like lions or baboons or humans. The demographic success of dogs has to do with their powers of adapation, their ability to exist as cohabiters with the most



Canine Portrait
Artist: Barrie Barnett
William Secord Gallery Pamphlet

successful predator, to make themselves necessary, if not always useful. Even in modern cities, like New York, whose spaces are not designed to accommodate dogs, dogs persist. The William Secord Gallery, just off Madison Street, specializes in dog paintings, particularly from the nineteenth century. Their pamphlet also lists another attraction of the gallery. It explains that:

> While initially known for its antique paintings, the gallery has branched out to the contemporary market. "Up until recently," William Secord states, "it was almost impossible to find an artist who was capable of capturing on canvas the true nature of our pets." This is no longer the case, for the gallery now represents the work of three living artists who are modern masters of the genre: Barrie Barnett, Christine Merrill and Joseph H. Sulkowski. Examples of these artists' work are always available at the gallery and commissions may be arranged.

The Gallery opened in 1990, describes itself as 'the only gallery of its kind in North America.' Its project and very existence is inextricably linked to the phenomena I am calling the end of nature. This is not because the idea of the animal portrait is new; it is an established part of the sentimental tradition of nineteenth century art. But in the age of photography, the portrait itself is something which holds an awkward place in modern culture. What separates the portrait from a photograph, the canine portrait from the snapshot of a dog? This brings me back to something I mentioned right at the beginning of the thesis in relation to the constellation, the difference between the photographic image and the likeness. A signature or sign of the end of nature is a desire for authenticity, for 'capturing the true nature' rather than making do with mere image. The canine portrait represents, as Adorno might put it, the sedimentation of a contradiction so that what begins as a desire for an escape from the limits of the image, finds itself bound not only by a tradition in painting (and part of this desire is linked to the authenticity of the past against the semblance of the present) but also by its place in the market, so that the portrait does in fact capture the 'true nature of our pets,' their nature as commodities. In the works of the painters mentioned above, the dogs are represented with a more than photographic clarity. Posed, still, displayed for the gaze against carefully selected backgrounds, the dogs all look toward the viewer and the painter, in a gesture of acknowledgment and recognition.

Another painting of a dog, one which might appear out of place in the Secord

Gallery, takes me from these commodified dogs to the autonomous dogs that make their appearance in Russell Hoban's dystopian novel Riddley Walker ten years before the Secord Gallery opened its doors. I am using the term 'autonomous dog' to describe a dog, literal or figural, which achieves a certain level of independence from the administered life, one which retains it power to disturb through its connection with whatever is outside commodity culture. The painting is one by English painter Francis Bacon, and the representation is of a dog running down a road toward the viewer. The front part of the dog which forms the foreground of the painting is blurred and only the hindquarters and a section of the road behind the dog is in focus. Study for a Running Dog (1953)[86] is in shades of gray and black and the dark urban landscape unlike the ordered domestic interiors or idyllic pastoral scenes of the canine portraits suggests a different aspect of the dog in contemporary culture. There are several reasons why it forms a fitting likeness for Hoban's dogs.

One of these has to do with the landscape. The typically Baconian dark and indistinct, haunted urban landscape matches in some ways the post-apocalytic landscape of Hoban's novel. Bacon's sketches of dogs date from his experiences of walking through London during the Blitz. These lone dogs in the bombed city, liberated by the violence of war from their role as pets, are the forerunners of Hoban's dog packs who roam the landscape around Canterbury after the nuclear holocaust.

Hoban's novel tells the story of Riddley Walker, an inhabitant of a land which has been devastated by a nuclear explosion. Although the blast happened in the remote past it, it continues to shapes the lives of the inhabitants. This is not only because the landscape itself still bears the mark of the explosion, although the dead towns reduced to rubble and the sour, barren land indicate that its effects continue to dominate the physical environment. But what dominates the inhabitants most completely is a kind of bafflement about the past, an obsessive and contradictory desire to gain knowledge about life before the explosion from the few remnants that remain and to understand and regain the technology that made both that life and the destruction possible.

Dogs enter the narrative of Hoban's novel in a number of different forms, both as material creatures and as contradictory figures in a number of different myths and urban legends. The wild dog packs literally constrain human movement, forcing people to

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[86] Francis Bacon Study for a Running Dog (1953) National Gallery, Washington, D.C.

travel always with 'road crowd' to prevent them from getting 'dog et.'[87] Though at one point Riddley Walker mentions that he sometimes thinks dogs are ready to 'come frendy,' at the beginning of the novel this has never happened, nor has Riddley 'never heard of no 1 tame a pup' (1980: 20). There are also dogs who figure in myth – in the official Eusa story (the 'blip' or symbolic dogs 'Folleree' and 'Folleroo'), in the more informal stories Lorna Elswint tells Riddley such as 'Why the Dog Wont Show Its Eyes'; in communal rumours or superstitions (the existence of 'dog peopl' who are half-human and half-dog) and in children's rhymes ('Gennl men wil do it front to back/When they do it with the ladys of the Ful Moon pack' (1980: 16).

In the novel, the dogs form an alliance with Riddley Walker and appear to be trying to guide him towards some end. For a significant part of the novel he travels with a pack guided by the 'black leader' first to an encounter with one of the Eusa folk, the Ardship of Cambry, then on through a series of encounters till they finally take him to Cambry, the site of the nuclear explosion. The Eusa folk, the descendants of those who suffered genetic mutation as a result of radiation are kept segregated so that their bodies will act as a kind of material link with the past. I will return to them at the end of this chapter as their 'crookit' bodies provide an interesting negative image against which my discussion of the muscular human body in the following chapter might be read.

In an article published in 1986, Jack Branscomb suggests the following significance for dogs in Riddley Walker:

> This separation of the young man from his society marks the first stage of the Jungian process of individuation, by which he develops a personality of his own. He [Riddley Walker] is taken up by representatives of Nature - one of the packs of wild dogs that live in the burnt out cities of "Inland" (England). The dogs, formerly the friends and servants of man, but now vicious and uncannily intelligent, represent Nature alienated and ravaged by man's exploitation of knowledge for power. (1986: 34)

Although the dogs are certainly autonomous and ready to attack humans when necessary, I would argue that they appear not so much as vicious representatives of alienated Nature, as beings with an alternative culture. The dogs on occasion observe a ritual around death as when the old leader, having chosen to die, walks onto Riddley Walker's spear observed by the rest of the pack. After being adopted by the pack,

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[87] Hoban tells the story in a new language that resembles but does not exactly match English. To be 'dog et' is to be eaten by dogs.

Riddley Walker notes that the dogs' behaviour is strategic and tactical.

The dogs in the novel appear to have some purpose, some understanding of the situation that has eluded the human communities. In the story 'Why dog wont show his eyes' dogs are described as having '1st knowing', the kind of knowing that came before the 'clevverness' (which humans get from looking into the eyes of goats) related to counting and measuring. It is this 'clevverness' which made possible technology and ultimately the bomb itself, the '1 big 1' which destroyed both the '1st knowing' and the 'clevverness'. One interesting aspect of the fable is the way it represents the relationship between dog and human in terms of a shifting movement between inside and outside. Initially man and woman are at the fire looking into the night and feeling afraid. The dog is in the night looking at them. When they offer it meat, it 'brung its eyes in out of the nite then they all lookit at the nite to gether...Dint have no mor fear in the nite they put ther self right day and nite that wer the good time' (1980:17-18). But after people have acquired clevverness, they stop roaming and become aware of property and the need to guard property and to put up fences. Night becomes merely darkness in which property might be taken and the Power Ring is built to create permanent day. After the explosion, it is dark for a long time and starving man and woman and dog look only for an opportunity to eat one another. Eventually day and night are restored but man and woman remain afraid of the night, without first knowing and the dog won't show its eyes: 'Come Ful of the Moon the sadness gets too much the dog goes mad. It follers on man and womans track and arga warga if it catches them' (1980:19).

In this strange allegory of modernization and its self-destruction, dog plays the role of intermediary permitting man and woman access to what is described as the 'shape of nite,' a kind of intuitive understanding of the world. The interaction between people and dogs enabled people to live in the world without fear of what is outside. In the devastated post-nuclear environment, without technology or intuition, people live in a profound state of dislocation.

Branscomb suggests that one characteristic aspect of Russell Hoban's fiction is a quest for wholeness articulated through a complex and allusive system of temporal and spatial patterning often based on an actual or imaginary visual image (1986:30). In each the protagonist moves though the spatial and temporal domains attempting to find in the lines of the image an intersection between landscape and history. Hoban's interest in images and patterns, Branscomb asserts, is 'psychological'. He writes: 'His protagonists come to recognize that they are fragmented or incomplete. They launch themselves or are thrust into searches for wholeness which turn out to be circular, leading them into the past before allowing them to escape into the present' (1986: 30).

Yet what this reading misses is that the sense of fragmentation and incompleteness is less in the protagonists themselves, than a condition of the damaged life that the narrative as a whole reflects. Although Riddley Walker does seem to achieve some sort of personal resolution at the end of the novel, it is of an extremely limited nature. His decision to travel and to formulate stories around the found figures of Punch and Pooty rather than repeating the official Eusa story seems less an escape into the present – the symbolic closure of a pattern – than a further meandering elaboration, a response, perhaps, to the recognition that wholeness is no longer possible. The dog pack accompanies him ('So we got our selfs ready and off we gone with our fit up and our figgers and our dog crowd.' (1986:200)) but it no longer appears to be urging him towards a particular purpose. In fact the purpose of the dogs in the novel never becomes clear and the question, what do dogs want, or even, what do these particular dogs want, is never clearly answered.

Instead what emerges is a kind of blurring that matches the blurred image in Bacon's painting. In the painting the actual confrontation between dog and viewer remains indistinct and opaque and it is only the hind quarters of the dog and the street beyond that come into focus. This blurring is matched in Hoban's novel by the language of the narrative itself which is recognizably English, but an English blurred by the subtle alteration of vocabulary and syntax, the standard written form invaded and transformed by the sound of the spoken form, by fragments of technological jargon and a wearing away of certain letters and structures (Maynor & Patterson 1984: 18-24). The experience of reading is one of having to follow the sound not the look of the words, to trust the ears rather than the eyes. This indistinctness is also present in the narrative itself which repeatedly offers texts and the interpretation of those texts which only partially match our own understanding, words and images which are familiar yet cannot be exactly deciphered.

Imagined Endings

Although in material terms, the kind of ending described by Hoban is very different from that imagined by McKibben ten years later, a response to a different political and historical configuration, it contains many of the elements which I have identified as part of the phenomena of the end of Nature. Hoban's novel is a response to the Cold War and the threat of nuclear holocaust, McKibben's work focusses on the hyper exuberant consumerism of late capitalism and the futures they imagine are in some ways very different. Yet despite the difference between the apocalyptic destruction of nuclear explosion on the one hand and a more insidious and unpredictable climate-based transformation on the other, both articulate related anxieties about human behaviour and its consequences in terms of a relation with nature which is broken.

If in McKibben's discursive writing this loss is articulated in reasoned metaphysical terms and in Hoban's novel it is registered as material and psychical loss, both express an existential concern about the loss of meaning – the impossibility and pain of being without nature. In Hoban's novel, of course, it is not only a matter of being without nature, but being without history, without either tradition or Enlightenment, either the ritual of established practices or the authority of scientific knowledge. It is almost as if in the absence of history and nature, only limited new cultural traditions can be established. As Riddley Walker notes in his conversation with Goodparley: 'Dyou mean to tel me them befor us by the time they done 1997 years they had boats in the air and all them things and here we are weve done 2347 years and mor and stil slogging in the mud?' (1980:120) Pursuit of the knowledge of the past is an almost desperate obsession, both in the strange contradictory fear-tinged desire to access knowledge of the power which caused the devastation, the '1 big 1,' and in a desire for dimly apprehended technology such as 'picter in the wind.' There is a continuous process of searching through the debris of the past to find answers, but the artifacts and even the words found, in the absence of historical continuity, can only ever be misread. The St Eustace legend, the atom, the U.S.A., are all bound together into one story which tries to explain the past without either concrete evidence, texts or oral tradition to anchor it.

The world Hoban's characters live in is rural, communal and focused on the material practices of living but it is a very far cry from William Morris's idyllic pastoral vision a century earlier. This is partly to do with the absence of historical memory. Although history is not given much value in Morris's community, knowledge of a pre-modern past is what shapes the structures and practices of his community. But it is also to do with the traumatic event and its effect on the present. The traumatic event, the nuclear explosion, can be read as a violent and total alienation of people from nature in the most inclusive sense of the word, from the natural landscape, from animals, and from a sense of their own natures through a knowledge of history.

Conclusion

In one sense at least, it appears that dogs and apes follow a similar trajectory in the second half of the twentieth and early twenty-first century. In the cultural imaginary of the West they are both treated as objects, commodities in a number of different fields of exchange, and desired as subjects, as figures which might still be able to speak out on behalf of all animals, even the human animal who communicates but no longer has the power of expression. The language of animals appears to contain a promise – the expression of something which might be articulated as being in nature, or being with nature which humans have forgotten.

This is particularly clear in Desmond Morris' project, although the medium he chooses for this expression is painting rather than language as such. Abstract painting, he suggests, opens a space for a kind of expression which is not dominated by the representation of objects, by the assigning of identities and the delimitation of boundaries. For Morris, being liberated from the task of representation meant that painting could assume a new form – the expression of the experience of being itself. For Morris, the biologist, this being was in some fundamental way, natural, part of the biological inheritance of man. It was located in the physical body itself and found expression in the gestural art of abstract painting, which could be matched or at least usefully compared with the gestural marks of chimpanzee paintings.

Like those engaged in teaching apes sign language ten years later, Morris' work indicates an interest in the subjectivity of animals. As Haraway suggests, this interest coexists with a wide range of other forms of scientific research on apes, ones in which they are far more firmly situated as objects. Investigative journalist, Deborah Blum, in her book The Monkey Wars (1994) describes in detail both kinds of research, and the ethical questions they raise. She notes the intractable political standoff that exists between scientific researchers and animal rights activists and formulates her conclusion in the following terms:

> Begin with chimpanzees, our genetic next-of-kin. So much like us, they are easy to respect. From there it is only a short path to other apes and then to monkeys. With new revelations about primate abilities, the gap seems to be narrowing all the time. If we can come to an agreement on how to regard and care for those extraordinary animals, that will mark a hard-won and much-needed lesson in stewardship. It may with luck, carry over as we try to resolve our differences on the care of other animals, of the world at large. (1994: 275)

Blum ends her book with an appeal to the notion of likeness, the chimpanzee's resemblance to the human. In gesture, thought and interaction the chimpanzee is able to enter a human form of life, to make itself recognizable and consequently to demand the right to subjectivity. The chimpanzee then becomes intermediary, the one through whom humans can recognize their own identity as animals and their kinship with other species. This differentiation between animals, between species as well as between individual animals, is the subject of a recent article by Jacques Derrida in which he meditates on, among other things, his relationship with his cat. He argues against the philosophic tradition that takes the concept of 'the animal in general', and opposes it to the concept of Man. In a gesture similar to the one performed by Horkheimer and Adorno in 'Man and Beast', Derrida troubles the apparently clear lines separating these two concepts. He writes:

> Beyond the edge of the *so-called* human, beyond but by no means on a single opposing side, rather than 'the animal' or 'animal life,' there is already a heterogeneous multiplicity of the living, or more precisely (since to say 'the living' is already to say too much or not enough) a multiplicity of organizations of relations between living and dead, relations of organization or lack of organization among realms that are more and more difficult to dissociate by means of the figures of the organic and the inorganic, of life and/or death. These relations are at once close and abyssal, and they can never be totally objectified. They do not leave room for any simple exteriority of one term with respect to another. (2002: 399)

As in 'Man and Beast' specific kinds of animals, literal and metaphorical, enter into the narrative as concrete elements to trouble the comfortable abstraction that underlies the concept of 'the animal'. In Horkheimer and Adorno's text, the focus of the disruption of the opposition lies with the introduction of the third term of 'woman' although the essay is not without an array of specific kinds of animals, the Pekinese, the serpent, the

Great Dane, the laboratory animal and the lion cub all of which serve as reminders of different although all vertebrate orders of animality. Derrida's argument goes further in a number of different directions.

Moving in one direction he draws attention to gender not only on the side of the human, but also on the side of animals. The gender of animals is something which must always be elided in any formulation involving 'the animal.' Derrida's address introduces not only specific kinds of animals but one concrete animal, his own cat before whose gaze he becomes aware of a peculiarity in his relationship with his naked body, a shame which is ashamed of itself. There is not space here to discuss in detail Derrida's complex argument about nakedness and naming that forms the first part of his discussion but I would like to draw on two points that he makes. One has to do with the language of animals, and the philosophic tradition which not only denies animals language but also regards this as privation. An example of this position is evident in the puzzling third paragraph of Horkheimer and Adorno's 'Man and Beast' in which the life of animals without the concept and the word is described as 'dreary and depressive.' Without the ability to arrest the flux of experience, Horkheimer and Adorno argue, animals can have no awareness of past and future and consequently, no self. They write: 'The animal responds to its name and has no self, it is enclosed in itself yet exposed...'(2002: 205). Derrida argues against this position, and suggests among other things, that only by assuming a general and abstract fissure between man and animal can language be assumed to be the defining possession of only one, while the other can only accept its name. He suggests not 'giving speech back' to animals but rather 'a thinking, however fabulous and chimerical it might be , that thinks the absence of the word otherwise, as something other than privation' (2002: 416). Instead of the difference between speech and silence Derrida suggest what is at stake has to do with the difference between a reaction and a response. The philosophic tradition which denies animals language sees the actions of animals, such as the action of looking, as nothing more than reactions. It denies them the 'right and power to "respond" and hence many other things that would be the property of man' (2002: 400). Understanding what it means to respond, and recognizing the the response of animals which is not that of speaking, would mean among other things, recognizing with Bentham the possibility of animals' suffering. Derrida writes:

> The two centuries I have been referring to somewhat approximately in order to situate the present in terms of this tradition have been those of an unequal struggle, a war being waged, the unequal forces of which could one day be reversed, between those that violate not only animal life but even and also this sentiment of compassion and, on the other hand, those who appeal to an irrefutable testimony to this pity. (2002: 397)

Compassion, the experience of another's suffering, implies a particular relationship with the body and with the bodies of others. It suggests recognizing the connection between the body as the physical locus of pain and the subjective experience of suffering.

From the point of view of animals then, if such a position might be imagined, what might separate almost all humans (perhaps not young children) from most other animals would be their inability to inhabit their own bodies. The 'naked' bodies of humans are not expressive and perhaps this is the quality of their nakedness. Popular psychology talks about 'body language' but such talk, the codification of certain gestures and postures with certain responses or reactions assumes a body already alienated from expression, one which can only learn to perform certain crude approximations of expression through the conscious learning of a code. Animals, or at least such animals who live in proximity with humans, such as Derrida's cats, the apes who learn sign language and most dogs might regard the human's relation with their body as a kind of aphasia, an inability to control its speech. Animals, but only those animals who have grown up socially in contact with other animals, might regard the bodies of humans mostly as noise which is almost but not quite speech although occasionally the odd phrase or gesture might surprisingly make sense.

Cape Town based dog trainer, Christopher Brookin follows a method of training which takes into account both the body of the dog, not as a set of isolated and interpretable gestures but as a single expressive form, and the body of the human who must learn not to imitate the dogs' gestures but to remember their own bodies as mediums through which their intentions might be expressed. Not simply through gestures but through posture, through the disposition of their own body in relation to all the other bodies, animal and human in the vicinity, and through the direction, intensity and quality of the gaze. To train a dog using this method is not to create associations between particular actions and positive or negative reaction as the behaviourists method would demand, to match human behaviour to the machine-like quality assumed to be found in animals, but rather to see training as a mode of engagement in which the human must not only learn to express him/herself but also to command the respect of the dog not, or not only, through physical strength but through social ease and confidence.

These bodies of humans, naked or clothed in a form of expression, are the subject of the following chapter. To reach them, I will go by way of a return to Hoban, and the bodies of the Eusa folk. In a singularly Kafkaesque image the Eusa folk come together to hold 'some poasyum' and talk 'vansit theory.' The form this takes is curiously physical.

> The ardship he begun to gether with the Eusa folk they all took of ther cloths and tangelt ther selfs to gether all nekkit and twining like a nes of snakes which they callit some poasyum. Which they done trantsing with it an hy telling. ...It put you hy your oan self even tho you mytnt know nothing of it yet you cud get jus the fayntes glimmer of what it musve ben to be the Puter Leat. (1980: 193)

In a strange reversal of the concrete and the abstract, the Eusa folk hold a symposium on advanced theory not, or not only through, conversation but through bodily contact. The incomprehensible language of the dimly remembered Computer Elite is translated into this uncanny intertwining of bodies deformed by genetic mutation. In the complete dislocation of their abstract knowledge from any reality in the world they inhabit, their bodies become their strange and enigmatic mode of expression.

The twisted bodies of the Eusa folk form an interesting contrast to another set of bodies which emerge in mainstream popular culture in the eighties – the developed, muscular bodies of film stars, Jean Claude Van Damme and Arnold Schwarzenegger. In the following chapter I investigate the movement of these other bodies as complex reactions to the deformations imposed on the human body in late twentieth and early twenty-first century culture.

Chapter 4

Abstract Bodies: Popular Film at the End of Nature

> *More haste, less speed.* – Running in the street conveys the impression of terror. The victim's fall is already mimed in his attempt to escape it. The position of the head, trying to hold itself up, is that of a drowning man, and the strained face grimaces as if under torture. He has to look ahead, can hardly glance back without stumbling, as if treading the shadow of a foe whose features freeze the limbs. Once people ran from dangers that were too desperate to turn and face, and someone running for the bus unwittingly bears witness to past terrors. Traffic regulations no longer need allow for wild animals, but they have not pacified running. It estranges us from bourgeois walking. The truth becomes visible that something is amiss with security, that the unleashed powers of life, be they mere vehicles, have to be escaped. (Adorno 1978: 162)

In the previous chapter I discussed the phenomenon I am calling 'the end of nature' in relation to human relations with animals – the ways in which a globalizing industrial culture marginalizes animals, transforms them into commodities and at the same time attributes to them a peculiar value. As conscious yet enigmatic creatures whose species-being sometimes resembles but never coincides with that of humans, certain kinds of animals become objects of desire. They are regarded as a point of contact with what might still be considered nature, and studied as a way of mediating people's troubled relationship with their environment and their own nature.

I argued that the fascination with the language of animals misses the untranslatability of most forms of wild animal life and constitutes a failure of humans to recognize their own muteness - the muteness of their bodies. Animals in proximate relations with humans enter into an intermediate form of life and the portion of their expression which can be translated into human language can only reflect human culture. Yet despite the fact that these intermediate animals are subsumed within human culture they still represent a form of 'animate existence' and are impervious to the logic of exchange. In the midst of a culture dominated by communication and information, animals, in their animate bodies, are expressive and appear to look for, although often perhaps without finding it, a similar expressiveness in people. What makes them fascinating is less their privileged access to nature, than the way in which they do not accept what consumer culture takes for granted, the alienation of the human body.

I ended with an image from Riddley Walker: the Eusa folk deformed and isolated practising their 'vansit theory' (advanced theory) through a strange ritual of intertwining, skin to skin. In Kafka's writing the human body is often bent, sometimes doubled-over; in Riddley Walker the bending or deformation has been written into the genetic material. In both the body in some way bears witness to the violence of modernity.

In this chapter I look at the emergence of a new manifestation of the human body, one which no longer appears to register the distortion imposed on it by its environment. It is not only silent, it is also blank, bearing no marks of history or experience. This body emerges not so much as a material reality but as a fantasy and a goal in a number of diverse contexts, in popular culture, in advertising, in medicine, and in the science of genetic engineering.

The first part of the chapter, 'Natural and Unnatural Bodies' explores some of contradictions which in the last two decades of the twentieth century subject the body to constitutive and deforming stress. I investigate the emergence of the the idea of stress itself, and the way in which stress, a biochemical response to social and environemental conditions, marks the coincidence in the body of the political, the philosophical and the scientific. At the same time as conditons of environmental and social crisis limit the possibilities of health, representations of the body, especially in film and advertising, become more abstract. The represented body, I argue, enacts an imagined condition of health, free from the body's own deforming response to the stresses of the real.

In the second part, 'Enter the Machine', I analyse a selection of action films, exploring the ways in which the bodies of Jean Claude Van Damme and Arnold

Schwarzenegger exemplify this process. As heroes in particular narratives they enact a particular form of engagement with the violent and destructive environment they inhabit, one in which their bodies alone are invincible and untouched.

NATURAL AND UNNATURAL BODIES

Bodies in Motion

Adorno's running man described in the quotation at the start of this chapter offers a interesting starting point for an investigation of the movement of the body in modernity. The particular focus of this chapter is the moving body in a particular genre of action films which emerges in the 1980s and 1990s in America. This body is set in motion by the movie industry. Literally, at a technical level each frame moves the body infinitesimally further on its trajectory. Like Muybridge's photographs of figures and horses in motion, taken a hundred years earlier, the movement of human body is divided into a series of minutely differentiated postures which the eye comprehends as motion.[88] Figurally, the genre itself transforms these bodies into expressions of 'action' itself. What is the importance of the moving body at this moment in the history of modernity? How does this body move through the language and images of science and popular culture?

Bodies in motion follow a particular trajectory. Abstract bodies, bodies separated from the friction of the real, once set in motion, continue to move through space until acted upon by a counteracting force. Galileo's theory of inertial motion, discussed in Chapter Two, requires the conceptualization of this neutral space as a vacuum, empty even of the deforming influence of air itself.

In the discourse of the life sciences, the human body is a biological system, and like the animal body, is subject to internal and external pressures. Like the body of the ape discussed in the previous chapter, the human body follows an evolutionary curve. It adapts to its environment, or fails to adapt and becomes sick. In popular culture the body follows a different trajectory. It becomes an ideal figure, corporeal yet two dimensional, cut out of an increasingly standardized material. In both science and popular culture the friction of the real is missing. The human body is an object, observed and represented, not experienced.

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[88] Photographer Eadweard Muybridge (1830-1904) took photographs of people, often naked, and animals engaged in various activities that involved movement. By taking a series of temporally consecutive photographs he broke down familiar movements into their component parts. See The Human Figure in Motion (1955). For a discussion of his work and of the collapse of 'natural' movements and the movements of machine more generally see Mark Seltzer's 'The Love Machine' in Boone & Cadden (1990: 140- 158).

The scientific or biological body and the advertising or filmic body share certain qualities. Both occupy the centre of a closed narrative from which the random claims of experience must be excluded; both are acts of translation, in which the materiality of the body is transformed into something transferable, something with mobility within systems of exchange. But these bodies, cut up and studied, or photographed and filmed are haunted by millions of other bodies, the bodies of those engaged in the act of cutting up, studying and photographing, as well as those providing the infrastructure for these activities, the capital, the lunches, the buildings, not to mention those who through consuming whatever is produced contribute to those bodies their value.

The running body that forms the centre of Adorno's narrative segment is neither a biological body, although it has an element of the corporeal, nor is it the filmic body, although it too is caught up in the processes of mimesis. Instead it inhabits the world, not the authoritative representative of authentic lived experience, but a figure around whom some of the contradictions and complexities of embodied experience coagulate.

Read allegorically, running for the bus articulates something of the subject's position in relation to modern society. The act of running for the bus enacts the urgent need to keep up with the impersonal demands of public systems. The transport system is at once the ultimate representation of the planned dimension of modern existence and its opposite, the random, erratic nature of its execution, since buses cannot escape the mysterious flows and congestions of traffic.

The running body set alongside the movement of cars registers its own obsoletion, its inability to compete. From within, the car acts as a technology of extension, providing the body with the illusion of its own power. Running after an escaping bus sets the human body up against the power of technology, and reveals its limitations.

Yet the frustration of a failed attempt to integrate with technology or the momentary triumph, when the bus is reached in time and the body measures up successfully to the power of technology is only one aspect of the running body – what registers in the consciousness of the subject of the experience. At another level the body represents something which is not available to the subject. The running body in the midst of the familiar, controlled, modern environment recalls, in the visible signs of contortion which mark its surface, a material connection with the past. In bearing traces of the drowning man and the torture victim, the runner unknowingly enters into a relationship of continuity with those others whose emotions he mimes. Modern society's suppression of nature, alluded to in the exclusion of wild animals, does not pacify the body which retains at least in its outward signs the terror that science's demythologization of nature was supposed to overcome.[89]

In this extract, the subject divided from his or her own body confronts it as something external to him/herself and in the gap between the intention contained in running for the bus and the terror this action enacts, the body enters into a relationship with history. The act of running in the street becomes 'unnatural' through its relation to the normalization of walking. Adorno continues:

> The body's habituation to walking as normal stems from the good old days. It was the bourgeois form of locomotion: physical demythologization, free of the spell of hieratic pacing, roofless wandering, breathless flight. Human dignity insisted on the right to walk, a rhythm not extorted from the body by command or terror. The walk, the stroll were private ways of passing the time, the heritage of the feudal promenade in the nineteenth century. With the liberal era walking too is dying out, even when people do not go by car. (1978: 162)

The right to walk, Adorno suggests perhaps somewhat mockingly, is about freeing the body from the spell of terror. It is achieved only temporarily, at a historical moment when the body of the bourgeois subject is freed from extortion – the word suggesting both the freedom from terror of arbitrary feudal power and the freedom of leisure in which the body is allowed to find its own rhythm outside of those demanded by physical labour.

He ends the narrative with the following sentences:

> Perhaps the cult of technical speed as of sport conceals an impulse to master the terror of running by deflecting it from ones own body and at the same time effortlessly surpassing it. The triumph of mounting mileage ritually appeases the fear of the fugitive. But if someone is shouted at to 'run', from the child who has to fetch his mother's forgotten handbag from the first floor, to the prisoner ordered by his escort to flee so that they have a pretext for murdering him, the

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[89] This is one of the central arguments of Dialectic of Enlightenment (Adorno & Horkheimer 2001).

> archaic power makes itself heard that otherwise inaudibly guides our every step. (Adorno 1978: 162)

Adorno shares high modernism's interest in the archaic but he understands its relationship with nature in different terms. Running evokes the archaic, but not simply as the articulation of a natural body which bourgeois culture seeks to suppress. Instead running reminds the subject of the body's vulnerability. The body is not freed from bourgeois constraint into a condition of natural exuberance. The body, in its distortions expresses what remains hidden from the subject, its materiality as memory. Through these traces which mark the body, and especially through the relationship between language and the body, the shouted word, something emerges of what otherwise is present but remains invisible.

The notion of an archaic power which 'guides our every step' does suggest a level of determinism which seems at odds with the dialectical structure of most of Adorno's writing.[90] Yet in the context of this narrative, the 'archaic power' appears less an ultimate biological cause in the E.O. Wilsonian sense, than a disturbance in the structure of the body itself. [91] The power resides not in the body but in the word to which the body responds, suggesting that what 'inaudibly guides our every step' is a kind of mute whispering, which the ear misses but the body itself registers. Implied in such a whispering is not a stable instinctual nature, but rather an inherent sociality through which the body finds its shape and gestures.

Terror registers even when the objective conditions for terror are absent, so that in the moment of running for the bus, the torture victim, the escaping prisoner, even the child fetching his mother's handbag are momentarily present as a kind of whispering awareness only the body notices. Speed, the technological extension of the body, and sport, its physical disciplining, Adorno suggests, might be understood as ways of deflecting this fear engendered in the body by its connectedness. The body is pacified by something which mimics its own triumphant escape, not only from the imagined terror but from the very whispering that reminds it of its vulnerability.

Since the 1960s and 1970s running in the street, at least in developed countries, has acquired its own rhythm in organised marathons. Running or jogging finds a new place for the body on the street as part of the late twentieth century fascination with health and the reduction of stress. The entries in North American encyclopedias provide useful indices of the development of the idea of 'stress' in the popular imagination after the Second World War.

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[90] In an essay on Walter Benjamin, Adorno writes: 'He viewed the modern world as archaic not in order to conserve the traces of a purportedly eternal truth but rather to escape the trancelike captivity of Bourgeois immanence' (1983: 236).

[91] E. O. Wilson makes the claim in Sociobiology (1975) that all human behaviour can be explained by referring an ultimate biological cause – the need for the gene to reproduce itself. See Soper (1995: 57-59) for a critical discussion of sociobiology.

In the Universal World Reference Encyclopedia, published in 1964, the only entry under the heading 'stress' relates to engineering. 'Stress and strain,' it informs us, 'measure the changes in dimension, shape, and volume that occur with the application of external forces. These forces cause a deformation of the body by bending, compressing, or pulling apart portions of the body' (1964: 4721). The extension of this idea to include the pressure deforming the human body had already been established by the publication in 1956 of Hans Selye's book, The Stress of Life. Hans Selye, the doctor who pioneered work in this field, began his research into the physiological effects of stress in the 1930s but it was only in the late 60s and early 70s that the concept of stress as a medical condition attained popular currency

In the World Book Encyclopedia, published in 2003, the first reference to 'stress' relates to the medical condition. Stress, it states, 'is the body's emergency response to real or imagined danger. A stress reaction prepares the body for a burst of action to fight or flee a threat.' It adds that 'Stress aids survival, especially in cases when extraordinary effort can overcome real physical dangers. Stress was particularly useful for prehistoric people when life was filled with such stressors as defending shelter and hunting large animals. As civilization developed, life for most people became less physically dangerous. But as society became more complex, mental and emotional challenges increased and became common stressors.'

Stress, defined in this way, becomes a residual chemical response, one which dislocates the body from its modern environment. The prehistoric body misreads situations as physically threatening, and responds by increasing blood sugar levels to prepare for physical exertion. Yet in the context of modern society, the subject cannot satisfactorily confront the source of its unease physically and the body suffers from a kind of misplaced energy which translates into symptoms and exhaustion.

In the late 1960s medical doctors began to recommend jogging or running as a means of counteracting the effects of stress. Jogging becomes a way of pacifying the body, of providing it with an ordered environment in which to exert itself. In the early twenty-first century, in response to the new technologies of genetic engineering, running acquires an added meaning.

In Bill McKibben's critical account of the developing technologies of genetic manipulation and nanotechnology, Enough (2003), he begins with a description of his own experience of running a marathon, focusing on the way in which the intense physical exertion forced him into a different relationship with his body, one in which he was temporarily 'absolutely, utterly present.' Later he explains the significance of this experience:

> I began by talking about running, because it is one of the contexts I have created for myself, one of the things that orders my life, fills it with metaphor and meaning. If my parents had somehow altered my body so that I could run more quickly, that fact would, as I have said, have robbed it of precisely that meaning I draw from it. The point of running , for me, is not to cover ground more quickly; for that, I could use a motorcycle. The point has to do with seeking out my limits, centering my attention: finding out who I am. (2003: 48)

Running, for McKibben, is a means of regaining contact with his body from which everyday life has estranged him. This estrangement is the estrangement of leisure rather than the estrangement of labour. Despite the recommendation of doctors, everyday life in developed countries, and most notably in America where the fascination with 'labour saving devices' remains high, has become more and more static. A dietician in Mississippi, Mary Gilmore, has introduced the category of sub-sedentary to define those of her clients who take less than 1200 steps per day and radio reports on the dangers of obesity recommend 'throwing away the remote' in an effort to restore some mobility to an other wise inert population.[92] This disused body, more completely than the person running after the bus, identifies the triumph of technology in defining the space of lived experience, so that the body itself appears as not so much inadequate as largely forgotten.

McKibben's satisfaction in running is partly a response to this – forcing open

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[92] Mentioned in the article 'Land of the Fat' Guardian Newspapers 5 January 2002. In the same article, Dr Alan Penman, an epidemiologist with the Mississippi Department of Health, suggests that to use the word epidemic in relation to obesity is inappropriate. He is quoted as saying : 'That implies something that comes and goes. What we have here are normal adaptions to the kind of environment we live in. Its Darwinian. Everyone is at risk, if not actually affected, because we have created what some people have called an obesogenic environment. The Americans have done it very well, better than anyone.'

through his own exertion a space for the body to inhabit. But it is also an attempt to defend the body in its 'prehistoric' or natural form. For McKibben running allows one to experience the body as limit, the defining form through which life can be experienced. Running, he suggest, allows him to experience himself as embodied, and to formulate as sense of his own identy.

Running in this context, divorced from the purpose of 'covering ground quickly', transforms action into abstract motion. The movement of the body becomes an end in itself, a way of mimicking the usefulness of the body to deceive it into health.

This chapter explores a certain moment in the history of the body in America in which a particular type of body erupts into the world of popular film. During the 1980s and 1990s the muscular male bodies of Jean Claude Van Damme and Arnold Schwarzenegger assume a striking prominence in the popular imagination. These invincible and invulnerable heroic bodies come to occupy, I argue, a defining moment in the history of action movies at the end of the twentieth century. They enter at a significant moment in the trajectory of the body itself, as it is moving at once into disuse and at the same time into hyper visibility. The promotion of running, along with other sports, the development of a vast industry around maintaining the body, the extension of the use of gyms to the general public, all these suggest a moment of crisis, as if the body's maladaption suddenly becomes a national and even international concern. Rebuilding the body, like the renovating of a collapsing period house, becomes of utmost importance. These films offer a particular insight because they mark a pivotal moment between the nostalgia for a natural useful and used body and the uneasy visions of a new technologically improved body. Because if the body is to be rebuilt, perhaps technology can remove its lingering and irrational attachment to its historical form.

The Pathology of Everyday Life

For Hans Selye, the physician who first studied and defined stress as a medical condition, the body and its complex metabolic reactions represents the stable variable, the material ground on which theories of health and sickness had to be based. He writes:

> The secret of health and happiness lies in the successful adaption to the ever changing conditions on this globe; the penalties for failure in this great process of

> adaption are disease and unhappiness. The evolution through endless centuries from the simplest of life forms to complex human beings was the greatest adaptive adventure on earth. The realization of this has fundamentally influenced our thinking, but there is not much we can do about it. Here we are, such as we are; and whether or not man is pleased with the result he cannot change his own inherited structure. (Selye 1956: vii)

Selye first became interested in what would later be central to his investigation of stress while still a student. He noted that there were numerous symptoms that were not considered to be characteristic of any specific disease but rather set aside during diagnoses as being part of the 'syndrome of just being sick'. It was the reappearance of these non-specific elements during laboratory tests he undertook much later, while working on a project investigating the existence of hormones, that led him to theorise about the existence of 'a single non-specific reaction of the body to damage' (Selye 1956: 25).

Selye's investigations into this non-specific reaction, for which he later chose the term 'stress', suggested to him the importance of adaption. Each person, he argued, has a certain amount of adaptive energy which allows them to adjust to situations they encounter in life. With modesty uncharacteristic for a scientist, Selye suggests that his study of stress has led him to a philosophy of life which might prove useful to others, one based on a principle of adaption which would allow people to live in harmony with the biochemical responses of their body.[93] He calls it the philosophy of gratitude.

The philosophy of gratitude, Selye explains, allows us to avoid the stressful situations of competition and hostility that the unrestrained egotism of biologic organisms would tend towards. Gratitude, he suggests, is a human way of assuring security through 'awakening in another person the wish that I should prosper' (Selye 1956: 285). It is the only philosophy which, he argues, 'transforms our egotistical impulses into altruism without curtailing their self-protective values' (Selye 1956: 290).

Selye's principle of adaption as a strategy for everyday living is based on certain assumptions, both about the body and about the environment to which it adapts. The 'inherited structure' of the body is ahistorical; subject only to evolutionary time which is too immense to figure in human history. About the environment to which the body must adapt, Selye has little to say.[94] The external socio-political world is present in his argument only obliquely in references to his own life, the life of a successful scientist. His examples of unavoidable situations in which it might be necessary to manage stress through a form of disengagement include 'most committee meetings, solemn academic ceremonies, and unavoidable interviews with crackpots' (Selye 1956: 301).

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[93] Selye writes: 'It helped me form my personal attitude towards stress in life. It may help you. But then, I realize, too, that it may not, for you might not see things my way. Here I am outside my element, the laboratory, where a proved fact is binding for eveyone. Here, I venture into pure philosophy: a very dangerous thing for a medical scientist to do...' (1956: 281).

For Adorno, adaptation to the contemporary social environment results not in health but in damage. The environment to which humans are asked to adapt, he suggest, is no longer conducive to life. He writes:

> The libidinal achievements of an individual behaving as healthy in body and mind, are such as can be performed only at the cost of the profoundest mutilation, of internalized castration in extroverts, besides which the old renunciation of identification with the father is the child's play as which it was first rehearsed. The regular guy, the popular girl, have to repress not only their desires and insights, but even the symptoms that in bourgeois times resulted from repression. Just as the old injustice is not changed by the lavish display of light, air and hygiene, but is in fact concealed by the gleaming transparency of rationalized big business, the inner health of our time has been secured by blocking flight into illness without in the slightest altering its aetiology...Underlying the prevalent health is death. All movements of health resemble the reflex-movements of beings whose hearts have stopped beating. Scarcely ever does an unhappily furrowed brow, bearing witness to terrible and long-forgotten exertion, or a moment of pathetic stupidity disrupting smooth logic, or an awkward gesture, embarrassingly preserve a trace of vanished life. (Adorno 1978: 58-59)

Adaptation in Adorno's analysis produces only the appearance of health, at the cost of tremendous psychic damage. To enact the role of the 'regular guy' or the 'popular girl' is to submit to the structures of a society from which any traces of life are banished. For Adorno, the term 'life' has a particular significance. In traces and remnants it indicates something which is outside the administered world, and though Adorno warns that these traces should not be mistaken for life itself, their abolition marks an important passing.[95] What is embarrassing, awkward or clumsy disrupts the smooth surface of commodified social interactions and reveals the contradictory nature of the exchange: the subject's own ambivalent relation to his actions and words, and to those of others. In Freud's Psychopathology of Everyday life (1960 [1901]), he describes a class of 'bungled actions', in which the subject shows an unusual clumsiness. The clumsy gesture not only communicates something which the subject is unable to admit, it also reveals something of the violence society imposes on the body.

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[94] He writes: 'I am not competent to speak about war – though these are also signs of maladaption' (1956: 275).

[95] In his lectures on metaphysics, Adorno writes about metaphysical experience in Proust that: 'It is as if the joy of finding that somewhere some such thing as life were possible at all – and this is the counter-motif to reification – had lured the subject of the experience into directly equating these surviving traces of life with the meaning of life itself.' (2001: 143).

Freud describes an incident in which a married, middle-class woman, a former patient of his, trips over a pile of stones in the street and in falling, does considerable, although temporary, injury to her face. At the moment of her fall she had been looking at an ornament in a shop window for her nursery which she had wanted to 'buy immediately'. Freud explains how the woman had described herself as troubled by guilt over an abortion. She and her husband had decided that they could not have another child 'owing to their financial circumstances' (Freud 1960: 184). Freud interprets the falling as an act of self-punishment and also as a way of avoiding an imaginary greater punishment: 'This thought did not become conscious; but instead of it she used the situation, at what I might call this psychological moment, for punishing herself unobtrusively with the heap of stones which seemed suitable for the purpose.' (1960: 185) For Freud these acts of clumsiness are moments of resolution, in which psychic conflicts are unconsciously managed. The practice of psychoanalysis is also a form of management which, through making conscious the contradictory impulses, enables the patient to be 'sufficiently able to cope with life' (Freud 1960: 183). It aims at a process of psychical adaption to the demands of particular moral and economic systems.

The shift that Adorno notes between Freud's subjects and those Adorno himself describes in 1945 is a difference in the role of the body. The body no longer is allowed to register contradictions; no 'flight into illness' is permitted. Instead Adorno suggests that 'what might be called a prehistoric surgical intervention' incapacitates psychical conflict before neuroses are even formed, ensuring the 'triumph of collective authority' (1978: 58). The body he describes, an efficient mechanism for living untroubled by psychical disturbances brought about by adapting to the social environment, is, of course, only partially a material reality in advanced Western societies. More significantly it operates as a desire, one in which the troublingly 'natural' or resistant body would no longer be permitted to articulate struggle against the conditions it is forced to inhabit but instead would allow the subject freedom from the responsibility of being a subject, of being able and required to take part in the fashioning of that world.

Written in 1944, in response to the war but also to the conditions he encountered on the West coast of the United States, these remarks seem even more apt a description of societies in the late twentieth century and early twentieth-first century. Contemporary medical science lays claim to innumerable ways of blocking flight into illness, through the prescription of mood enhancing drugs, such as Prozac, or through the suppression of the symptoms of struggle, the signs of stress. The business of health has taken over from psychoanalysis the work of dealing with problems of maladjustment, creating a situation wherein the body's resistance is suppressed so that the subject is 'sufficiently able to cope with life'. It is as if the methods of psychoanalysis, the constitutive power of language, no longer has the purchase to enact psychical transformations on the scale that is required to enable adaption to modern society.

Hygiene, with its claim to provide a scientific approach to maintaining health, has itself become big business. In innumerable advertisements, gleaming kitchen surfaces are revealed to contain hidden, teeming hosts of bacteria which can only be defeated through liberal application of antibacterial detergents of various kinds. That the toxicity of these products causes further ill health is something that is only recently being admitted[96] and requires, in itself, an adjustment. The toxicity of the gleaming home, in which each surface has been treated against invasion by microscopic organisms, provides a literal extension of Adorno's argument. Adaption to the current environment is itself a kind of death, or at least a submission to conditions in which it is impossible to be properly alive.

The immaculate house is itself matched by the ageless, unmarked body of the woman or man who, in the advertisements, inhabits it. That wrinkles and fine lines that appear on the skin are themselves unacceptable is also constantly reiterated. Andie MacDowell, model and actress, advertises a number of products to 'reduce the visible signs of aging'. The brand slogan, 'because you're worth it', suggests an interesting reversal. Although the advertisement ostensibly claims to affirm the value of the addressee, the structure of the phrase also suggests the subjection of human value to the

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[96] See the World Health Organisation (www.who.org) on the increase in asthma being a result of household toxins. Also Sandra Steingraber's Having Faith: An Ecologist's Journey to Motherhood which explores, among other things, the toxicity level s in breast milk due to household cleaning products.

measurement of things. The human subject must become worthy of the commodity; it must enter into a relationship of commensurability in which its value can be priced in the same system of exchange as the cosmetic products. The furrowed brows must be chemically smoothed and the desirability of the resulting blankness suggests that what must be erased are the marks of experience itself. History may not be written on the body.

This image of the body as frozen in time also suggests the form of the commodity. In the process of exchange, Alfred Sohn Rethel argues, commodities must occupy abstract time and space:

> The business of exchange enforces abstraction from all this [the temporal aspect of human life], for the objects of exchange must remain immutable for the duration of the transaction. This transaction takes time, including that of the delivery of the commodities and the act of payment upon the conclusion of the deal. But this time is emptied of the material realities that form its contents in the sphere of use. (Sohn-Rethel 1978: 48)

Thus desire for a body unmarked by time can be read as a form of adaption – submission to the demands of a society in which value is attributed only, or most easily, through entering into the system of exchange.

The fact that only a small proportion of the world can afford such blankness does not detract from its power as a global marker of what is desirable. The immense global culture industry obsessively represents bodies without marks of history. In the abstract time of the film or advertisement, the actor or actress must undertake to remain, like the commodity in the transaction of exchange, immutable. The actor's body, more than any other public figure, must take on the responsibility of displaying the triumph of adaption, of health in a social, political and physical environment of dis-ease.

For Adorno, writing during a moment in which modernity appeared to be in crisis, adaption is not a sign of health but a kind of death, a submission to an instrumental logic which excludes any place for the uncommodified body, for the 'awkward gesture', the moments of 'pathetic stupidity' and the 'furrowed brow'.

Towards the end of the twentieth century a new attitude towards the possibility of adaption emerges. Cultural critic, Frederick Buell, suggests that the last two decades of the twentieth century were characterised by a 'culture of hyperexuberance' (2003:215). Buell defines this hyperexuberance in relation to William Catton's notion of the culture of exuberance:

> Catton's culture of exuberance was the artifact of the expansion of earth's carrying capacity temporarily created by the discovery and exploitation of an underpopulated, premodern New World and fossil-fuel energy sources. For Catton, the culture of exuberance lasted throughout American history from discovery times to the 1960s; it was a fundamental part of Western modernity. (Buell 2003: 215)

The recognition, in the 1960s and 1970s, of a state of environmental crisis, suggested that this exuberance might be misplaced, that the conspicuous consumption of the early part of the second half of the century could have serious and lasting consequences. Yet in the last two decades of the twentieth century, Buell argues, a new culture of defiance emerged in direct opposition to the environmental movement. According to Buell:

> this culture of hyperexuberance had little or none of the innocence of the the culture of exuberance – a culture that did not realize or admit that it had filled its limits and gone out of balance. The culture of hyperexuberance accepted as its foundations exactly what the environmental crisis elaboration held: that people were already beyond their limits, out of balance and in disequilibrium with nature. It accepted these premises and sought to alchemize them into possibilities' (2003: 216).

The source of these possibilities was located in the inventiveness of the human mind which, inspired by the crisis, it was argued, would find new solutions in radically altered scientific paradigms.[97] One of these was defined as neoevolution or hyper evolution which envisaged science as taking control of the process of adaption so that it was no longer necessary to 'wait a million years' (Kevin Kelly quoted in Buell 2003: 226). Buell quotes from Kelly's book published in 1994, Out of Control: The new Biology of Machines, Social Systems, and the Economic World:

> The logic of Bios (extracted from biology) is being imported into machines, the logic of Technos is being imported into life; ...human-made things are behaving more lifelike, and. ...Life is becoming more engineered. The apparent veil between the organic and the manufactured has crumpled to reveal that the two really are, and always have been of one being.' (quoted in Buell 2003: 226)

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[97] Buell mentions Julian Simon, Alvin Toeffler, and the author of technotopian internet magazine, *Wired*, as examples of this tradition.

One characteristic of those writing in defence of the new technologies of genetic manipulation is a frequently expressed distaste for the inefficiency of the human body. McKibben quotes several of these technological visionaries who find the human body troublingly insufficient. Robert Ettinger, a cryogenicist is concerned about 'the elimination of elimination' and the absurdity of a 'multi-purpose mouth'. Marvin Minsky, a pioneer in the field of Artificial Intelligence, is quoted as remarking, 'Myself, I don't much like how people are now. We're too shallow, slow, and ignorant' (quoted in McKibben 2003: 111). Minsky is also cited as expressing dissatisfaction over the fact that we 'seem to have reached a plateau in our intellectual development. There is no sign that we're getting smarter. ...Has any playwright in recent years topped Shakespeare or Euripides? We have learned a lot in two thousand years, yet much ancient wisdom seems sound, which makes me suspect that we haven't been making much progress' (quoted in McKibben 2003: 111). In a book titled Beyond Humanity, Gregory Paul and Earl Cox, ask 'Why do we have only one heart, why not two in case one fails? Or two livers?' and suggest that 'the erect bipedal posture of which we are so proud makes us so unstable that falling on flat ground can have devastating results' (quoted in McKibben 2003: 111).

The pathology of everyday life is at once the damaged life of late capitalist social and physical environments, in which, to mention simply one example, household cleaners cause toxicity in breast milk, and the pathologised life, in which the body itself appears as structurally unhealthy, incapable of fulfilling the functions of a full and healthy life in the modern world. If, for Adorno, the environment is such that adaption means a kind of death, a suppression of even the traces of life that the constitutive conflict of being a human/social subject involves, for the theorists of the late twentieth century the possibility of adaption seems equally troubling. Yet for them, the solution appears technical: the material modification of humans to enable them to achieve more completely what Adorno condemned in 1944, the removal of all traces of resistance, all signs of maladaption. The health of the new body is one in which the flight into illness is literally blocked. The films I discuss in the section that follows thus occur at a pivotal moment in which the 'natural' body, already marked as obsolete, overlaps with the new body, still uneasily and imperfectly imagined.

Enacting health

In an interview with Candian television talk show host Pierre Berton in 1971, Bruce Lee discusses the relationship between martial arts and acting.[98] Asked about why film stars come to him for training, he says that they:

> ask me to teach them not so much of how to defend themselves, how to do somebody in. Rather they want to learn to express themselves through some movement be it anger, be it determination or whatsoever. So, in other words, what I am saying therefore he is paying me to show him in combative form the art of expressing the human body.'

Martial arts, Lee suggests, involves a particular orientation toward the body, one in which each movement must be precisely defined. 'The ideal,' he says, ' is unnatural naturalness or natural unnaturalness,' a body trained but not mechanical. It involves a recognition that the body contains the possibility of expression. Lee describes it as thinking: 'here I am, a human being, how can I express myself totally and completely?'

In trying to define the 'enigma' of health, philosopher Hans Georg Gadamer draws on some similar ideas. He writes that 'health is not a condition that one introspectively feels in oneself. Rather it is the condition of being in the world, of being together with one's fellow human beings, of active and rewarding engagement in one's everyday tasks' (1996: 113). Health, he suggests, is a state of equilibrium, a form of presence. He writes, 'here presence does not refer to that mysterious aspect of time in the narrow sense of a series of temporal points which are enumerated in their momentary being. Rather presence refers here to something which fully occupies a kind of space' (1996: 74). The example Gadamer uses is of a great actor or an outstanding statesman.

What happens to the health of the body when the space it occupies becomes less habitable, when the space prevents or obstructs this form of enactment or engagement? [99] In Minima Moralia, Adorno uses the idea of 'damaged life' to describe this condition. Among many other fragments of everyday life, he comments on the effects of technology. Although he is talking about a form of technology that predates the cyborg, his reflection on its integration into life remain useful.

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[98] 'Interview with Bruce Lee' Pierre Berton Show Hong Kong, 9 December 1971.

[99] Gadamer comments that 'it is extremely significant that in today's highly developed technical civilization it has proved necessary to invent an expression like 'quality of life', which serves only to describe what has been lost in the mean time' (1996:104).

Adorno writes:

> Technology is making gestures precise and brutal, and with them men. It expels from movements all hesitations, deliberations, civility. It subjects them to the implacable, as it were, ahistorical demand of things. (Adorno 1978: 40)

Technology, Adorno claims, acts on 'gestures', on the way in which the body moves in space. It conditions movement, the possibility of engagement with the world, and excludes from the body the possibility of thought (hesitations, deliberations). Gestures, meaningful movements of the body, are subjected to the demands of things.

This seems to me to be a useful starting point for approaching the bodies of action film heroes, Arnold Schwarzenegger and Jean-Claude Van Damme as particular enactments of the human body's relationship to late twentieth century space. In a sense they do 'fully occupy space', mimicking the condition of health, as Gadamer describes it, but not as a 'great actor' or statesman might. The charismatic quality of the great actor or statesman, Gadamer explains, is an articulation of the 'full completion and realization of a living being', a mode of total engagement with the space they occupy. In the films in which Schwarzenegger and Van Damme feature, it is no longer the living being as a whole that is present. Instead it is the bodies themselves which have been expanded to fill up the space of engagement.

ENTER THE MACHINE

Spectacular Bodies

Films in which action, the representation of bodies in motion, takes precedence over plot or dialogue, emerge as a genre in the 1970s. Their emergence is linked to an attempt to repopularise film in America after the decline in film attendance in the 1950s and 60s due to the development and widespread distribution of television. Part of this revival of cinema was inspired by Hong Kong cinema and in particular by the films of Bruce Lee, Big Boss (1971), Fist of Fury (1972) and Enter the Dragon (1973), which became perhaps the most widely recognized martial arts movies in the West.[100] For Lee, as was suggested earlier, acting and martial arts both articulated a particular relation to the body, one in which the movement of the body was an act of expression. In Enter the Dragon, the fight sequences focus on the body's lightness, its lithe maneuverability and its vulnerability. Lee's body is muscular but slight and in the act of combat it not simply his body which is in motion. In these fight scenes Lee's face and voice are also expressive and there is a sense that it is his whole being which is engaged.

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[100] See discussion in Lisa Odham Stokes & Michael Hoover (1999: 92).

What is significant about the bodies of Schwarzenegger and Van Damme is the degree to which they exist as objects before their incorporation into the world of representation. Arnold Schwarzenegger's career as a bodybuilder predates his move to America from Austria, and it is his built body which permits him entry into the world of film. This body which in 1965 earned him a perfect score in body building competition, and the similarly although perhaps less extremely built body of Van Damme, generate a particular form of narrative. A selection of movies from their careers gives an indication of how these bodies as objects become visible in particular ways during this period. They shift from the pre modern, pre technological body of the 'barbarian', (Schwarzenegger in Conan 1982 & 1984), to what Paul Willemann refers to as the 'erotic labour power body', the celebrated body of the industrial worker, (Van Damme in Hard Target), to the postindustrial, cyborg body, (Schwarzenegger in Terminator 1, 1984), to the obsolete cyborg body (Schwarzenegger, Terminator 2 1991) and back again to the post-apocalytic, post technological body (Van Damme Cyborg 1989) with various digressions, and repetitions along the way.[101] What remains constant is the invulnerability of these bodies, their privileged relation to the violent world that forms them and through which they move.

Language and Gesture

Gestures, the coded movements of bodies in space, constitute the subjects in these films. Against this fluid movement, the choreographed violence, in which the represented world arranges itself around the body of the hero, language emerges as something awkward and difficult.

The machine Schwarzenegger in Terminator speaks by choosing set phrases from a list of options or exactly mimicking speech he has overheard, but his and Van Damme's speech in other films seems to be marked by a similar recycling of set phrases.

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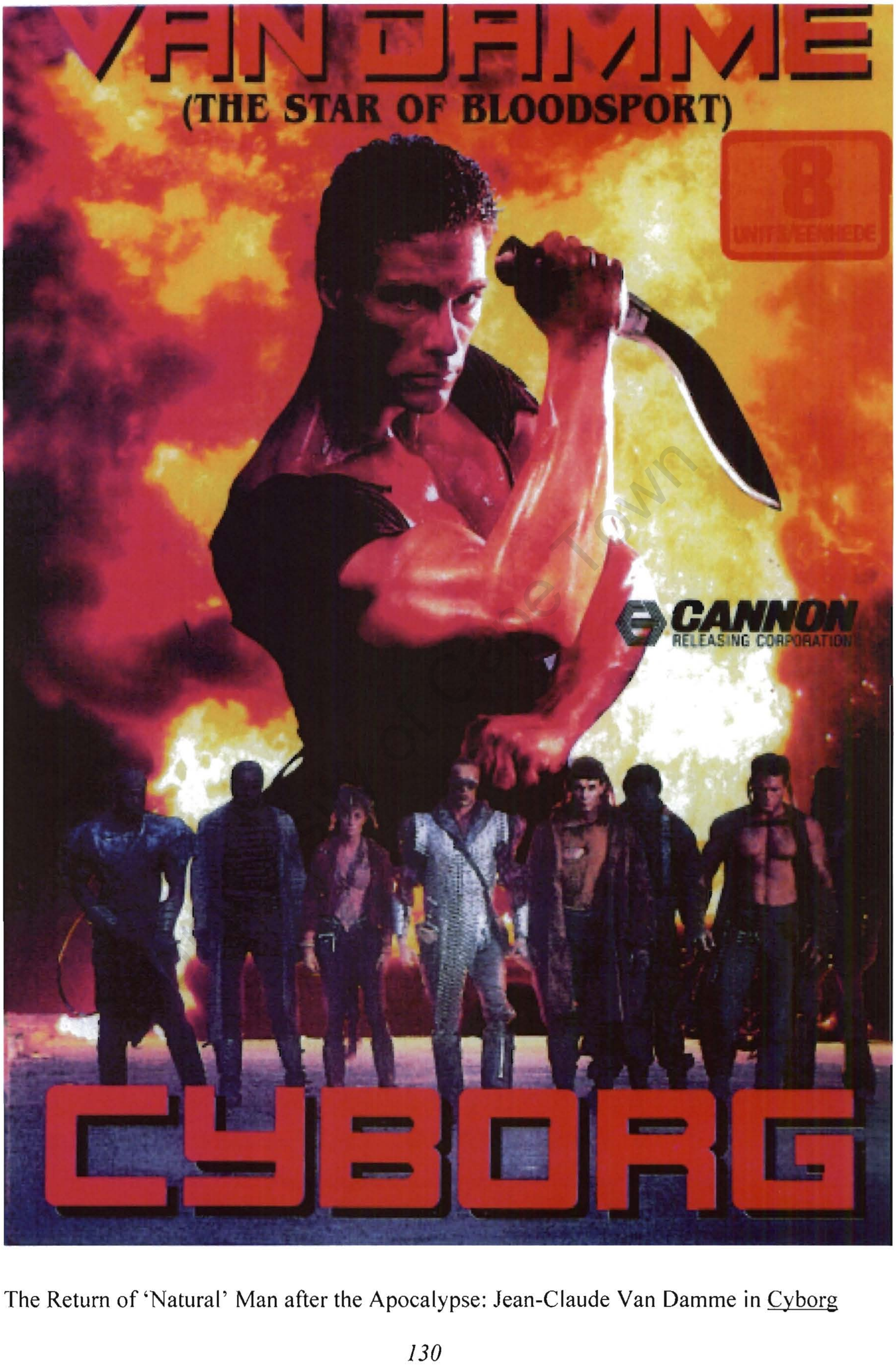
[101] Willemen's notion of the 'erotic labour power body' is discussed in David Stafford's 'The Body in Science Fiction Film' in O'Brien (Ed.). (1999).

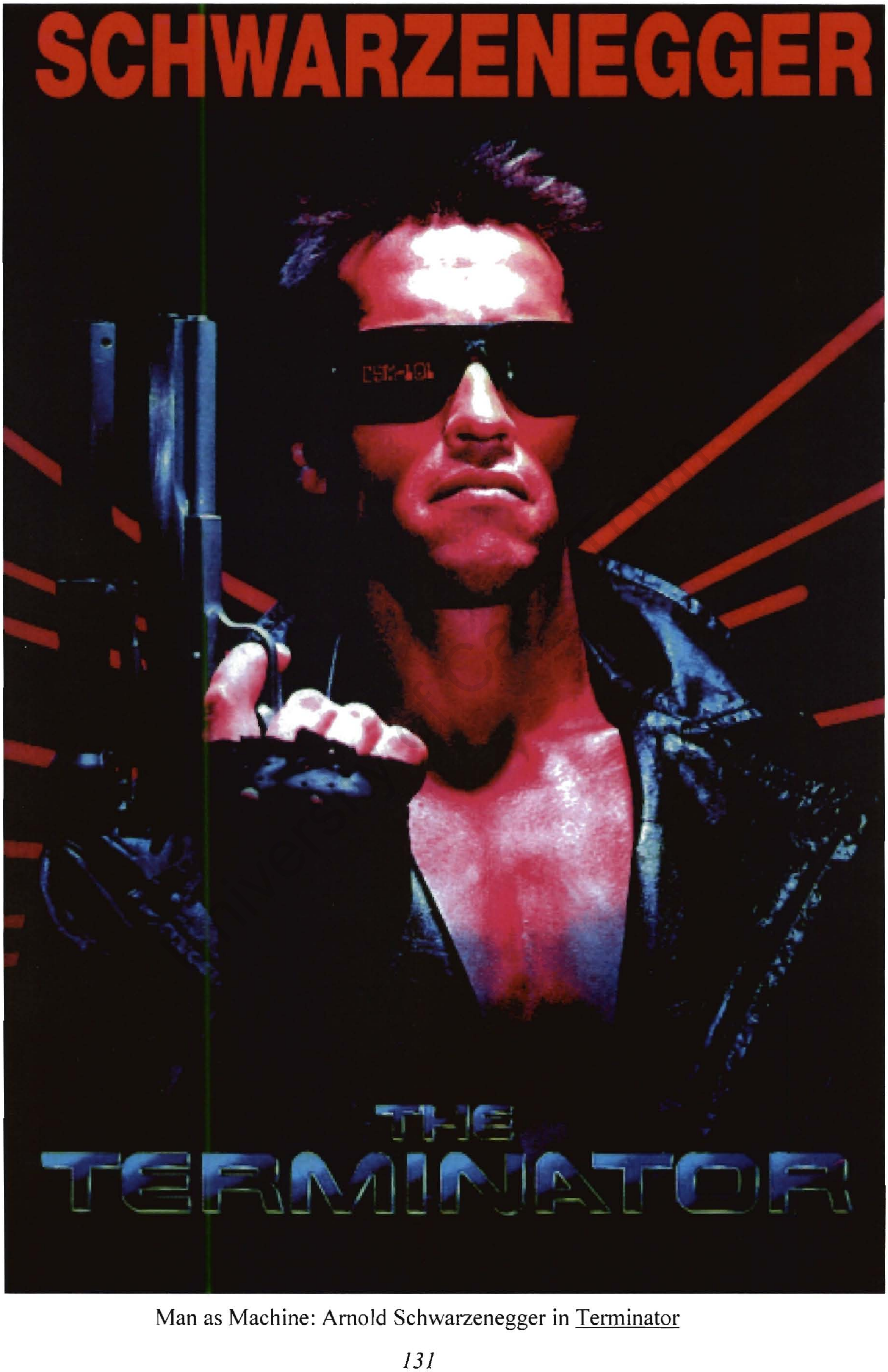
Film critic, Richard Ebert criticizes Cyborg for 'its actors reciting unspeakable lines' but in fact this quality of recitation is characteristic of all these movies. Unlike the wisecracking action heroes Bruce Willis and Mel Gibson, Van Damme and Schwarzenegger seem to have a particularly awkward relation to language. Characteristically silent, they speak as if language was something foreign to them. Literally true for them of English, the language of the movies they feature in, this foreignness of language seems also, in part, a performance. It is as if the muscled body resists being incorporated into the social order of language.

In one of the most interesting Van Damme movies, Hard Target, director John Woo seems to exaggerate this dislocation between body and language. In the fight scene which occurs early on in the movie, where Van Damme as Chance Boudreaux defeats five would be rapists and muggers in a series of flying and apparently effortless kicks and throws (perhaps significantly centred around a car) the camera lingers lovingly on his body. In a series of camera techniques – moving into slow motion, repeating frames – any pretense to realism is abandoned and the fight becomes pure spectacle. Immediately after this Van Damme speaks briefly to the woman he has just saved. The lines: 'Next time be more careful where you show your wallet,' spoken slowly in Van Damme's accented English, have an almost painful literalness which contrasts sharply with the easy, fluid control of the body in motion celebrated by the camera in filming the fight. Even his attempt at lightness, 'You know it's a shame, this used to be such a nice part of town' seems like a generic reference to another type of action movie rather than an integral part of this one. It is as if speech itself constrains the body, forces it into a mode of articulation which is alien to it.

In Schwarzenegger's films the dislocation between the body and language takes a slightly different form. If Van Damme's words articulate an awkward literalness, Schwarzenegger, like the terminator cyborg, seems to recite the catch phrases of late twentieth century urban culture. In Total Recall, Schwarzenegger plays Quaid, ostensibly a simple manual labourer but one who has dreams about being a secret agent on Mars. 'I want to do something with my life, I want to be somebody.' These words, spoken by Quaid to the woman he believes to be his wife after she has tried to persuade him to forget his fantasies and dreams about Mars, are immediately recognisable as a set phrase for articulating generic aspiration in late twentieth century culture.


VAN DAMME
(THE STAR OF BLOODSPORT)
8
UNITS/EENHEDE
CANNON
RELEASING CORPORATION
CYBORG

The Return of 'Natural' Man after the Apocalypse: Jean-Claude Van Damme in Cyborg


SCHWARZENEGGER
THE
TERMINATOR

Man as Machine: Arnold Schwarzenegger in Terminator

Fred Pfeil also notes Schwarzenegger's tendency to 'drop gruesome puns' (1995: 31), but what in fact, these involve is a literalisation of everyday figural speech. Pfeil's example is the line 'He lost his head over me' after a decapitation. In Total Recall, a mutant addresses him angrily with the line: 'You've got a lot of nerve showing your face around here' to which Schwarzenegger replies with a significant look at the man's distorted face, 'Look who's talking.'

The Demands of Things

If on the one hand the heroic body remains outside the network of communality implied by language, the narratives generated by these bodies also indicates the breakdown of the social world itself. In the post-apocalyptic future world of the Terminator movies and Cyborg, no stable form of human society remains, no linguistic contract can be trusted. In Total Recall, even the hero's own words to himself, recorded on video before his memory is altered are duplicitous. The body, the gesture, becomes the only reliable form of articulation. In a world subject to the implacable demands of things, engagement must take place through the rearrangement of things, through gestures and actions, not through language and conversation.

The destroyed cityscapes in Cyborg, and Terminator are bleak dystopian visions but there is also a sense in which the total destruction of everything that is familiar is satisfying. The muscled body of the hero is liberated into a new space uncluttered by the buildings, commodities and cultural debris of consumer society. Fredric Jameson writes that 'on a global scale, allegory allows the most random minute or isolated landscapes to function as a figurative machinery in which questions about the system and its control over the local ceaselessly rise and fall...' (1992: 5). These destroyed or threatened landscapes, read allegorically, can be seen to articulate a kind of rage against the system which constructs space so that the body must become a machine to operate efficiently.

In Total Recall the atmosphere of Mars, from which the inhabitants are only partially protected by domes, is extremely hostile to any kind of animate life. It is without air, the kind of vacuum Galileo imagined in constructing his theory of inertial motion. The body exposed to Mars' atmosphere bulges and writhes, the eyes stand out and the face distorts in an agonising death. This inhospitable landscape is what the hero sets out to transform, as if through muscular strength alone, the entire relationship between body and space can be transformed. Schwarzenegger's act of starting the alien machinery which will provide air for the whole planet liberates the oppressed mutant population from their reliance on the industrialist, Cohagen. It is as if his muscular body creates a new space in which their bodies will no longer suffer distortion and mutation. In a similar way, in Death Warrant, Van Damme's coherent, completed hyperbody stands in opposition to the body parts that the evil doctor and prison authorities sell. His whole body is the only thing that can prevent the other prisoners from becoming merely a collection of saleable parts.

The Body as Symptom

The machine body does not suffer or grow sick. It can only become, as in the second Terminator movie, obsolete, and in the experience of this obsolescence become humanized. For the body of the heroes to be human they must experience pain, but this experience must not disrupt the integrity of the body as a whole. Part of the satisfaction of the movies for the viewers is their refusal to permit the possibility in the heroic body of death or disfigurement. Unlike the figure of the cyborg, defined by its participation in a complex inter-penetration of the world and the body, these fully defended heroic bodies act on the world but are not in any deep sense acted upon. The heroic bodies of Van Damme and Schwarzenegger are not, in these movies, sexual bodies. Their engagement is predominantly with the world of things, with the violent demarcations of the boundaries of their own bodies in relation to the world and to other hostile bodies. This aggressive assertion of the human body takes place at a moment when both the successes and failures of science are becoming acutely felt. On the one hand, research in genetics makes possible a whole new assault on the integrity of the body, offering a sophisticated programme for the redesign of the species, on the other the evidence of the HIV/AIDS epidemic shows the failure of scientific medicine in a culture which had assumed that it understood and could control the workings of body and could regulate its relations with other organisms.

The body in contemporary culture appears as something unruly, which has to be controlled in order to fit appropriately into the social world of work and pleasure. The body is the raw edge, the recalcitrant materialism of the social individual which has to be suppressed and confined in order for the individual to function efficiently in the world.

In the same way, muscular strength in an era of technology and of weapons of mass destruction appears increasingly inadequate. Yvonne Tasker writes that for many critics 'the muscles of male stars seem repulsive and ridiculous precisely because they seem to be dysfunctional, "nothing more" than decoration, a distinctly unmanly designation' (1993: 239). Yet these muscles produced for display can be read in another way. While on the one hand they are clearly icons, developed not through use but through dedicated bodybuilding, and serve as 'reassuring' indicators of masculine power, they can also be read as symptoms of the narrowing space allowed for the body in postmodern culture. According to Freud: 'the symptom emerges as a many-times-distorted derivation of the unconscious libidinal wish fulfilment, an ingeniously chosen piece of ambiguity with two meanings in complete mutual contradiction' (1963: 360). In this sense the pumped up muscles can be read as a kind of swelling indicative of an injury – the dis-ease of the body in postmodern culture, at once the ultimate commodity, all surface and perfected for its role as pure spectacle and at the same time the violent return of the swollen body exhibiting the damage it has suffered in the technological culture of late twentieth century. Van Damme and Schwarzenegger's enactment of health, of the body able to fully occupy space, is at the same time an enactment of a form of sickness, not a state of equilibrium, or a condition of engagement with the world but rather a position of disengagement. The repressed body returns, but it returns only as a sign of illness.

Conclusion

In 'Education after Auschwitz' Adorno discusses some of the social conditions which might make it possible to comprehend the violence of the twentieth century. He suggests that:

> One can speak of the claustrophobia of humanity in the administered world, of a feeling of being incarcerated in a thoroughly societalized, closely woven, netlike environment. The denser the weave, the more one wants to escape it, whereas it is precisely its close weave that prevents any escape. This intensifies the fury against civilization. The revolt against it is violent and irrational. (1998[1963]: 193)

In an interesting way the film, Total Recall, seems to offer itself as an allegorical expression of precisely these conditions. The airless environment entirely controlled by the industrialist and the mutilated bodies of the inhabitants represent in a literal form the claustrophobic character of late twentieth century culture and its resulting distortions. The muscled body makes its appearance in mainstream film at a time when the body is perceived as extremely vulnerable. Threatened both with violence from without in a global culture obsessed with national and personal security, and with its own redundancy in an increasingly technologically-ordered work environment, the body is also threatened from within by the spread of a disease that destroys the body's internal defence mechanism. The exploding body exposed to the vacuum of Mars' atmosphere can be understood to represent this condition of the body, subject to the unbearable stresses of its own vulnerability, exposed to a social and cultural space which no longer has any exterior.

While in the world of such movies, the extreme violence of the heroic protagonist becomes rational because it transforms the space he inhabits, outside the film world, such violence cannot find the source of its oppression. It explodes instead, Adorno suggests, in irrational acts of violence – in genocides. Adorno's interest is, of course, in changing the environment people inhabit, or if this is not possible at least finding spaces of resistance, moments when you can step outside for a breath of air.

At the end of the twentieth century, however, a new solution presents itself. Instead of creating an environment which might be conducive to human health and happiness, a utopian vision which no longer appears even as a possibility, genetic engineering introduces the idea that the body might be rescued from its obsolescence. Managed adaption, genetic engineers seem to be suggesting, might enable the body to be healthy despite the stresses it is exposed to in the contemporary physical but also social and economic environments. Or at least the body might be adjusted so that it no longer registered such stresses as physical symptoms. Adorno's apparently exaggerated claim in 1945 – that 'the inner health of our time has been secured by blocking flight into illness' (1978: 58) – promises at the beginning of the twenty-first century to become true in a very literal sense.

In 'A Cyborg Manifesto', Haraway argues that the body in the postmodern space constituted by the integrated circuits of information technology and genetic engineering can no longer be conceived of as distinct and bounded. Instead she suggests that 'we are all chimeras, theorized and fabricated hybrids of machine and organism' (2000: 70). The bodies of Van Damme and Schwarzenegger, ambiguously both embracing the machine and defending the human seem to fit, in their very awkwardness, this category. But the new engineered body, at least as it is imagined for us by those developing the technology, need bear no visible signs on its surface of its hybridity. Instead of the cyborg, the new figure for imagining such a future subject is the posthuman.

In the following chapter I discuss this new move in the long trajectory of the human body. If in this chapter I have talked repeatedly of the body as if it were something distinct from the subject, an agent in its own right, this is because I wished to emphasize those ways in which it appears, both as commodity and as symptom, to acquire a life of its own. In the next chapter, I return to the question of subjectivity and the way in which manipulating the material body may or may not be able to restore to human subjects a sense of being inside their skins, of inhabiting the world and being at home there.

Chapter 5

Philosophy at the End of Nature

> *Refuge for the homeless.* – The predicament of private life today is shown by its arena. Dwelling, in the proper sense, is now impossible. The traditional residences we grew up in have grown intolerable: each trait of comfort in them is paid for with a betrayal of knowledge, each vestige of shelter with the musty pact of family interests. The functional modern habitations designed from a *tabula rasa*, are living-cases manufactured by experts for philistines, or factory sites that have strayed into the consumption sphere, devoid of all relation to the occupant: in them even the nostalgia for independent existence, defunct in any case, is sent packing. (Adorno 1978: 38)

In the previous chapter I discussed how a particular type of body, the extremely muscled body of the action hero, both manifests and contains the contradictory forces acting on the human body at the turn of the twenty-first century. They represent simultaneously the fantasy of invincibility and the reality of damage, both an extreme form of reification and a response to unbearable pressure. In the films, the complex relationship between body and the environment also indicates something else: a rage against the suppression of the body in the interest of efficiency and a desire that it might be released from its blank and silent immobility into expressive motion.

In this thesis, I began with nature as external – in the spaces which surround people, and the animals, imagined and real, with whom these spaces are shared. The human body, ambiguously both external and internal, acts as hinge between what is outside and what is inside, human nature itself. This relationship which is both between the body and subjectivity, and between nature and history, is the focus of this fifth and final chapter of the thesis. Not this relationship in the abstract, but this relationship as it is articulated at a particular historical moment, when the promise and threat of re-engineering the human subject is imminent but not yet realized. Adorno's philosophy, I suggest, is one that has a particular significance to the complex political and ethical questions which make their appearance at the end of the twentieth and the beginning of the twenty-first century and which I have chosen to sum up under the title of the 'end of nature'.

In the first section, I take as my starting point the figure of home and homelessness, since it provides a moment of intersection, where the material landscape, the lived environment, the experience of living and its interpretation through philosophy come together. This section discusses the different ways in which the concept of home has been represented: as a way of being in the world, a defense against the alienation of commercial society but also an epistemological project, the desire to make the world familiar and habitable. Yet in the contemporary context neither science nor philosophy seem able to satisfy such a desire. Instead the world appears more strange and less habitable, and I suggest that Freud's investigation of the concept of the uncanny might prove useful in understanding the place of the human subject in the context of genetic technologies.

The second part of this chapter focusses more directly on Adorno's assessment of the predicament of philosophy. For 'the end of nature' represents not only an ethical and psychical problem, it also implies a crisis in interpretation. What is the role of philosophy in an environment where language itself, disentangled entirely from the materiality of the world, no longer holds the promise of revealing the truth? This section of the thesis, which I have called 'The Real and the Natural,' explores some ways in which these two terms interact in the formulation of a lived relation between subject and object. I discuss Adorno's early essays 'On the Idea of Natural History' (1984 [1932]) and 'The Actuality of Philosophy' (2000[1931]), as well of some of his later writing in order to trace the peculiar relevance of Adorno's 'critical models' for contemporary debates around 'the end of nature' and technologies of the posthuman.

THE PROBLEM OF HOME

The Impossibility of Dwelling

In the era of environmental disasters, Adorno's acerbic denunciation of the possibility of 'dwelling' in the second half of the twentieth century acquires a new intensity. If the condition of exile forced on him by the war alerted Adorno to the essentially precarious nature of domicile in a time of global political upheaval and genocide, it also indicated something further: a condition of homelessness that marked the peculiar relationship of the subject to the emerging world order.

Several recent trends confirm Adorno's insight. In an article in the Mail & Guardian 17-23 October 2003, 'An Unnatural Disaster', Andrew Simmon, the policy director at the New Economic Foundation, argues that the world needs to acknowledge a new category of refugees: environmental refugees – people displaced because of environmental disasters. He suggests that:

> the number of people seeking refuge as a result of environmental disaster is set to increase dramatically over the coming years. Ironically, given current attitudes, industrialised countries will resist accommodating them, and yet they will have become refugees as a direct result of the way the west lives.

Global warming, he asserts, may surpass wars and political upheavals as the primary cause of the displacement of people from their traditional homes. A similar claim is made by economist John Gray, in his critique of globalisation. He argues that globalisation, far from improving conditions in the 'third world', will instead result in further impoverishment. He writes:

> The overall effect of global free markets on the world environment will be unchanged. It will still work world wide to unload the costs that in an earlier, more accountable species of capitalism were borne by enterprises. More and more of the world will, as a result, become less and less habitable.' (Gray 1998: 81)

A new terrain is being mapped wherein whole land masses are expected to become submerged leaving their inhabitants literally without the material locus around which a nation might be imagined.[102] Even if the projected sea level rise does not occur, much territory has already been made unlivable. In Africa, the huge unmapped areas of land mines, the residual remains of colonial and postcolonial wars left under the skin of the land, mean that certain areas can only be marked off as too dangerous to enter. And as writers such as Ken Saro-Wiwa bear witness to multinationals who are deliberately homeless, exploit their vagrant status by avoiding the responsibilities of a more grounded or situated version of capitalism.[103]

The concept of 'dwelling' implies above all staying still. Around a dwelling there accrues habitual actions, reflection, hesitation, deliberations, civilities. [104] It suggests a relationship with time as well as with place; the soothing quality of approximately repeated actions through which the body gives form to the space around it. In a pathological form, this transforms into compulsion, the obsessional gesture which testifies to the impossibility of escaping the past or the brutality of the factory line in which the forced repetition of a constantly interrupted movement reduces gesture to mechanical motion.

The condition of homelessness, the obverse of dwelling, is, for Adorno, at once a physical and a psychical dislocation. Homelessness also has an ethical dimension – being at ease in the world as it is, of accepting what is the case, can only ever be achieved at the expense of others. It is in one aspect the quintessence of modernity's restless commitment to transformation, the glamour of perpetual motion in which 'one is always closer by not staying still'[105] and in another, the attrition and uncertainty of constant, involuntary removal, whether within cities or across state borders. Homelessness implies the existence of a home which one refuses to recognise or from which one has been banished. The end of nature suggests that what makes possible home, the condition of ease in relation to the body, to the land, to other creatures, human and otherwise, and to things themselves, may no longer exist.

For Georg Lukács, writing in 1914, homelessness was an unavoidable condition of modern experience. Following Hegel, he argues that ancient Greece represented the last 'integrated civilization'. For ages such as that of the Greeks, he maintains in the opening paragraphs of The Theory of the Novel:

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[102] Andrew Simmon discusses the case of the Island of Tuvalu which is threatened by rising sea levels. The people there, he comments have an 'ad hoc agreement with New Zealand to be allowed phased relocation' Mail and Guardian 17-23 October 2003.

[103] For an interesting discussion of Ken Saro-Wiwa work and conditions in the Rivers State as a result of oil production see 'Struggle in Ogoniland: Ken Saro-Wiwa and the Cultural Politics of Environmental Justice' in Adamson, Evans & Stein (2002).

[104] The concept of dwelling has particular resonances in the work of Heidegger. See Greg Garrard's 'Heidegger, Heany and the Problem of Dwelling' in Kerridge and Sammells (1998) for a discussion of the significance of the idea in Heidegger's writing.

[105] The line is from Thom Gunn's 'Man You Gotta Go' (1979).

> the world is wide and yet it is like a home, for the fire that burns in the soul is of the same essential nature as the stars; the world and the self, the light and the fire are sharply distinct, yet they never become permanent strangers to one another... Thus each action of the soul becomes meaningful and rounded in this duality: complete in meaning – in sense – and complete for the senses; rounded because the soul rests within itself even while it acts; rounded because its action separates itself from it and, having become itself, finds a center of its own and draws a closed circumference round itself. "Philosophy is really homesickness," says Novalis: "it is the urge to be at home everywhere." ' (Lukács 1962: 29)

In a preface added in 1962, Lukács explains how the book, worked on in the summer of 1914, was 'written in a mood of permanent despair over the state of the world. It was not until 1917 that I found an answer to the problems which, until then had seemed to me insoluble' (1962: 12). The 'solution', dialectical materialism, transforms 'transcendental homelessness' into the Marxist concept of alienation or estrangement. The consequence of capitalist relations of production and a society based on exchange value, not use value, homelessness appears no longer as an unavoidable condition but is inextricably linked to a particular historical moment.

Adorno's representation of homelessness, although not antagonistic to Marx's theory of alienation, approaches from a different direction. What is important, he argues in a letter to Benjamin, is defining and clarifying the 'dialectical image' because it suggests an alternative to the more rigidly deterministic Marxian model in which class theory is 'conceived of as some "deus ex machina"' (Adorno 1994: 54). [106] The aphorism on homelessness offers not so much a theory of alienation as a juxtaposition of elements, in which the physical, the ideological, the ethical and aesthetic collide both to elucidate and to trouble the concluding assertion: that 'wrong life cannot be lived rightly' (Adorno 1978: 39).

The aphorism begins with the house as a physical manifestation of the concept of home. In his claim, 'the house is past', Adorno registers the end of a particular relationship with place. Although in some senses an exaggeration – houses continue to exist – it holds a literal truth as well, a description of the world as it is: European cities reduced to rubble, and cars, trailers and camps as the new spaces of habitation. The 'period house' offers only a simulation of an earlier relationship, and the attempt to buy back as an individual what has been lost at the level of society – the possibility of dwelling.

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[106] His comments concern Benjamin's Arcades project which Adorno felt was being limited by Brecht's influence. Brecht, insisting on atheism as the proper mode for theorisation apparently discouraged the theological dimension of Benjamin's project (1994: 54).

In Walter Benjamin's 1935 exposé, Paris the Capital of the Nineteenth Century, he writes, 'to dwell is to leave traces'.[107] This comment occurs in the section which discusses the emergence and the shattering of the interior, as a space opposed to the office, the domain of work and commercial interests. The interior reflects the needs of the private individual, a refuge from the reality of the world of work. The interior, Benjamin suggests, 'is liquidated in the last years of the nineteenth century' (1999: 20). Before this, however, the interior has a particular relation to the world of objects. He writes :

> The collector is the true resident of the interior. He makes his concern the transfiguration of things. To him falls the Sisyphean task of divesting things of their commodity character by taking possession of them. But he bestows on them only the connoisseur value, rather than use value. The collector dreams his way not only into a distant or bygone world but also into a better one – one in which, to be sure, human beings are no better provided with what they need than in the everyday world, but in which things are freed from the drudgery of being useful.' (1999: 9)

In the nineteenth century, the collector is someone still able to insist on a different form of value, to resist the form of the commodity. Through never-ending labour he is able to maintain within the circumscribed space of the interior, a different relation to things, one in which he 'takes possession' of them rather than the other way around. He creates an imaginary world where things are removed entirely from the circuits of use-value and exchange value.[108]

The liquidation of the interior is linked for Benjamin to the *Jungendstil*, a style of architecture and design associated with a desire to restructure the human environment.

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[107] Adorno considered this work to be very closely allied with his own project. In a letter to Benjamin in 1934, he writes : 'You are well aware that I really regard this work [the Arcades] as part of our destined contribution to *prima philosophia....*' (1994: 53).

[108] For a discussion of Benjamin's Arcades Project see Susan Buck-Morss (1989) For a discussion of the relation between the work of Benjamin and that of Adorno see Buck-Morss (1977) ; Nicholsen (1997: 130-225) & Bernstein (2001: 116-118).

Their project is similar to that of William Morris, the aethetisization of everyday life, or the rescue of everyday life through art. Benjamin notes they 'find expression in the mediumistic language of the line, in the flower as the symbol of a naked vegetal nature confronted by a technologically armed world' (1999: 9). For Morris, everything must have a use-value, nothing must be purely decorative. Yet every useful object must also have aesthetic value; it must bear the trace of human work, the gestural mediation whereby people enter into a relationship with the world around them, with nature itself as the material substratum with which all labour engages.

The impossibility of home is only partly a rearrangement of space. The imposition of functionality on what has become the business of living means not only that places are transformed into neutral zones for particular forms of habitation but also that they no longer offer any resistance to the ordering principle of commercial interests. The collector at the end of the twentieth century is at least as thoroughly entangled in the circuit of exchange as anyone else, and if the absence of use-value remains a precondition, this only serves to create more intensely reified objects whose worth can only be established through exclusive auction houses. Outside this occupation of the very rich, collecting takes a new form in attempts to create or own a unique object, the largest ball of wool, or to undertake a singular action, to single-handedly pull a jumbo jet ten meters or to be able to break an unmatchable number of tiles across your forehead.[109]

Benjamin writes that 'the original form of all dwelling is existence not in the house but in the shell. The shell bears the impression of its occupant' (1999: 220). Yet dwelling , he suggests, is also a nineteenth century invention. Through habitual action, through the particular orientation towards things, it was possible for a particular class to fashion such a shell. (1999: 221) Things and spaces could still be wrested from the logic of commercial interest to form an environment which bore the trace, the outline of the occupant. The Second World War completes what at the end of the nineteenth century is already underway. It brings the literal and the figural together, so that in the excessiveness of its violence and destruction it mimics the psychical impossibility of private lives. In a sense, the war makes manifest what is concealed – that the subject can no longer leave a trace.

Instead what marks the world is the increasing domination of technology. (much has been written about the particular technological form of violence represented by the gas chambers) What in 1943 is still unknown is the precise force of nuclear technology, which can demolish not only individual cities but with the refinements of the technology during the cold war, the world itself. In one sense nuclear technology creates the world as a single global unit by making possible its destruction.

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[109] These examples are taken from the popular American television programme Riddley's Believe it or Not.

In Dialectic of the Enlightenment, Horkheimer and Adorno argue against the idea of fascism as abnormal, a rupture in the otherwise progressive history of Western societies towards greater equality and freedom. [110] Although few people might now accept the radicalness of Horkheimer and Adorno's claim that Stalinist Russia, consumerist America and Fascist Germany represent equivalent if diverse expressions of similar historical conditions, globalization, in the late twentieth and early twenty-first centuries suggests a new relevance to their analysis. It is as if the exaggerated claims about the impossibility of subjectivity within the increasingly administered world Adorno articulates in 1945, come to have a peculiar truth fifty years later.

At Home in the Universe

It is perhaps ironic that at the same time as the world is being created through the possibility of its destruction, a new narrative of home is gaining currency. In his introduction to The Copernican Revolution written in 1957, Thomas Kuhn suggests that the uniqueness of the project of Western science is that it combines what he refers to as 'the universal compulsion for at-homeness in the universe' with a close attention to detail. He writes:

> The sun god, Ra, travels in his boat across the heavens each day, but there is nothing in Egyptian cosmology to explain either the regular recurrence of his journey or the seasonal variation of his boat's route. Only in our Western civilization has the explanation of such details been considered a function of cosmology. No other civilization, ancient or modern, has made a similar demand. The requirement that a cosmology supply both a psychologically satisfying world view and an explanation of observed phenomenon like the daily change in the position of the sunrise has vastly increased the power of cosmological thought. It has channeled the universal compulsion for at-homeness in the universe into an unprecedented drive for the discovery of scientific explanations. (Kuhn 1957: 7)

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[110] A similar argument has been put forward more recently by Zygmunt Bauman in Modernity and the Holocaust (1989).

The desire for 'at homeness', Kuhn suggests is a condition of all societies. Its satisfaction requires that a meaningful context is created for human communities to inhabit. Through cosmologies, explanatory narratives, the external world is drawn into human meaning. By associating Western science with this mythologising process, Kuhn suggests that it too occupies such a position within societies. Yet he also makes a careful distinction. Western science depends on a close observation and explanation of details in a way that other mythologies did not.

Kuhn's proposes for science a role in Western societies that was previously in Western society the domain of philosophy – to provide individuals with the sense of occupying a place within a web, a network of relationships. The proliferation of popular science books published in the 1980s and 1990s which take as their theme 'the web of life' attempt to return to the reading public a sense of context which is no longer experienced, as if narrative can take the place of social practices, abstract knowledge form experience.[111] People are returned to nature, not through practical engagement, through actions, but abstractly by taking their imaginary place in relation to the other animals, plants, as elements within an ecosystem. In the late twentieth century, at least as the concept is used within the jargon of popular science, to be at home requires a level of abstraction. To feel what is in effect something entirely separate from experience. To feel a kinship with animals that you have never encountered, to structure your experience of belonging through the acquisition of knowledge.

Kuhn's comparison between science and cosmologies is interesting because it challenged the dominant discourse on science which tends to elide its historical and cultural dimension.[112] But it also misses something about cosmologies, which is that they are not simply knowledge. Cosmologies are part of a complex set of ritual and social practices. They require observances, not observations and imply a different relationship between the knowledge and the holder of the knowledge, between object and subject. Cosmologies define not simply the physical world but more importantly, the ethical parameters that govern interactions between people and between people and their surroundings.

If as Kuhn suggests, science functions cosmologically in Western societies, and

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[111] See for example Kauffman's At Home in the Universe: The Search for Laws of Complexity (1995).

[112] For a discussion of the work of Thomas Kuhn and the impact of his ideas see Sardar (2000).

extends through the powerful influence of these societies into global networks, developments in cloning, genetic engineering and nanotechnology bring a peculiar disturbance into science's framing of the world as home. In the early nineteenth century, the dominant understanding of alienation was religious – the loss of the originary home, the garden. In the late twentieth century the problem of home is different but the metaphor remains apt: the loss of the world as home through the acquisition of a particular kind of knowledge, and the practices such knowledge gives rise to.

In the first chapter of this thesis I talked about the process of abstraction through which experience is excluded from authoritative knowledge both in the sciences and by analogy in the human sciences. I noted a movement, in the later part of the twentieth century and early part of the twenty-first century towards a recontextualization, re-embodiment, an interest in the sensual, the everyday, everything which science or empiricism sought to exclude. Although this tendency does appear earlier in the Romantic movement and other cultural resistances to the 'disenchantment of the world,' I argue that in the late twentieth century it assumes a particular intensity and that this intensity is linked to a crisis in confidence in the material world, articulated through the idea that nature has ended. It is not simply a philosophical crisis; it is the articulation of people's unease about their environment, about the way they live now and the way they can expect to live in the near future.

But as I also suggest in the first chapter, nature has always been an ambiguous value in political debate. As Martin Jay has observed, the movements which insist on the concrete, the material against the abstraction and impersonality of scientific rationalism, are not necessarily on the side of freedom, as in the case of the Nazis, and their affirmation of tradition, garden and community.[113]

With germline genetic engineering human intervention is extended into what constitutes the species, and consequently what constitutes the species being. Through its manipulation of embryonic DNA, not simply the body, but of all physiological aspects of human development are subjected to the control of science, and ultimately to the vagaries of the marketplace. With nanotechnology, the manipulation of the atomic structure of substances by miniature robotic machines, germline genetic engineering extends human control, drawing into the ambit of the productive forces of society, the production of life and the production of matter.

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[113] 'No State of Grace: Violence in the Garden' paper presented at conference, The Aesthetic in an Anti-aesthetic Postmodern Culture , University of California at Berkeley, 2002.

In his new book, Enough: Staying Human in an Engineered World, McKibben suggests these new technologies, which are on the verge of being incorporated into the structure of everyday life at least in the developed world, need to be resisted. Technological developments in the second half of the twentieth century, he suggests, have followed a particular trajectory. He writes:

> What is important about these changes is that they all went in the same direction: they traded context for individual freedom. Maybe its been a worthwhile bargain; without it we wouldn't have the prosperity that marks life in the West, and all the things that prosperity implies. Longer life span, for instance; endless choice. But the costs have clearly been real, too: we've tried hard to fill the hole left when communities disappeared, with "traditional values" and evangelical churches, with back-to-the -land communes and New Age rituals. But those frantic stirrings serve mostly to highlight our radical loneliness. Even the surrounding natural world, as I argued in *The End of Nature*, no longer serves as a ground, a context; we've reshaped it so thoroughly, now changing even the climate, that it reflects our habits and appetites and economies instead of offering us a doorway into a deeper world. (McKibben 2003: 45-46)

The new technologies of germline genetic manipulation and nanotechnology, McKibben suggests, institute a further level of dislocation – initiate a movement across a boundary which once crossed will have a fundamental impact on the meaning of human life.

Enough, like McKibben's earlier, The End of Nature, attempts to return experience to the cosmological imaginary of science. What would be the experience of running, he asks, if you are aware that you have been genetically altered so as to enhance your physical capacity? What emerges is a kind of disquiet, an unease which, McKibben suggests, has to do with the possibility of meaning in a context without 'natural' limits. He suggests that we inhabit 'a moment when we stand precariously on the sharp ridge between the human past and the posthuman future, the moment when meaning might evaporate in a tangle of genes and chips'(McKibben 2003: 198).

McKibben's book provides a thoughtful account of the state of the new technologies, their potential, and the concrete ways in which they might restructure the conditions of everyday life in developed countries. Central to his disquiet is what he describes as the 'fragility of human meaning', the feeling of radical doubt about the boundaries between what is artificial, what is designed, and what is not. Although McKibben does not frame it in these terms, the world he describes is one in which subjectivity itself has become commodified, one in which the distinction between what is real, what is natural and what is produced no longer has currency.

The kind of anxiety which surrounds these new technologies suggests that they might usefully be considered in relation to that class of phenomenon Sigmund Freud, in a very different context, describes as inducing feelings of uncanniness.

Uncanny Technologies

In his article on the uncanny, Freud notes the peculiar etymological relationship between the term '*heimlich*' meaning homely or familiar and its ostensible opposite, the word 'unheimlich' suggesting something unfamiliar or uncanny. *Heimlich*, from indicating a place friendly and intimate, free of ghostly influence, shifts towards the idea of *heimlich* as indicating something withdrawn from view, something secret and hidden. In relation to knowledge it comes to indicate a private knowledge linked with ideas of mysticism and the occult. This shift develops further to include a sense of inaccessible knowledge, something hidden and dangerous (Freud 1955: 377). At this point, through its association with ghostliness and fear, it comes to coincide with the meaning of *unheimlich*. After reviewing several examples of this progression in different dictionaries, he comes to the conclusion that: '*heimlich* is a word the meaning of which develops towards an ambivalence, until it finally coincides with its opposite, '*unheimlich*' (1955: 77).

In trying to analyse the psychical cause of the uncanny effect, Freud refers to the work of Jentsch, who suggests that one of the crucial elements is an intellectual uncertainty about what is real, about whether, in the case of E.T.A. Hoffman's story 'The Sand Man', the doll Olympia is human or an automaton. Inanimate objects in the story appear too much like animate ones.

In his list of things associated with the uncanny Freud also includes the idea of the double, where blurring of identities occurs between subjects and 'there is a doubling, dividing and interchanging of the self' (1955: 234); the recurrence of situations, things or events and involuntary repetitions which 'forces upon us the idea of something fateful and inescapable' (1960: 390); the sense of the omnipotence of thoughts; death and dead bodies and madness and epilepsy.

For Freud, intellectual uncertainty is not the primary cause of the uncanny, since it frequently occurs without an uncanny effect. He focusses instead on the role played by the eyes and the threat to the eyes in the story of 'The Sandman'.[114] For Freud, the threat to the eyes can be linked, through the infantile Oedipus complex, to the fear of castration. Yet the threat to the eyes also seems to have a remarkable connection with intellectual uncertainty, since observation is precisely the scientific act which fixes the world in a stable relation to the viewer. The eyes have a literal and metaphorical value as perceptual organs which enable a particular kind of orientation toward the world, one in which the contours of the real can be defined. [115]

Although as Freud points out children frequently imagine dolls to be real, this does not compare with what takes place in 'The Sand-Man' where Spalanzi and Coppola create an automaton, a doll who appears to be human but who is, in fact, a creature of their own design. This is precisely the anxiety that animates McKibben's rejection of germline genetic engineering. He writes:

> At the moment we still perceive – sometimes dimly– the distinction between the real and the artificial. In fact, there are signs that more of us take it more seriously all the time: worried and unsatisfied by a life in front of the TV, we reach for some of these more fulfilling disciplines. We run; we take up instruments. Or at least, we yearn to do so. But how fulfilling would those focal practices be once the line is fully blurred - once we have been turned into a kind of tool? If you've been designed and programmed to run, what meaning can running hold?' (2003: 55)

What McKibben identifies here can be read as a form of resistance, however inchoate, to the administered world in which the culture industry dominates all aspects of life. The 'yearning' suggests an acknowledgment of lack and the 'fulfilling disciplines' an attempt at a personal level to work against the alienation of the body, to reanimate it through practices in which it is engaged at a physical level; practices in which the breath, the hands, legs and the muscles are required to act together reminding the body of its own coherence, that it not merely a collection of parts. Training partially releases the body from disuse and inertia and awakens in it a physical memory of its own capacity for expression.

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[114] In the story, Nathaniel, the main protagonist, is frightened as a child by a man who visits his father and who threatens to put bits of hot coals in his eyes. This man, Coppelius ,is identified by Nathaniel with the Sand-Man, a figure who appears in tales told to frighten children into going to bed. The Sand-Man was said to throw handfuls of sand into children's eyes.

[115] Martin Jay discusses this in detail in his chapter on the Enlightenment in Downcast Eyes (1993).

The genetically modified child, like the doll Olympia, is a product of design and labour. Although genetic factors do not programme human behaviour, McKibben suggests, they do influence it, and, more importantly, having been modified in some way results in a profound intellectual uncertainty about to what extent you are determined not simply by your biology, as Freud had suggested fifty years earlier, but in a very fundamental sense by the market. What is familiar, the body, but also more disturbingly, subjectivity itself, becomes unfamiliar, estranged.

In 'The Sand-Man' it is not only Olympia who is an automaton, in the sense that she is controlled by forces outside herself. Nathaniel himself appears controlled in some mysterious way by the sinister father figures who in their constant mocking reference to eyes drive him to madness and suicide. Each time Nathaniel attempt to establish through observation the nature of the real, (whether for instance Olympia, with whom he has fallen in love, is a human or a doll) these sinister father figures appear and his health and ability to engage with the world is destroyed. Like the subjects McKibben describes, who can only yearn weakly for something beyond what is offered them by television, Nathaniel's autonomy is weak and easily overturned. He is subject instead to compulsions, to involuntary repetitions of a past he cannot escape.

If science takes over from philosophy the project of transforming the world into home and extends its domain to include not simply the encountered material world but also the imagined world of the universe, it also intervenes in structuring the relationship between the real and the natural. It does this abstractly through the production of knowledge and an insistence on the forms the natural can assume, and materially through technologies based on these assumptions. Although this knowledge is spread thinly over the world, making only fragmentary and glancing impact on most people's interpretation of their experiences, the material ways in which what exists in the world is altered by technology extends further.

THE REAL AND THE NATURAL

The Real Without Nature

McKibben presents his argument against the new technologies of genetic engineering in terms of a loss of meaning. Francis Fukuyama, in his recent book, Our Posthuman Future, is equally concerned about these new developments but approaches the question from a slightly different perspective. For Fukuyama, the crisis represented by the emergence of the 'posthuman' is a political one because it implies the end of human nature as an essential category and invalidates political philosophy based on 'natural rights'. It is necessary, he argues, to ground human rights in human nature because the other ways of asserting the validity of human rights, through religion or through political consensus, have proved too fragile a basis on which to build an ethical position. He writes: 'It is my view that the common understanding of the naturalistic fallacy is itself fallacious and that there is a desperate need for philosophy to return to the pre-Kantian tradition that grounds rights and morality in nature' (2002: 112).[116]

What happens to the real when it cannot lean against nature? The terms 'ethics' and 'morals' are both derived from roots, in Greek and Latin, which have to do with custom and manner. They are connected with habitual actions which fashion a shell, or a dwelling, a place where the subject can linger ontologically. Fukuyama's anxiety about postmodernity or the poststructuralist turn seems be about the impossibility of fashioning that shell, of constituting through repeated action the network of traces through which custom can be formed. Nature is recalled to ground a political philosophy which in the face of the unreason of the world, no longer has complete faith in reason.

The real as the domain of politics and history, without nature, is for Fukuyama profoundly disturbing and ungrounded. Yet there is something contradictory about Fukuyama's appeal to 'human nature'. Right at the end of the book he concludes with the following statement:

> It may be that we are somehow destined to take up this new kind of freedom, or that the next stage of evolution is one in which, as some have suggested, we will deliberately take charge of our own biological makeup rather than leaving it to the blind forces of natural selection. But if we do, we should do it with eyes open.

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[116] Fukuyama sees Hume not as a proto- Kantian but rather as part of an older philosophical tradition which derives rights from human nature (2002: 231 n.16).

> Many assume that the posthuman world will look pretty much like our own – free, equal, prosperous, caring, compassionate - only with better health care, longer lives, and perhaps more intelligence than today. (Fukuyama 2002: 218)

Fukuyama, who teaches at the Paul H Nitze School of Advanced International Studies in the United States, bases his argument on a particular version of the real, one which, like the mode of thought of the science he is criticizing, is forced to exclude from the equation any real apprehension of history, of the concrete facticity of most people's experience of inequality and poverty. His apparently naive reading of the world as prosperous and free and human nature as caring and compassionate appears to stand in opposition to the to the self-hatred of the technophiles discussed in chapter three but in fact represents merely the opposite side of the same coin. It participates in a mode of thinking in which what is particular and historical must be subordinated to a conception of nature as a general ordering principle. That the substance of this nature is open to dispute, that it is unclear whether human nature is sufficient and constructive or insufficient and destructive, suggests that posing the question in these terms leads only to further abstractions, to pointless disputes over the content of the real. An appeal to nature, as a structuring principle, only leads further away from the stable ground Fukuyama hopes to establish.

What genetic technology represents, for both its opponents and its celebrants, is a final separation between nature and history. For Fukuyama and others, this appears as a loss of nature, for the technophiles, as an escape from nature. Yet the very abstraction of the debate suggests neither side is able to engage with the real in concrete historical terms. The debate itself provides each side with an escape from history, an escape from an apprehension of the real as complex, concrete, metabolic interaction between nature and history. Adorno's writing provides an interesting alternative approach to the by now somewhat sterile if no less urgent debate about whether genetic engineering is a good thing. At the moment when, fearfully or enthusiastically we appear to be approaching something which might be called unnatural history, or postnatural history, it might be useful to return to Adorno's 1932 essay 'On the Idea of Natural History'.

Unnatural history

In the essay 'On the Idea of Natural History' Adorno proposes a different relationship between nature and history. Instead of insisting on the primacy of one or the other, he argues that they are inseparably interwoven.[117] His formulation of the idea of 'natural history', he explains, is not concerned with the pre-scientific tradition of the seventeenth century or with a history of nature as an object of the natural sciences. It focusses rather on a mode of interpretation which permits an apprehension of concrete history without setting it up in opposition to a realm of static and unchanging nature. His discussion turns on the question of the accessibility of the real and the way in which different modes of understanding the existent permit or fail to permit engagement with concrete history.

At the beginning of the essay Adorno explains the two concepts which he hopes to overcome. The one is nature as myth, as that 'fatefully-arranged and predetermined being that underlies history'; the other, history as the 'mode of conduct established by tradition that is characterized primarily by the occurrence of the qualitatively new'(1984: 111). Yet he resists an attempt to define how the concept of 'natural history' exceeds or transforms the terms it contains. Instead he suggests the juxtaposition of the terms enables an analysis which pushes 'these concepts to a point where they are mediated by their apparent difference' (1984: 111). Thus he first approaches the question from the standpoint of neo-ontological thought, in which through a formulation of the concept of being, historicity itself is naturalized, and then shifts to a reading of the philosophy of history in which the historical being of nature is revealed.

Adorno's criticism of neo-ontological thought centres on its misrecognition of the real as open to a non-conceptual apprehension. Phenomenology claims, he argues, to replace the idealistic formulation that all categories of being can be grounded in 'certain fundamental structures of subjectivity' with 'another kind of being, a region of being that is different in principle, a transsubjective, an ontic region of being' (Adorno 1984: 112). This gives rise to the articulation of question of the meaning of being, the meaningfulness of the existing or the meaning of being as possibility. Adorno writes:

> Only when reason perceives reality that is in opposition to it as something foreign and lost to it, as a complex of things, that is, only when reality is no

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[117] This speech was presented to the *Kantgesellschaft* in July 1932 in Frankfurt. Susan Buck-Morss comments that it represented 'Adorno's contribution to the debate on historicism which had been going on at the university since Max Scheler and Karl Mannheim taught there in the twenties and worked to establish a sociology of knowledge' (1977: 53).

> longer immediately accessible and reality and reason have no common meaning, only then can the question of the meaning of being be asked at all. (1984:112)

The loss of the real, the impression of the existent as something foreign, which for Adorno constitutes a specific historical condition, becomes the basis for a philosophical position. The meaninglessness of the real is translated into its resistance to meaning and this opacity becomes the domain of being itself. Adorno writes:

> I mean nothing else than that the attempt of neo-ontological thought to come to terms with the unreachability of the empirical continually operates according to one schema: precisely where an element fails to dissolve into determinations of thought and cannot be made transparent, but rather retains pure thereness, precisely at this point the resistance of the phenomenon is transformed into a universal concept and there resistance as such is endowed with ontological value. (1984: 115)

Despite the incorporation of historicity as the structure of being, ontological thought remains dependent on a concept of autonomous reason. Although the real is no longer conceived of as a systematic whole, it nevertheless is susceptible to the imposition of a structural unity, which implies, Adorno suggests, that 'he who combines everything existing under this structure has the right and the power to know adequately the existing in itself and to absorb it into the form' (1984: 116).The impossibility of this epistemological task makes it necessary to find a new way of formulating the question. Shifting to the perspective of the philosophy of history, Adorno locates the source of the concept of natural history in Lukács work on aesthetic material in the Theory of the Novel. For Lukács the lost world of the real constitutes what he refers to as second nature, the world of conventions. He writes that:

> Where no aims are directly given, in the process of *becoming-man,* the structures which the soul encounters as the arena and sub-stratum of its activity among men lose their obvious roots in supre-personal ideal necessities;...They form the world of conventions, a world from whose all-embracing power only the innermost recesses of the soul are exempt, a world which is present everywhere in a multiplicity of forms too complex for understanding. Its strict laws, both in becoming and in being, are necessarily evident to the cognisant subject, but despite its regularity, it is a world that does not offer itself either as meaning to the aim-seeking subject or as matter, in its sensuous immediacy, to the active

> subject. It is second nature, and like nature (first nature) it is determinable only as the embodiment of recognised but senseless necessities and therefore is incomprehensible, unknowable in its real substance. (Lukács 1978: 62)

Adorno quotes this section in some detail, inserting into it a reminder that for Lukács first nature is also alienated nature, 'nature in the sense of the natural sciences' (Adorno 1984: 118), not something sensuous and immediate.

Confronted by the world of second nature, Adorno writes, 'the problem of natural history presents itself in the first place as the question of how it is possible to know and interpret this alienated, reified, dead world' (1984: 118). For Lukács, at this stage of his thinking, the problem of awakening this world is conceived in metaphysical terms, as a form of 'theological resurrection'. For Benjamin, the project of awakening is part of the task of philosophical interpretation and can best be understood through the mode of allegory. Adorno writes:

> Allegory is usually taken to mean the presentation of a concept as an image and therefore it is labelled abstract and accidental. The relationship of allegory to its meaning is not accidental signification, but the playing out of a particularity; it is expression. What is expressed in the allegorical sphere is nothing but a historical relationship. (1984: 119)

Allegory as Benjamin defines it, Adorno suggests provides 'a presentiment of the procedure that could succeed in interpreting concrete history' (1984: 121). This procedure, which is the project of natural history, involves a different conceptual approach to that which is based on a project whose foundation is constituted by a general conceptual structure' (1984: 120). What Adorno is describing here is, of course, the 'constellation'.

As I have already mentioned in Chapter one, the constellation does not aim at the definition and clarification of terms but rather places a form which holds them in a particular relation to one another. Constellations become the mode of illuminating not fixed coordinates but the ever shifting ground of historical facticity so that in the moment of their juxtaposition, they are temporarily released from their solidification in second nature. Nature in its transience constantly invokes the historical and thus works against the seemingly fixed character of second nature.

Adorno writes:

> For radical natural-historical thought however, everything transforms itself into ruins and fragments, into just such a charnel house where signification is discovered, in which nature and history interweave and the philosophy of history is assigned the task of their intentional interpretation. (1984: 121)

The charnel house, an image taken from Lukács, becomes the figure for understanding the reified world, not as a totality but as a collection of fragments ceremoniously housed together but constantly in a process of decay.[118] Philosophy, confronted with the world as charnel house, finds its own impulse, 'the urge to be at home everywhere in the world' turned against itself. To be at home in a charnel house is to belong there, to be one of the dead. The task of philosophy thus needs, Adorno suggests, to be redefined so that it does not become merely the legitimation of the given – the task of making the charnel house more homely.

The Task of Philosophy

In the political philosophy of Fukuyama, the 'real' offers itself to the autonomous subject without any interruption. Surveying the events of the twentieth century, he claims, can lead to only one conclusion: that socialism and other 'utopian political projects' are untenable. The 'failure' of socialist revolutions in Russia, China, Cuba and elsewhere, he argues, indicates that such projects are incompatible with human nature. He writes:

> Political institutions cannot abolish either nature or nurture altogether and succeed. The history of the twentieth century was defined by two opposite horrors, the Nazi regime, which said biology was everything, and communism, which maintained that it counted for nothing. Liberal democracy has emerged as the only viable and legitimate political system for modern societies because it avoids either extreme, shaping politics according to historically created norms of justice while not interfering excessively with natural patterns of behaviour. (Fukuyama 2002: 14)

The figure Fukuyama uses to apprehend to the world is the pattern. Historical events arrange themselves into patterns; human behaviour follows natural patterns. According to his reading, one socialist revolution after another cannot be sustained and a pattern is formed. In a pattern certain forms are repeated and the regularity of this repetition, however complex the individual forms, makes possible prediction. The word 'pattern' or 'patron' begins by designating an ideal form, something worthy of imitation and from there shifts to include the idea of something typical, an example and also the idea of a plan or design.

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[118] The image of the charnal house appears in Lukács' discussion of first and second nature in The Theory of the Novel. He writes:'This second nature is not dumb sensuous and yet senseless like the first: it is a complex of senses–meanings–which has become rigid and strange, and which no longer awakens interiority; it is a charnel house of long dead interiorities' (Lukács 1978: 64).

As a method of interpretation, it implies the discovery of repetitions which allows particularities to be subsumed under general structures. Seeing patterns involves recognising typical examples, finding what is exemplary, excluding everything that is random and contingent, and identifying interruptions which cause deviations and irregularities. It also implies that everything is within grasp, that the material from which the pattern emerges, whether it is history or nature, is entirely available to the organising subject.

Leaving aside the validity of the particular patterns Fukuyama identifies and the conclusions he draws from them for the moment, this method provides a useful contrast to that proposed by Adorno in the idea of the constellation. The constellation is also an arrangement but the figure to be found in it is enigmatic and contingent. The constellation represents for Adorno the temporary configuration of elements in such a way as to create a momentary yet powerful and transformative illumination. Unlike the pattern, the constellation draws things into a relationship which does not assume repetition and regularity. It is not about abstracting from the everyday a supposed order. Rather it wishes to bring into interpretation, into thinking, the 'density of experience' that the act of abstraction, inherent in the identification of patterns, excludes.

Philosophy, Adorno argues, cannot operate according to the same principles as the natural sciences. He writes:

> the central difference (between science and philosophy) lies...in that the separate sciences accept their findings, at least their final and deepest findings, as indestructible and static, whereas philosophy perceives the first findings which it lights upon as a sign that needs unriddling. Plainly put, the idea of science (*Wissenschaft*) is that of research; that of philosophy is interpretation. It remains the great, perhaps the everlasting paradox: philosophy persistently and with the

> claim to truth, must proceed interpretatively without ever possessing a sure key to interpretation; nothing more is given to it than fleeting, disappearing traces within the riddle figure of that which exists and their astonishing entertwinings. (Adorno 2000 [1931]: 31)

The real for Adorno is not self-evidently present to the subject but occurs only as a 'riddle figure', a collection of traces. The task of philosophy is to interpret these fragments, not so as to reconstruct something that has been lost, but to purposefully bring things into a proximate relation so that each element reveals something about the others, and in the form that they temporarily create, something becomes apparent which was previously invisible. The affinity of this form of philosophic interpretation with a materialist approach, Adorno explains, is precisely that it refuses to accept or justify the real but rather, following the example of psychoanalysis, turns to the 'refuse of the world' (2000: 32) in order to find traces of life, elements in the riddle of the existing, which in other places have been ordered out of existence by the standardizing effects of the culture industry.

The form of the riddle acknowledges the contradictory nature of its material, the existing world, and represents these contradictions in the form of a partial figure, to be interpreted. It does not assume one form would serve as a pattern or model for all such acts of interpretation. Adorno writes: 'The idea of philosophic interpretation does not shrink back from that liquidation of philosophy which seems to me signalled by the collapse of the last philosophic claims to totality' (2000: 34).

For Fukuyama, nature still provides the ground for the establishment of a totality, a system or structure which could sustain interpretation and promise ultimately to deliver a complete knowledge of the world. Nature needs to be defended against interference by genetic engineering precisely because in the form of a model it allows the world, abstractly at least, to exist as a totality. And this totality provides the basis for way of judging human behaviour. Fukuyama's argument against what he calls 'cultural relativism' is precisely its undermining of this totality and the way this impacts on questions of ethics and morality, on the potential limits and forms of the 'patterns of human behaviour' he wishes to establish. Cultural relativism, he argues, as a mode of interpreting human behaviour, in its refusal of nature as an authoritative structure, loses its ability to make convincing claims about human behaviour.

What is at stake for Fukuyama is what he sees as the uncertainty of modes of interpretation which resist the singular authorising narrative that 'nature' might provide. His attitude reflects a familiar conservative response to poststructuralism's challenge to the hegemony of scientific rationalism. Yet the context in which his argument occurs introduces a new element. His defense of an older form of science, the speculative theories of evolution against the new, the technologies of genetic modification, reveals the contradictions of his position. Confronted with the logical conclusion of the scientific project to control nature in all its aspects, nature appears suddenly as something to be saved from science.

Nature's hypervisibility, its sudden inflation of value, appears at the moment when what science has made homely suddenly becomes unhomely, where what was experienced as familiar and habitual becomes something strange and compulsive. Genetic engineering, in the name of freedom of choice, finally threatens to dispel the illusion of the autonomous individual, and to reveal the hidden truth of the world as it is, that what appears animate is actually dead, and what appears autonomous is actually automated or controlled. Fukuyama's anxiety about authority is about confronting what has already been lost: the subject's own ability to act autonomously in the world, to be a subject and not, like the doll Olympia, simply to resemble one.

In response to the question of relativism, Adorno comments that:

> Ever since puberty, when it is customary to get excited about such questions, I have never again really understood the so-called problem of relativism. My experience was that whoever gave himself over in earnest to the discipline of a particular subject learned to distinguish very precisely between true and false, and in contrast to that experience the assertion of general insecurity as to what is known had something abstract and unconvincing about it. Let it be that confronted with the ideal of the absolute, everything human stands under the shadow of the conditional and temporary - what happens when the boundary is reached at which thought must recognize that it is not identical to being, not only allows the most convincing insights, but forces them. (Quoted in Buck-Morss, 1977: 53)

The difference lies in the orientation of the perceiving subject to the material he/she engages with. For Adorno, what makes impossible the vertigo of relativism is a refusal of abstraction. The person who gives 'himself over in earnest to the discipline of a particular subject' would in the act of giving up himself find a relation to the material world which a commitment to abstraction forecloses. Instead of the identification of patterns, Adorno proposes the idea of an 'exact fantasy' in which 'the demands to answer the questions of a pre-given reality each time, through a fantasy which rearranges the elements of the question without going beyond the circumference of the elements, the exactitude of which has its control in the disappearance of the question' (2000: 37).

What is exact are the dimensions of the engagement through which the subject realises the limitation of thought and its inexact relation to being. The constellation is a model for a philosophic project which recognises, even before the environmental crisis and the technologies of genetic engineering made visible the end of nature as totality, the end of the illusion 'that earlier philosophical enteprises began with: that the power of thought is sufficient to grasp the totality of the real' (Adorno 2000: 24).

It is only when approached in this way that the existent can be apprehended exactly, without the kinds of reduction at work in thinking that insists on unequivocal identities and precise definition. Giving yourself over to the subject means accepting the form it takes, and the form of the world as it exists today is irreducibly contradictory.

Conclusion – The Riddle of Living

The problem with both McKibben and Fukuyama's critique of the posthuman is that they are unable to confront the world as it is. Each can only extrapolate from their own experience, the experience of the First World. If McKibben is more critical of the conspicuous consumption that marks American culture and less inclined to accept a reading of it as predominantly 'free, equal, prosperous, caring and compassionate' (2002: 18), he nevertheless participates in the debate from the standpoint of comparative security. His concern with the loss of 'meaning' reveals, as Adorno suggests in relation to the concerns of ontology, just how completely the real has been lost. A sign of its absence is the persistent reiteration of the autonomy of the subject. Against an industry which promotes itself on the basis of the free market, of extending the choice of the individual, a rejection of technology appears always as a rejection of freedom. Fully apprehending that it is in fact the opposite, the penetration of the market into the very cells of body, means acknowledging the unfreedom that already exists. There is no room in either McKibben's or Fukuyama's account for those who already are without choices.

In his segment on homelessness, Adorno writes: 'the hardest hit, as everywhere, are those who have no choice. They live, if not in slums, in bungalows that by tomorrow may be leaf-huts, trailers, cars, camps, or the open air' (1978: 39). As elements within the constellation whose configuration illuminates the global as a necessary concept not of totality, grasping the world as a whole, but of the impossibility of totality, those who have no choice, for whom the house is literally past, are brought into proximity with those who are exiled and those who in the face of such homelessness must consider their own ethical position. Such an ethics should not be based on some abstraction, the idea of human nature, but rather on the experience of living, of confronting the real in all its impossibility.

In the essay 'Walking in the City' (1984), Michel de Certeau talks about the contrast between the city viewed from above and the experience of walking. In the city, he suggests, the proper names which formerly allowed people to negotiate a relationship with spaces, which formed a 'foggy geography of meaning', are gradually disappearing. Furthermore:

> The same is true of the stories and legends that haunt urban space like superfluous or additional inhabitants...But their extermination (like the extermination of trees, forests and hidden places in which such legends lives makes the city 'a suspended symbolic order'. The habitable city is thereby annulled. Thus, as a woman from Rouen put it, no, here 'there isn't any place special, except for my own home, that's all...There isn't anything.' Nothing 'special': nothing that is marked, opened up by a memory or a story, signed by something or someone else. Only the cave of the home remains believable, still open for a certain time to legends, still full of shadows. Except for that, according to another city dweller, there are only 'places in which one can no longer believe in anything'. (1993: 159)

In the absence of stories even the habitable spaces of the first world become less habitable so that in the end it is only the limited domain of the home that contains the possibility of engagement.The subject is driven out of the spaces of communality, the city streets, the open air, into a smaller and smaller space, and at last find themselves locked up in the house, unable to leave a trace beyond the that of ownership.

What interests me is the way De Certeau's description of the annullment of the habitable city echoes Adorno's earlier comment on homelessness. If in the late twentieth and early twenty-first century, cities in Europe are not reduced to rubble, their designs just as surely, although more subtly and insidiously, displace the living subject. The unmarked city offers no point of subjective engagement for its inhabitants.

In his description of the American landscape in *Paysage* , the extract from Minima Moralia quoted at the start of Chapter two, Adorno comments on a similar blankness. He notes the expressionlessness of the roads which appear to have no relation to the country-side they pass through. Neither the road nor the natural landscape, he suggests, bear any traces of human engagement. He writes that 'it is as if no one has ever passed their hands over the landscape's hair' (1978: 48). This missing gesture, this gentle yet expressive touch, seems a fitting metaphor for Adorno's interpetative project, one which involves not a rigid separation of subject and object but rather a yielding to the object.

In Negative Dialectics, he writes: 'dialectics is the consistent sense of non-identity. It does not begin by taking a standpoint' (Adorno 2000: 5). The dialectical method does not impose on the object its own form. Instead it permits precisely the delicate gesture suggested by running your hand over something and finding in the roughness of the texture all those aspects which are not apparent to identity-thinking, those things which 'to classifying procedure are considered either a matter of indifference or a burden' (2000: 162). This act of apprehending the world is also not indifferent. In the expressive gesture of running a hand over the landscapes hair, both subject and object are, momentarily, comforted.

This does not mean finding a condition of ease, a way of being at home in the world. Instead it recognizes the painfulness of such limited contact. Adorno's philosophy offers a means of engagement with precisely what appears to refuse engagement, the world of the existent, not through an abstract apprehension of it as system, but rather through a process of giving yourself up to the contradictions of the real, to inhabit them in a way the world itself can no longer be inhabited.

Conclusion

I began this thesis by asking what elements might be drawn into a constellation of nature at the end of the twentieth and early twenty-first century. I suggested that one way in which this configuration could be imagined spatially was through the concepts of outside and inside and the way in which elements associated with nature are arrayed across this apparent opposition.

The image which emerges from the configuration of elements which constitute the phenomenon I have been calling 'the end of nature' is not a photographic image, one in which what is natural is revealed as a self-evident truth. Instead, like Bacon's painting of the running dog the moment of confrontation is blurred. The elements are all in motion, in history, shifting within their own domains and in relation to each other. Yet a likeness does emerge. In similar though not identical way, in relation to external nature, in relation to animals and in relation to the human body nature emerges as that which holds and conceals the irredicible contradictions of living in consumer culture. This likeness makes visible the way things like landscapes, animals and human bodies, become marginalized and/or reduced to commodities sometimes even in the very act of trying to conserve them from the violence and degradation of the practices of a globalizing industrial culture. But to say only that would be to miss something important.

What also becomes evident in the phenomenon I am calling the end of nature is not only the physical degradation and reification but also an inflation in the value of the concept of nature. If in some ways, the new value acquired by nature seems simply to repeat an earlier movement, in which reified nature becomes the desired alternative to the degraded landscape of industrial production, this interpretation does not sufficiently account for the extent and intensity of recent interest in nature. This new visibility of nature indicates also, I argue, an absence or an inadequacy in the way in which theories of the postmodern have apprehended the real. Nature returns as a sign of loss not only because of real environmental concerns, but also because, in a lived condition of increasing abstraction, it contains the promise of something outside.

The inflation in the value of nature is not only a turn away from history. It does not necessarily mean screening off lived experience, poverty, the friction of the real. It also involves recognizing something about the agency of what is not human. There is a very material way in which certain elements of what is called nature enter human culture awkwardly and resist the pressure to be subsumed under the logic of exchange. If dogs as pets are unmistakeably commodified, as subjects they show a baffled disregard for the principles of consumer culture. Instead in their enquiring gaze might be read a reminder of what it might mean for humans to have a different relationship with their bodies, one in which they are not condemned to inertia or random, meaningless motion. If in the world of representation, the model of the desirable human body grows increasingly blank and expressionless, even there it does not accept this erasure quietly and in its excesses displays to world its damage.

Perhaps this is one way of understanding Adorno's somewhat enigmatic claim at the end of 'Man and Beast: 'What threatens the prevailing praxis and its inescapable alternatives is not nature, with which that practice coincides but the remembrance of nature' (2000: 211-212). The concept of nature with which 'the prevailing praxis' coincides is that of mythic nature. It is this idea of nature as the 'fatefully arranged predetermined being' which 'underlies history' that Adorno seeks to overcome. It is the idea of nature as rational or mythic system which determines human activity. The remembrance of nature, on the other hand, contains no such pretention to systematised knowledge. It indicates instead what might be considered outside the administered world – those moment in which human bodies or animals or natural beauty recall something which does not fit into the smooth world of equivalence.

In the context of a single globalizing industrial culture, what might still be considered outside becomes critical. To be outside in this context contains the promise not of an altogether different mode of existence, a utopia, but of a margin of resistance, a breath of air in the claustrophobic atmosphere of the administered world.

Adorno suggests that the usefulness of the notion of the constellation lies not with its ability to reveal the secret intentions of reality but rather with its capacity to 'interpet unintentional reality' in such a way that the combination of elements makes possible the negation of the initial question. Perhaps one of the questions which is negated by the image which emerges from this thesis is the question: 'Has nature ended?' or 'Is nature ending?' This is not to dispute the extent and significance of the environmental degradation McKibben describes or to take issue with his sense that the possibility of stepping outside is increasingly limited. But as a rhetorical move the notion of the end of nature shuts down precisely what should be opened up – the particular and irreducible contradictions of the real's uneasy relationship with the natural.

This brings us to a second question which might vanish in solving the riddle of this configuration, the question: 'Are humans natural.' This is the question at the heart of the debate over the posthuman, as it is articulated by writers such as Fukuyama and McKibben. For them, the term 'human' has come to stand for something natural and the prefix 'post' for a border which would divide us forever from that past.

I maintain that this thesis negates these questions because what emerges in the elements I have combined is that nature in that sense, as an identity, nowhere coincides with itself. Instead it moves away every time the gaze is directed at it, shifting always from foreground into background without ever releasing it hold over the imagination.

Finding the identity of nature, asking the question which lurks behind the earlier ones, the question 'What is nature?' helps to define certain language games in which it is used but it does not help to release nature from its ambitious role as universal. Instead, along with the Habermasian idea of autonomous spheres, it simple removes what is contradictory by placing the conflicting elements in different systems.

Perhaps this spatial configuration makes it possible to ask a new question, 'where is nature?' Such a question might free the concept of nature from its identity as a totalizing system which conceals its own abstractness through a consoling attachment to the material – the exuberance of green trees, mountainous lanscapes, the smell of apples, the sound of the sea and all of those things which give incontrovertible sensory confirmation of its existence. This new question might permit the recognition both of the fragmented quality of nature, its dispersal across and between moments of its reification, and of its elusiveness.

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