

Abstract

This thesis draws on Jacques Derrida's idea of 'differance' (difference as both distinction and deferral) to argue that, within post-Darwinian humanist culture, the category of 'the human' can only be defined by differentiating it from 'the animal'. Following Derrida, this project seeks to 'determin[e] the number, form, sense, or structure' of the 'plural and repeatedly folded frontier' between these two categories.

Chapter 1, 'Becoming Human', examines the chronological boundaries between the human and extinct hominids such as *Homo erectus* and Neanderthals. It reads contemporary scientific accounts of 'how we became human' to demonstrate that they preserve the conceptual framework of earlier creation myths. However, despite their humanism, these accounts inevitably unsettle the boundaries between human and animal by revealing the play of traces across them.

Chapter 2, 'Acting Human', reads Descartes' *Discourse on the Method* with Judith Butler's theory of gender performance to argue that the human can only be identified by its behaviour. Those who do not behave 'correctly', such as people with autism, threaten humanism and are consequently punished. Conversely, when animals are seen to 'act human' (for example, the chimpanzee artist Congo) this is dismissed as anthropomorphism. However, these possibilities demonstrate that human behaviour is not tied to an internal essence.

Chapter 3, 'Talking Human', deconstructs the opposition between human language and animal communication which underpins contemporary humanist discourse. The human voice is identified with presence, truth and subjectivity, while animals are mute, inarticulate objects. However, the human subject is never fully in control of its communication, as demonstrated by blushing and involuntary nonverbal 'leakage'. I conclude that 'language' and 'the human' are constituted only by referring to each other.

This thesis critiques the mythology of humanism in order to challenge the unethical acts that are committed in the name of the human.

DECLARATION

This work has not previously been accepted in substance for any degree and is not concurrently submitted in candidature for any degree.

Signed

Date

STATEMENT 1

This thesis is being submitted in partial fulfillment of the requirements for the degree of PhD.

Signed

Date

STATEMENT 2

This thesis is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references.

Signed

Date

STATEMENT 3

I hereby give consent for my thesis, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

Signed

Date

The Animal in Differance

**Tracing the Boundaries of the Human
in Post-Darwinian Culture**

Jessica Mordsley

A thesis submitted in candidature for the degree of
Doctor of Philosophy

Critical and Cultural Theory

Cardiff University

2007

UMI Number: U585056

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI U585056

Published by ProQuest LLC 2013. Copyright in the Dissertation held by the Author.
Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against
unauthorized copying under Title 17, United States Code.



ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106-1346

Table of Contents

Acknowledgements.....	i
Introduction. The Human as the Animal in Differance.....	1
Borders, Difference, and Differance	6
Darwin's Legacy	17
Deconstruction and Limitrophy	21
Cyborgs, Companions, and the Discourse of Species.....	24
Posthumanism, Uncertainty, and the Uncanny	28
Animal Studies, Animal Rights, and the Production of the Human.....	30
Popular Philosophy	32
Mythbusting and Semioclasms.....	36
Ethics and Humanism	40
Summary of Chapters.....	46
Chapter 1. Becoming Human: Evolution, the Trace, and Differance in Time.....	51
The Origin of Species.....	55
Creation Myths.....	65
Paleoanthropology as a Humanist Discourse	74
The Magic Moment.....	80
Homo Erectus: A True Man?	83
Neanderthals: Simple-Minded Brutes or the First Flower People?.....	87

Face to Face: Neanderthal as Mirror	90
The Ghost in the Mirror: Neanderthals and the Uncanny	95
Border Crossings, Border Control.....	101
The Ascent of Man: Bipedalism and Humanism	102
Children: Becoming Human and the Biogenetic Law	106
DNA, the Origin, and the Trace	110
Conclusion: Paleoanthropology Dissolves the Human	117

Chapter 2. Acting Human: Autism, Anthropomorphism, and

Differance in Behaviour.....	125
Theoretical Approach: Descartes and Butler	128
Animals in Human Form: Feral Children and Autism.....	135
Autism and the Uncanny	141
Missing Persons: Autism and Exclusion from the Human	144
Other Minds: Border Figures and the Limits of the Human	150
The Violence of Species Norms: Punishment of Autistic People	153
Autism, Ethics and Power: Re-evaluating the Human	158
Human Drag.....	161
A Brief History of Anti-anthropomorphism.....	168
Seductive Pollution	173
PG, Pathe and Puns: Acceptable Anthropomorphism.....	176
Aping Art: Congo and Dangerous Anthropomorphism	183
Parody and Risk	195
Quotation Marks: Performance vs. Performativity	197
Conclusion: The Showman and the Marquis	202

Chapter 3. Talking Human: Speech, the Unconscious, and

Differance in Communication	206
Theoretical Approach.....	210
Language / Communication = Us / Them	213
Sudden Emergence of Language.....	216
The Myth of Language: Freedom and Constraint	219
From Language to Speech.....	222
<i>Logos</i> and <i>Phone</i>	224
Voicelessness, Advocacy, and Articulation	227
Aping and Parroting	232
‘An Animal Looks at Me’	237
Smart Alex: Parroting, Uncertainty and the Uncanny.....	240
<i>The Case of the Perjured Parrot: Death and Doubling</i>	242
<i>The Great Taboo: Voice and the Transmigration of Souls</i>	245
Replaceable Subjects.....	250
Blushing: Betrayal and Self-control.....	254
The Limbic System and Leakage	257
Body Language and Proper Speech	262
Aphasia and the Symphony of Smells: Communication and Otherness	266
‘Electric Vocabulary’: Terminology and Power	272
Conclusion: Endless Deferral.....	277
Conclusion: Dismantling the Myth of the Human	281
Notes	287
Bibliography.....	313

Acknowledgements

This thesis could not have been written without funding from the Arts and Humanities Research Council. I am extremely grateful for their award.

I would like to thank the staff of the Cardiff University Arts and Social Studies Library, in particular the Inter-Library Loans service, for their help.

My supervisor, Dr Neil Badmington, was generous with his time, meticulous in his attention to detail, and a great source of inspiration and ideas.

Donna Haraway and Cary Wolfe both very kindly allowed me to read extracts from their forthcoming publications.

Jodie Matthews and Mareile Pfannebecker helped me a great deal by reading drafts of chapters and providing extremely useful and thorough feedback.

Roger Christofides discussed Derrida, Drogba, and diacritical marks.

Paul Gorton's rigorous questioning helped to clarify several ideas.

Dr Anne McMonagle, Dr Irene Ragaller, and Dr Robin Sims all gave valuable advice and proved that it could be done.

Dr James Evans provided the intellectual and practical support which made it possible to complete this project.

My parents were extremely supportive and supplied all sorts of interesting cultural artefacts.

Finally, Mark Saint John Ridley kept me going with many years of strength, love, sustenance, and lifts home in the rain.

Introduction

The Human as the Animal in Differance

We could thus take up all the coupled oppositions on which philosophy is constructed, and from which our language lives, not in order to see opposition vanish but to see the emergence of a necessity such that one of the terms appears as the differance of the other, the other as 'differed' within the systematic ordering of the same (e.g., the intelligible as differing from the sensible, as sensible differed; the concept as differed-differing intuition, life as differing-differed matter; mind as differed-differing life; culture as differed-differing nature; and all the terms designating what is other than *physis* – *techne*, *nomos*, society, freedom, history, spirit, etc. – as *physis* differing: *physis in differance*).

Jacques Derrida, 'Differance', in *'Speech and Phenomena' and Other Essays on Husserl's Theory of Signs*, trans. by David B. Allison (Evanston, IL: Northwestern University Press, 1973), pp. 129-60 (pp. 148-49).

For there is no interest to be found in a discussion of a supposed continuity, rupture, or even abyss between those who call themselves men and what so-called men, those who name themselves men, call the animal. [...] The discussion is worth undertaking once it is a matter of determining the number, form, sense, or structure, the foliated consistency of this abyssal limit, these edges, this plural and repeatedly folded frontier.

Jacques Derrida, 'The Animal that Therefore I Am (More to Follow)', trans. by David Wills, *Critical Inquiry*, 28: 2 (Winter 2002), 369-418 (p. 399).

In August 2006, Channel 4 broadcast a two-part documentary series entitled *What Makes Us Human?*. It was presented by the geneticist and evolutionary biologist Armand Leroi, who argued that the answer to this question could be found by looking at the genes. Against a backdrop of forest and blue sky, Leroi claimed:

Ever since Aristotle, philosophers have wondered, what makes us different from the beasts? Their answers – that man is a political animal, a thinking animal, a tool-making animal – can now be discarded. Now when we ask what makes us human, we can answer: this gene, and that one, and that one. We can begin to write the recipe for making a human being.¹

This passage embodies the beliefs and assumptions of contemporary scientific humanism. First, the belief that science, especially genetics, has now rendered philosophical inquiry on the subject unnecessary: that there has been, as Marjorie Garber phrases it, a ‘shift in the disciplinary custody of “human nature”’² from the humanities to the biological sciences. Second, the assumption that after centuries of asking the question ‘what makes us human?’, all previous answers ‘can now be discarded’, as the current answer (‘this gene, and that one, and that one’) is the final definitive truth. But is this ‘new’ answer really so different from the old ones?

One of the classic statements of ‘what makes us different from the beasts’ is found in René Descartes’ *Discourse on the Method of Rightly Conducting One’s Reason and Seeking the Truth in the Sciences*.³ The *Discourse* was written in 1637 at a time when the importance of ‘the human’ was in the ascendant while the centrality of God was

correspondingly in decline.⁴ Descartes played a crucial role in constructing the new idea of the human; as Neil Badmington argues, Descartes might 'be seen as one of the principal architects of humanism, for in the seventeenth century, he arrived at a new and remarkably influential account of what it means to be human'.⁵ Descartes' argument is that humans are physically animals, a conclusion which was hard to avoid given the new discoveries in anatomy and the first encounters of Western explorers with apes, but that 'we' have an extra quality, namely reason, which distinguishes 'us' from other animals. This distinction between humans and other animals has a secular rather than religious basis. Indeed, Descartes separates humans from animals in a more absolute way than some religious philosophers, such as St Thomas Aquinas, who thought that animals may have souls, albeit 'lesser and temporary' ones.⁶ Stephen Walker notes that: 'Descartes was not original in being a dualist, but innovative in abandoning dualism for animals other than man'.⁷ This dualism is stated in the following passage from the *Discourse*:

If any such machines had the organs and outward shape of a monkey or of some other animal that lacks reason, we should have no means of knowing that they did not possess entirely the same nature as these animals; whereas if any such machines bore a resemblance to our bodies and imitated our actions as closely as possible for all practical purposes, we should still have two very certain means of recognizing that they were not real men. (pp. 139-40)

The first of these two tests is that 'they could never use words, or put together other signs, as we do in order to declare our thoughts to others [...] so as to give an appropriately meaningful answer to whatever is said in [their] presence' (p. 140). The second test is that 'even though such machines might do some things as well as we do them, or perhaps even better, they would inevitably fail in others, which would reveal that they were acting not through understanding but only from the disposition of their organs' (p. 140). Therefore, humans do not act 'only from the disposition of their

organs'; there is something else that exceeds the body. 'In just these two ways', Descartes argues, 'we can also know the difference between man and beast' (p. 140).

This account of the difference between humans and other animals still dominates contemporary views: as Jacques Derrida writes, 'when it comes to the relation to "the Animal", this Cartesian legacy determines all of modernity. [...] Descartes's "text" is of course not the cause of this large structure, but it "represents" it in a powerful systematicity of the symptom'.⁸ Many people today, both scientists and non-scientists, look to genetics to answer the question 'what makes us human?', but contrary to Armand Marie Leroi's claims, the old answers have not really been 'discarded'. The persistence of the 'Cartesian legacy' can be read, for example, in a 2004 *New Scientist* article entitled 'Chimp Genome Preview: What Makes Us Human', in which Robin Orwant writes:

Using DNA chips, [the researchers] compared expression patterns for about 18,000 genes shared by humans, chimps, macaques, and orang-utans [...]. They found that in blood and liver tissue, humans and chimps expressed the genes in a very similar way. But when they looked at brain tissue, they found that chimps' expression patterns were closer to those of other primates than those of humans. The group concluded that a major acceleration in the evolution of regulatory factors in humans allowed them to develop unique gene expression patterns in the brain.⁹

This passage rearticulates Descartes' dualism in the language of genetics. It is acceptable for the material body ('blood and liver tissue') to be the same in humans and chimpanzees, because this does not disrupt the privileged category of the human, but the mind, whether figured as soul, reason, or 'unique gene expression patterns in the brain', separates 'us' from other animals. It is true that these brain expression patterns have a certain materiality that Descartes' 'reason' does not. The genetic differences referred to here are empirically verifiable, unlike Descartes' theorisation of the soul. However, I suggest that the way in which this research is reported, and in

particular the emphasis upon the distinction between ‘blood and liver tissue’ and ‘gene expression patterns in the brain’, echoes the Cartesian split between body and mind, and between animal and human. This reinscription of Cartesian dualism is symptomatic of a general tendency within contemporary humanism to take longstanding philosophical or religious ideas about ‘what it means to be human’, and to reformulate them using scientific terminology.

The third problematic belief expressed in Armand Leroi’s argument permeates the entire genre to which it belongs, which I have referred to as scientific humanism.

Leroi answers the question ‘what makes us human?’ by saying ‘this gene, and that one, and that one’, but how do you know *which* genes ‘make us human’? Early on in the programme, Leroi makes it clear that he is not referring to all human genes when he says this, but only to a specific set. Visiting the University of Chicago, he says:

One of the most exciting projects of twenty-first-century science is underway here in Chicago. Its goal is the identification of the genes that make us human, or more precisely, the genes that distinguish *us* from the great apes.

It is the shift in the middle of this sentence that fascinates and troubles me: ‘the genes that make us human, *or more precisely*, the genes that distinguish us from the great apes’. Is this simply a more precise way of saying the same thing? Is the concept of ‘what makes us human’ really indistinguishable from ‘what distinguishes us from the great apes’? The assumption that these two questions are synonymous is prevalent within contemporary accounts of ‘what it means to be human’. As Cary Wolfe observes (in a discussion of Ernest Hemingway’s *The Sun Also Rises*), ‘the question What is a man? gets rewritten as if it had always been What is the difference between a human and an animal?’.¹⁰ Furthermore, at the present historical moment this ‘difference’ is most frequently identified as being written in the genes. Thus the

question, ‘What is a man?’, already transformed into ‘What is the difference between a human and an animal?’, is rewritten once more as ‘What is the genetic difference between a human and a chimpanzee?’.

Borders, Difference, and Difference

This reinscription of meaning can be read in the 2004 issue of *New Scientist* mentioned above, which featured a series of articles about the forthcoming publication of the chimpanzee genome sequence under the heading ‘Humankind Past and Future: Chimp Genome: Revelations from our Closest Kin’.¹¹ The sequencing of the human genome¹² was completed a year earlier, so why should it be the *chimpanzee* genome which promises ‘revelations’ about ‘humankind’? While the Human Genome Project was underway, it seemed to herald an amazing breakthrough; for the first time, it was claimed, there would be an accurate and complete account of ‘what it means to be human’. This sense is captured in the US Department of Energy’s 1996 publication, *To Know Ourselves*, whose title indicates the kind of knowledge that was promised:

In a material sense, then, all of the subtlety of our species, all of our art and science, is ultimately accounted for by a surprisingly small set of discrete genetic instructions. [...] We are far more alike than we are different. At the same time, there is room for near-infinite variety. It is no overstatement to say that to decode our 30,000 genes in some fundamental way would be an epochal step toward unraveling the manifold mysteries of life.¹³

This passage exemplifies the excitement with which the Human Genome Project was anticipated: an excitement that was shared by the media and by the public and not confined to US government documents. Somehow there was a sense of disappointment when it was completed, ahead of schedule, in 2003; it was, as Richard Horton (editor of *The Lancet*) writes, ‘a crushing anticlimax’.¹⁴

Why was it such an anticlimax? I suggest that the human genetic sequence alone, with nothing to compare it to, is meaningless. This sense of meaninglessness is reflected in Horton's description of the full genome as 'the 3.2 gigabases of DNA reported in *Nature*':¹⁵ that is, 3.2 billion pairs of letters (A, T, C and G). What makes the human genome meaningful is *difference*: as Horton writes, 'the human genome's practical value is thought to lie not in the sequence itself but rather in the genetic variation that exists between individuals'.¹⁶ The chimpanzee genome is needed to make the human genome meaningful, by identifying the differences between the two: 'When the chimpanzee genome sequence is published, sometime in the next few weeks, what everyone will want to know is how it compares with ours, and what genetic differences set us apart from our ape cousins'.¹⁷ As this quotation demonstrates, within contemporary humanist discourse the category of the human is constructed by differentiating it from the animal, and the chimpanzee, in its cultural position as 'our closest living relative', is the animal which is most frequently used as a point of comparison to identify the differences that 'make us human'. This is why genetics in particular is such a powerful cultural discourse and why, as Donna Haraway writes, 'genetic difference studies are a high stakes game'.¹⁸ It is this active process of differentiating which constructs the meaning of the human. The chimpanzee is not considered to be interesting in itself, but only because of its difference from the human; conversely, without the knowledge of the chimpanzee genome, the human genome is meaningless.

A similar process of differentiation is currently taking place with the sequencing of the Neanderthal genome. Like chimpanzees, 'our closest living relatives', the Neanderthals occupy a significant cultural position as the closest extinct relative of

Homo sapiens. An article in *The Times* in November 2006 reported that ‘DNA extracted from a Neanderthal bone has been analysed in detail for the first time and the genetic code of humanity’s closest cousin will be mapped completely within two years’. The article continues:

The development will allow scientists to compare the human genome with that of our nearest living and extinct relatives – the chimpanzee and the Neanderthal – to tease out the differences between the three. These variations will in turn reveal the genes that make us human.¹⁹

Once again, it is ‘the differences’ or ‘variations’ which will ‘reveal the genes that make us human’; the definition of the category of the human is fundamentally dependent upon the process of differentiating it from its closest animal relatives. Scientific humanism suggests that ‘we’ can only learn ‘who we are’ through these differences. At the same time, the fact that the search continues indicates that neither the human genome nor the chimpanzee genome was able to provide a final answer to the question ‘what makes us human?’.

The process of identifying the differences between the human and the animal in order to define ‘what it means to be human’ is not restricted to genetics. In *The Ascent of Man*, Jacob Bronowski argues that in order to find out what ‘man’ is, it is necessary to ask what makes ‘him’ different from ‘the animals’:

Every human action goes back in some part to our animal origins; we should be cold and lonely creatures if we were cut off from that blood-stream of life. Nevertheless, it is right to ask for a distinction: What are the physical gifts that man must share with the animals, and what are the gifts that make him different?²⁰

It is the ‘distinction’, the difference, that Bronowski wishes to locate in order to understand what the human ‘is’. It is only by identifying the differences between ‘man’ and ‘the animals’ that the human can be defined. Bronowski works through an example: a detailed description of an athlete performing a pole vault. He observes that

‘the starting response of the runner is the same as the flight response of the gazelle. He seems all animal in action’.²¹ He then notes the physiological changes that take place, such as an increase in heartbeat and breathing rate, and continues:

So far, there is nothing to distinguish the athlete from the gazelle – all that, in one way or another, is the normal metabolism of an animal in flight. But there is a cardinal difference: the runner was not in flight. The shot that set him off was the starter’s pistol, and what he was experiencing, deliberately, was not fear but exaltation. [...] The overriding difference [...] is that the athlete is an adult whose behaviour is not driven by his immediate environment, as animal actions are. [...] It is the invention of the pole, the concentration of the mind at the moment before leaping, which give it the stamp of humanity.²²

Because the physiological aspects are shared with nonhuman animals, the meaning of the human (‘the stamp of humanity’) is defined as what is *not* shared: namely, technology and innovation (‘the invention of the pole’), mental powers (‘the concentration of the mind’) and above all, behaviour that is not determined but ‘deliberately’ chosen.²³ To define ‘what it means to be human’ is to differ it from the animal. It is the identification of these differences which constructs the category of the human. As part of the same process, the physical attributes ‘that man must share with the animals’ are excluded from ‘what it means to be human’; humanism denies or downplays their importance.

The human is defined as what differs from the animal, but this difference or opposition is not single or simple; there are many differences, many borders, to be identified. At the beginning of *Eve Spoke: Human Language and Human Evolution*, in which he argues that the act of speaking differentiates humans from other animals, Philip Lieberman writes:

Over the past thirty years my colleagues and I have studied monkeys, chimpanzees, infants, children, normal adults, dyslexic adults, elderly people, and patients suffering from Parkinson’s disease and other types of brain damage. We have also examined the skulls of our fossil ancestors, comparing them with those of newborn infants and apes. The focus of these studies has

been the puzzle surrounding human evolution. Why are we so different from other animals, although we are at the same time so similar?²⁴

In this passage, the ‘normal’ human is constructed by differentiating it from these various border figures. The diverse beings that Lieberman lists have little in common, except that they are here opposed to ‘normal [human] adults’: the unproblematic ‘we’ of the final sentence. Each of the others is related to the normative ‘we’ in a relation of both sameness and difference, and the category of the ‘normal’ human is produced by this play of differences and similarities. What is *not* shared with these ‘so similar’ but ‘so different’ border figures is what makes ‘us’ human. In her introduction to *Human, All Too Human*, Diana Fuss notes that: ‘Sameness, not difference, provokes our greatest anxiety (and our greatest fascination) with the “almost human”’.²⁵ These ‘almost human’ border figures threaten the security of the ‘normal’ human by exposing its unstable boundaries, but they are also needed in order to define it.

A similar list of border figures appears in Leda Cosmides and John Tooby’s foreword to Simon Baron-Cohen’s *Mindblindness: An Essay on Autism*. Describing the ‘evolved, specialized neural’ devices which construct ‘our [...] mental worlds’,²⁶ they write:

Because these devices are present in all human minds, much of what they construct is the same for all people, from whatever culture; the representations produced by these universal mechanisms thereby constitute the foundation of our shared reality and our ability to communicate. [...] Indeed, it is exactly because of their universal and automatic character that we have been blind to the existence of the machinery that constitutes most of the evolved architecture of the human mind [...]. Cognitive scientists were awakened by a series of encounters with alien minds, whose starkly contrasting designs and surprising incapacities drew attention to previously overlooked natural human competences and to the computational problems they routinely solve. They encountered artificial mentalities in the computer lab that had obstinate difficulties in seeing, speaking, handling objects, understanding, or doing almost anything that humans do effortlessly. They encountered thousands of animal species each of which could solve a striking diversity of natural information-processing problems that other species could not. They

encountered the developing minds of infants and children [...] [and] neurologically impaired individuals who displayed unanticipated dissociations of cognitive deficits and abilities.²⁷

I want to draw attention to two particular aspects of this passage. The first is the seemingly unselfconscious and uncritical use of the term ‘alien minds’ to describe a diverse group that includes ‘neurologically impaired individuals’ and ‘infants and children’, as well as animals and artificial intelligences. Cosmides and Tooby set up a universal human nature which transcends culture; it includes ‘all people’, ‘all human minds’. ‘We’ inhabit ‘our shared reality’ which is constructed by ‘universal mechanisms’. And yet this apparently all-inclusive, non-discriminatory category excludes not only ‘infants and children’ but also ‘neurologically impaired individuals’ with ‘cognitive deficits’ who are profoundly excluded from ‘our shared reality’; indeed, they are explicitly labelled as ‘alien’. This exclusion of certain groups from the category of the human counteracts the common-sense argument that ‘we all know who is human now’. The boundaries of the category of the human are by no means static, obvious, or natural. They are discursively constructed in texts such as this one, and who is ‘in’ and who is ‘out’ is always a question of ethics and of power.

Furthermore, I suggest that these exclusions are an essential part of humanism. In order to define the human, in order to draw its borders, someone or something must always be excluded: as Judith Halberstam and Ira Livingston argue, ‘science and its poetic sidekick have maintained the “household of man” through exclusions, subordinations, exoticizations, pathologizations, [and] criminalizations’.²⁸ The second aspect to which I wish to draw attention, the aspect which is central to this thesis, is that, as the quotations above demonstrate, the human must be constituted through differentiating it from its almost-human others. It is *only* by encountering the ‘stark

contrast’ of these ‘alien minds’ that the idea of the normal, natural human can be constructed. As Zakiya Hanafi argues with reference to monsters, these humanlike, but not quite human, beings enable us to define ourselves – ‘I know I am human because I am not *that*’²⁹ – and this requirement to ‘know’ who is and is not human is central to humanism.

Many different strands of thought have been characterised as humanist, but despite the important theoretical differences, there are certain threads that run through all of them.

As Kate Soper writes:

A profound confidence in our powers to come to know and thereby to control our environment and destiny lies at the heart of every humanism; in this sense, we must acknowledge a continuity of theme, however warped it may have become with the passage of time, between the Renaissance celebration of the freedom of humanity from any transcendental hierarchy or cosmic order, the Enlightenment faith in reason and its powers, and the ‘social engineering’ advocated by our contemporary ‘scientific’ humanists.³⁰

I am engaging with all of these humanisms in as much as they each posit an absolute opposition between the human and nonhuman.³¹ However, because of the historical span of this thesis, the predominant focus is on contemporary scientific humanism. I am interested in interrogating the humanism that dominates cultural discourse in Britain (and elsewhere in ‘the West’) at the present moment. In the past century, the question of ‘what it means to be human’ has become almost exclusively a scientific one: as Garber notes, “‘human nature’, once deemed the proper study of mankind, [has become] the privileged territory of geneticists and biologists’.³² She writes:

The very idea of human nature as a normative, identifiable essence is both a political and a psychological wish, with important side effects. [...] The quest for it has become a self-fulfilling dream, a lure of full self-knowledge, a ruse of research paradigms and protocols from the theological to the anthropological, from behaviorism to genomics. In the Enlightenment it was political philosophers; in the nineteenth century it was religious believers, psychologists, and anthropologists; today it is scientists working at the level of the gene.³³

Secular humanism has rejected the idea of the soul, but still preserves the idea of some kind of core human identity, of ‘the psychic unity of mankind’, as the sociobiologist E. O. Wilson puts it.³⁴ It is my argument that there is no ‘normative, identifiable essence’, no ‘psychic unity’, nothing tangible which unequivocally identifies something as human. The human is a signifier within a system of signs which only become meaningful through their differences from each other.

Therefore, the only way to define what the human *is* is to define what it is *not*. In Ferdinand de Saussure’s *Course in General Linguistics*, he argues that linguistic terms gain their meaning only through being differentiated from other terms: ‘In language there are only differences. Even more important: a difference generally implies positive terms between which the difference is set up; but in language there are only differences *without positive terms*’.³⁵ The meaning of the human is constructed by ‘set[ting] up’ the difference between it and its neighbouring terms; it is not a ‘positive ter[m]’, but is formed by locating it within a system of signs. The human is frequently located between two specific signs:

1. Is man an ape or an angel? My lord, I am on the side of the angels.³⁶
2. Man is a rope connecting animal and beyond-man [*ubermensch*].³⁷
3. The human baby, the human being, is a mosaic of ape and angel.³⁸
4. We may prefer to think of ourselves as fallen angels but in reality we are risen apes.³⁹
5. We have, it seems, never ceased to be apes; yet we aspire to be angels.⁴⁰

These quotations are taken from a variety of genres and historical moments, from 1864 to 2004: a time span which corresponds closely to the historical period covered in this thesis. Many more examples could be quoted to demonstrate that within post-Darwinian humanist discourse, the human is defined primarily by its differential relationship to animals on the one hand, and to angels on the other. Drawing on this structural relationship, Hanafi writes: ‘The human and the monster vie for space

between two thresholds of transformation: the upper limits are godhood, the lower limits are bestiality'.⁴¹ As indicated by the use of terms such as 'fallen angels', 'risen apes', 'upper limits' and 'lower limits', these signs are hierarchical; humans are placed below angels and above animals. The metaphors of 'up' and 'down' demonstrate that the idea of a great chain of being, an overtly hierarchical structure of life-forms, has not been eradicated by the scientific discoveries of the last two centuries.⁴² Instead of a hierarchy of divinely created species, the human is now considered to have reached the pinnacle of evolution: as John Gray notes, 'Darwinism has been used to put humankind back on its pedestal'.⁴³ While today the 'lower' limit of the human is generally located within the organic biological world, the 'upper' limit is imagined in terms of inorganic artificial intelligences, or fictional characters such as extraterrestrials and vampires. In this thesis the main focus is on the 'lower' limit of the human, as I am interested in reading what is currently the dominant discourse which claims to explain 'what it means to be human' (namely, scientific humanism). Therefore this thesis engages predominantly with non-fictional discourse which deals with the boundaries between the human and its real, organic others.

The scientists who study these beings are responsible for establishing and policing the borders of the human: primatologists define the boundary between human and chimpanzee; psychiatrists, the border between the 'normal' human and the psychotic or damaged other; paleoanthropologists, the chronological division between human and pre-human species, and so on. Since the human is constituted by differentiating it from the animal, and vice versa, neither of these categories pre-exists the definition of this difference. The anthropologist Tim Ingold notes this interdependence of the categories of human and animal. Referring to the title of his book, *What Is an Animal?*, he writes:

Although our question touches on the properties of both life and the major classes of organisms, it is more popularly construed, narrowly and reflexively, as a question about *ourselves*. Every attribute that it is claimed we uniquely have, the animal is consequently supposed to lack; thus, the generic concept of ‘animal’ is negatively constituted by the sum of these deficiencies.⁴⁴

Similarly, the reverse is also true; the ‘generic concept’ of the human is ‘negatively constituted’ by relating it to its others. Within contemporary humanist discourse, the key figures who are used to ‘negatively constitut[e]’ the human in this way are humanlike animals, such as apes and parrots, children, Neanderthals and other extinct hominids, and people who are identified as ‘damaged’ or ‘abnormal’ in some way.

These almost-human doubles are necessary to mark the limits of the human. In order to indicate the boundaries where ‘we’ stop and ‘they’ begin, humanism constructs a network of oppositions in which the human is both related to and distinguished from its nonhuman others. In his essay ‘Differance’, drawing on Saussure, Jacques Derrida writes:

The signified concept is never present in itself, in an adequate presence that would refer only to itself. Every concept is necessarily and essentially inscribed in a chain or a system, within which it refers to another and to other concepts, by the systematic play of differences.⁴⁵

It is differance, this ‘systematic play of differences’ between the human and its others, which I trace in this thesis.⁴⁶ Differance implies not only ‘difference as distinction’ but also ‘the interposition of delay, the interval of a *spacing* and *temporalizing* that puts off until “later” what is presently denied’: in other words, differance both differs and defers.⁴⁷ There is in fact a trace of this double meaning in English; the now-distinct words ‘differ’ and ‘defer’ were originally the same word, and the verb ‘to differ’ can be used transitively (‘to put apart or separate from each other in qualities; to make unlike, dissimilar, different, or distinct; to cause to vary; to distinguish, differentiate’), although this is now ‘unusual’.⁴⁸ In the course of this thesis, I occasionally employ the

verb in this way to indicate the active movement of difference, 'the *play* [*jeu*] of differences'.⁴⁹ To differ 'the human' from 'the animal' is not simply to list the differences between these two constructs, but to show that the meaning of the human is always deferred: that the human can never be defined without 'temporalizing', without shifting the question from what the human *is* to what the animal is *not*.

The 'locus and operation' of difference, as Derrida writes, 'will therefore be seen wherever speech appeals to difference', and this 'appea[l] to difference' is a key part of contemporary humanist discourse about animals.⁵⁰ For example, Sue Savage-

Rumbaugh writes in the Preface to *Kanzi: The Ape at the Brink of the Human Mind*:

I knew that the rest of my life would be spent studying apes. So like us they are, and yet so distinctly different in some ways. It had not taken long to see that human beings could learn a great deal about themselves and the kinds of creatures they might once have been, by studying apes. How much of the ape was left within us and how much of what we had become resulted from the complex society we had managed to build? I was fascinated with this question and knew that many of the keys to its answer lay hidden within these animals.⁵¹

In this passage, Savage-Rumbaugh makes it clear that her interest in studying apes comes from a desire to learn about human beings. The human is constructed from this interplay of sameness and difference: 'so like us they are, and yet so distinctly different'. As Derrida writes: 'The one is only the other deferred, the one differing from the other. The one is the other in difference, the one is the difference from the other'.⁵² This relationship between the one and the other, human and animal, appears repeatedly in Savage-Rumbaugh's text, for example when she writes:

Having been granted the opportunity to come to know apes better than I knew most people, I had no doubt they had a great deal to tell us about who we humans were, where we came from, and where the biological limits or constraints upon our species were to be found.⁵³

Despite Savage-Rumbaugh's important work in Ape Language research, which has itself challenged those 'limits or constraints', she still assumes that there is a rigorous

opposition between ‘we’ and ‘they’, and that apes are valuable primarily because of what ‘they’ can tell ‘us’ about ‘ourselves’. The workings of ‘the economy of difference’⁵⁴ can be read in the claim that ‘they’ can help ‘us’ to locate ‘the biological limits’ of ‘our species’. To locate these limits is to draw the boundaries of the human and thus to claim knowledge of what the human ‘is’: to ‘stake out the boundaries of our humanity by delineating the boundaries of the monstrous’.⁵⁵

However, this differential structure also troubles the power relationship of humanism, as the human is dependent upon the nonhuman for its meaning: ‘as monsters change form so do we, by implication’.⁵⁶ Similarly, Ingold asks: ‘How can we reach a comparative understanding of human cultural attitudes towards animals if the very conception of what an animal might be, *and by implication of what it means to be human*, is itself culturally relative?’.⁵⁷ In the phrase which I have italicised here, Ingold acknowledges that ‘what it means to be human’ is necessarily dependent on ‘what an animal might be’. This reveals that the human is never a secure or stable category.

Darwin’s Legacy

I have identified the historical period covered in this thesis as ‘post-Darwinian’.⁵⁸ This marks a span of years – from 1859, the year that *The Origin of Species* was first published, to 2007, the present day – but also indicates the radical transformation in the cultural understanding of the relationship between humans and other animals that was brought about by Charles Darwin’s work. In my opinion, the immense implications of Darwin’s theories of evolution by natural selection and the non-existence of species have still not been fully absorbed by contemporary culture. Before Darwin, it was

generally believed within Western culture that species were divinely created and immutable. This belief was influenced by Judeo-Christian accounts of the separate creation of each species, and also by Platonic philosophy.⁵⁹ Species were seen as fixed, unchanging entities: ‘a group of animals all of which were supposed to be identical with a type’.⁶⁰ Creatures were, as the word implies, *created* ‘according to their kinds’ and were fundamentally separate from each other. While Darwin’s work is now scientific orthodoxy, this pre-Darwinian belief in an absolute and hierarchical opposition between humans and all other animals persists to the present day. Despite the decreasing authority of religion, the Judeo-Christian account of creation is one of the most influential accounts of who ‘we’ are, and its structure continues to inform the way that the relationship between humans and other animals is understood today. This issue is discussed in greater detail in the section ‘The Origin of Species’ in Chapter 1 of this thesis.

Darwin’s work was complemented by Gregor Mendel’s discovery of the laws of genetic inheritance in the 1850s and 1860s, and the discovery of the structure of DNA by Francis Crick, James Watson, Maurice Wilkins and Rosalind Franklin in the early 1950s.⁶¹ The discovery that all organic life is built in the same way dispels the idea of a fundamental biological difference in kind between humans and other animals. This is the conclusion that was drawn by Julien Offray de La Mettrie as long ago as 1748, when he wrote: ‘Man is not moulded from a costlier clay; nature has used but one dough, and has merely varied the leaven’.⁶² But in fact many people have interpreted the idea of DNA as a way of enumerating the exact mathematical difference between humans and animals. In the *New Scientist* article on the chimpanzee genome, ‘What Makes Us Human’, it was suggested that a specific gene could be the answer:

The team is now trying to identify which changes make humans unique. Meanwhile, [Matthew] Rockman has already found one candidate gene whose regulation may help explain what makes us human. The gene, whose identity he is keeping secret pending publication, codes for a neuropeptide and is regulated by a *cis*-regulatory region that affects the gene's expression in the brain. The chimp's *cis*-regulator is similar to the corresponding region in other primates, but differs markedly from that in humans.⁶³

The regulation of this unidentified gene is presented as the tangible counterpart of a human essence whose existence is unquestioned. Once again, the 'locus and operation' of difference can be seen here as this text 'appeals to difference':⁶⁴ because the chimpanzee's *cis*-regulator 'differs markedly' from the human's, it 'may help explain what makes us human'. Throughout the article it is assumed that humans are indeed 'unique' and that it only remains for science to 'identify' precisely where this difference lies. In the 1920s, the behaviourist John B. Watson asked:

How, then, shall we account for the notion that man is something and has something which the brute is not and has not? The feeling that a cataclysmal difference exists has been strong through all the centuries, and is as firmly fixed in the popular mind today as ever. Among scientific men the conviction that the gap is not so wide as was formerly supposed is growing; yet we find scientifically-minded men still searching for the 'missing link'.⁶⁵

It can be seen in this quotation that the feeling of the 'cataclysmal difference' comes first, not the observation of any specific differences. This feeling becomes something that must be 'account[ed] for' by finding something tangible to represent it.

The *cis*-regulator, identified in the article above as 'the difference between humans and animals' and therefore 'what makes us human', is the most recent in a long line of specific physical features which have been identified as the materialisation of human essence. For example, in the eighteenth century the anatomist Petrus Camper claimed that the difference between humans and animals was that humans do not have an intermediary bone between the maxilla (upper jaw bone) and the skull.⁶⁶ As Herbert Wendt comments, 'the modest *os intermaxillare* was suddenly promoted into one of

the chief means of proving that man was not an animal'.⁶⁷ When Goethe discovered that humans do in fact have intermaxillary bones, he wrote in a letter: 'There it is ... it is like the keystone to mankind, not missing, really there'.⁶⁸ More recently, paleoanthropologists and anatomists have located the 'keystone to mankind' in various physical features such as the larynx, the hypoglossal canals (two holes at the base of the skull which are connected to the nerves which control the tongue), and the hyoid bone, while others, such as geneticists and evolutionary biologists, have claimed that particular genes contain the essence of the human. The quest to locate the essence of the human in a specific physical object, and thus provide material evidence for the 'feeling that a cataclysmal difference exists',⁶⁹ shows no sign of ending.

The 'notion that man is something and has something which the brute is not and has not', the belief that humans are fundamentally not animals, is too deeply embedded in Western culture to be easily displaced. Some people have claimed that the full implications of evolution and the origin of species have now been taken into account: for example, in *Purity and Danger* Mary Douglas writes: 'Now that we have recognised and assimilated our common descent with apes nothing can happen in the field of animal taxonomy to rouse our concern'.⁷⁰ I do not share Douglas' confidence that the position of the human within 'animal taxonomy' cannot cause concern or disturbance; on the contrary, I contend that humanist culture has not assimilated the full implications of Darwin's work. This was demonstrated by a recent poll on Channel 4's website, on the pages accompanying the *What Makes Us Human?* programme discussed above. The poll asked: 'Do you think of yourself as an animal?'. On 11 April 2007, the results of the vote were 77% Yes, 23% No. The introductory text above the poll states:

The forces that have made us are the same as those that have fashioned all of life on Earth. And yet many of us can't resist the notion that we are somehow more advanced than other animals. [...] Humans are medium-sized mammals that belong to a group of animals closely related through evolution, known as the primates. All species of lemurs, monkeys, apes and humans are primates. We are bound to all other life by the stuff we're made of.⁷¹

It is startling that nearly one-quarter of people, even after reading this evidently one-sided preamble, do not think of themselves as animals. But it indicates that by no means have all of 'us' 'recognised and assimilated our common descent with apes', and that the myth of the human as something profoundly and essentially different from all other animals is still pervasive.

Deconstruction and Limitrophy

The main theorist informing my methodological approach is Jacques Derrida. My overall approach is Derridean, in that I read humanist texts closely in order to show how they themselves deconstruct the opposition between human and animal on which they insist. I draw on texts including *Of Grammatology*, '*Speech and Phenomena*', and 'Differance' in the course of the thesis.⁷² Above all, this project is framed by Derrida's two late essays which specifically deal with the question of the animal: 'The Animal that Therefore I Am (More to Follow)', and 'And Say the Animal Responded?'.⁷³

The essay 'Differance', which I have already discussed above, suggests a way in which the dominant belief system of humanism could be challenged. Derrida writes:

We could thus take up all the coupled oppositions on which philosophy is constructed, and from which our language lives, not in order to see opposition vanish but to see the emergence of a necessity such that one of the terms appears as the differance of the other, the other as 'differed' within the systematic ordering of the same (e.g., the intelligible as differing from the sensible, as sensible differed; the concept as differed-differing intuition, life as

differing-differed matter; mind as differed-differing life; culture as differed-differing nature; and all the terms designating what is other than *physis* – *techne*, *nomos*, society, freedom, history, spirit, etc. – as *physis* differing: *physis in differance*).⁷⁴

I respond to Derrida's suggestion here by taking up the 'coupled oppositio[n]' human/animal and examining its construction in contemporary humanist discourse, 'not in order to see opposition vanish' by erasing the differences between *Homo sapiens* and other living beings, but in order to demonstrate that the human is defined as the animal 'in differance', as 'differing from the [animal], as [animal] differed': in short, as 'differed-differing' animal.

Although Derrida does not, in this particular essay, list human/animal as one of the 'coupled oppositions on which philosophy is constructed', his interest in this opposition can be traced through a great many of his texts. Always present to some degree in his work, it became more overt towards the end of his life. In *For What Tomorrow...*, a collection of discussions between Derrida and Elizabeth Roudinesco first published in 2001, he makes explicit the central importance of 'animality' in his account of differance:

There is differance (with an 'a') as soon as there is a living trace, a relation of life/death or presence/absence. This became linked for me very early on with the immense problematic of animality. There is differance (with an 'a') as soon as there is something living [*du vivant*], as soon as there is something of a trace [*de la trace*], across and despite all the limits that the strongest philosophical or cultural tradition thought it could recognize between 'man' and 'animal'.⁷⁵

The 'immense problematic of animality' is thus central to Derrida's account of differance, and plays a significant part in deconstructing philosophical and cultural traditions in general. Furthermore, this 'problematic' has a particular urgency at this historical moment; as Derrida argues in 'The Animal that Therefore I Am', not only

do the borders of the human have a history, but this history 'is now passing through the most unusual phase' (p. 399).

It is not my intention to argue that the opposition between humans and other animals disappears entirely and is replaced by a homogeneous, undifferentiated category.

There are obvious differences between humans and other animals, and to ignore them would be critically and pragmatically wrong. In 'The Animal that Therefore I Am',

Derrida lays out his project:

So it will in no way mean questioning, even in the slightest, the limit about which we have had a stomachful, the limit between Man with a capital M and Animal with a capital A. [...] To suppose that I, or anyone else for that matter, could ignore that rupture, indeed that abyss, would mean first of all blinding oneself to so much contrary evidence; and, as far as my own modest case is concerned, it would mean forgetting all the signs that I have sought to give, tirelessly; of my attention to difference, to differences, to heterogeneities and abyssal ruptures as against the homogeneous and the continuous. I have thus never believed in some homogeneous continuity between what calls *itself* man and what *he* calls the animal. I am not about to begin to do so now. That would be worse than sleepwalking, it would simply be too asinine [*bête*]. (p. 398)

Therefore, I do not attempt to deny or erase the differences between humans and other animals. However, as Derrida points out, the opposition between 'The Human' and 'The Animal', is not simple and unitary, but 'multiple and heterogeneous' (p. 399). I therefore want to pay attention to these heterogeneities, not to ignore the differences between 'what calls *itself* man and what *he* calls the animal', but to examine how these differences are used to construct the meaning of the human. In *For What Tomorrow...*,

Derrida says:

If I am unsatisfied with the notion of a border between two homogeneous species, man on one side and the animal on the other, it is not in order to claim, stupidly, that there is no limit between 'animals' and 'man'; it is because I maintain that there is more than one limit, that there are many limits. There is not *one* opposition between man and non-man; there are, between different organizational structures of the living being, many fractures, heterogeneities, differential structures. (p. 66)

My aim, therefore, is to examine the ways in which these multiple, fractured, and heterogeneous borders are constituted, in order ‘not to efface the limit, but to multiply its figures, to complicate, thicken, delinearize, fold, and divide the line precisely by making it increase and multiply’.⁷⁶ Derrida describes this process of thickening as ‘limitrophy’, referring to ‘the supposed first or literal sense of *trephe* [...]: transform by thickening, for example, in curdling milk’.⁷⁷ This thesis participates in this process of limitrophy by thickening and folding the line between humans and animals.

As Derrida puts it:

The discussion is worth undertaking once it is a matter of determining the number, form, sense, or structure, the foliated consistency of this abyssal limit, these edges, this plural and repeatedly folded frontier.⁷⁸

In this thesis, I therefore undertake the discussion by tracing some of the many folds along this frontier, in order to understand precisely how the boundaries between human and animal, and therefore the meanings of the categories themselves, are being constituted and disputed in contemporary culture.

Cyborgs, Companions, and the Discourse of Species

Another important influence on this thesis is Donna Haraway’s work, beginning with her famous 1985 essay, ‘A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s’.⁷⁹ The ‘Cyborg Manifesto’, as it is commonly known, is one of the seminal texts of posthumanist theory; Cary Wolfe characterises it as ‘perhaps the central theoretical statement of this recently established field’.⁸⁰ The (de)construction of the opposition between human and animal is a fundamental part of the ‘Cyborg Manifesto’. Haraway writes:

I want to signal three crucial boundary breakdowns that make the following political fictional (political scientific) analysis possible. By the late twentieth

century in United States scientific culture, the boundary between human and animal is thoroughly breached. The last beachheads of uniqueness have been polluted if not turned into amusement parks – language, tool use, social behavior, mental events, nothing really convincingly settles the separation of human and animal. And many people no longer feel the need of such a separation; indeed, many branches of feminist culture affirm the pleasure of connection of human and other living creatures. (p. 10)

This ‘pleasure’ in connecting with other, nonhuman animals foreshadows Haraway’s recent work, such as *The Companion Species Manifesto* and the forthcoming *When Species Meet*, which conceptualise the relationships between humans and animals in terms of companionship, play, and ‘significant otherness’.⁸¹

In the ‘Cyborg Manifesto’, the two other ‘crucial boundary breakdowns’ are ‘between animal-human (organism) and machine’ and ‘between physical and non-physical’ (pp. 10-11). However, while these other ‘boundary breakdowns’ have been eagerly taken up, especially in the United States of America, the one between humans and animals has been somewhat overlooked by posthumanist critical theorists. But Haraway’s text makes it clear that this boundary breakdown is absolutely central to the idea of the cyborg: ‘The cyborg appears in myth precisely where the boundary between human and animal is transgressed. Far from signalling a walling off of people from other living beings, cyborgs signal disturbingly and pleasurably tight coupling’ (p. 10). Despite Haraway’s pre-emptive warning here that the cyborg myth does not mean turning away from the organic connections between humans and other animals, the other ‘boundary breakdowns’ have attracted more attention, perhaps because they seem more novel and revolutionary. But it is precisely because the human/animal boundary is older – is, as Felipe Fernández-Armesto writes, ‘the longest-debated frontier of human identity’⁸² – that it is so important to pay attention to it, and its construction and deconstruction. As Cary Wolfe writes:

On the one hand, then, the question of the animal is embedded within the larger context of posthumanist theory generally, in which the ethical and theoretical problems of nonhuman subjectivities need not be limited to the form of the animal alone (as our science fiction writers have dramatized time and again). On the other hand, the animal possesses a specificity as the object of both discursive and institutional practices, one that gives it particular power and durability in relation to other discourses of otherness. For the figure of the 'animal' in the West (unlike, say, the robot or the cyborg) is part of a cultural and literary history stretching back at least to Plato and the Old Testament, reminding us that the animal has always been especially, frightfully nearby, always lying in wait at the very heart of the constitutive disavowals and self-constructing narratives enacted by that fantasy figure called 'the human'.⁸³

While it could be argued that the idea of the cyborg, if not its material reality, has a longer history than Wolfe indicates here,⁸⁴ it is undoubtedly true that animals, both real and figurative, have 'always been especially, frightfully nearby'. In concrete terms, human civilisation is only made possible through the use of animals. The various phases in the conventional history of the human, such as nomadic hunting/gathering, agriculture, ancient civilisation, the agricultural and industrial revolutions, the space age, and so on, are each founded on a specific relationship to animals. Each of the human figures in this history – 'Man the hunter', the first farmer, the coloniser, the space scientist and genetic engineer – has a shadowy animal counterpart: the hunted mammoth, domesticated cows and pigs, dogs and chimpanzees sent into space, genetically altered mice and sheep. Each of these human identities is founded on a power relation to animals.⁸⁵

Wolfe is one of the few contemporary thinkers to specifically take up the question of the animal in the terms of deconstructive critical theory (rather than animal rights, traditional literary criticism, or philosophy). At the beginning of his 2003 book *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory*, Wolfe states the terms of the debate very clearly. I quote it at length since it is such an important foundational text for this thesis:

I want to begin by suggesting that much of what we call cultural studies situates itself squarely, if only implicitly, on what looks to me more and more like a fundamental repression that underlies most ethical and political discourse: repressing the question of nonhuman subjectivity, taking it for granted that the subject is always already human. This means, to put a finer point on it, that debates in the humanities and social sciences between well-intentioned critics of racism, (hetero)sexism, classism, and all other -isms that are the stock-in-trade of cultural studies almost always remain locked within an unexamined framework of *speciesism*. This framework, like its cognates, involves systematic discrimination against an other based solely on a generic characteristic – in this case, species. In the light of developments in cognitive science, ethology, and other fields over the past twenty years, however, it seems clear that there is no longer any good reason to take it for granted that the theoretical, ethical, and political question of the subject is automatically coterminous with the species distinction between *Homo sapiens* and everything else. (p. 1)

My theoretical approach is very similar to and influenced by Wolfe's; like him, I want to question 'the humanist habit of making even the *possibility* of subjectivity coterminous with the species barrier' (p. 1), and like him, I believe that developments from scientific fields such as ethology do and should impact upon posthumanist critical theory. Both Wolfe and Haraway seek to remedy the failure of philosophy and critical theory to take account of zoological and scientific knowledge, as I do in this thesis.⁸⁶ Finally, I agree with Wolfe that 'Derrida's work on the animal [...] provides the most promising framework among the figures discussed for bridging the ethical and epistemological dimensions' of the various issues around the discourse of species (p. 11).

My work differs from Wolfe's in that his predominant focus is specifically on the culture of the United States of America, as indicated by the subtitle of *Animal Rites*, whereas I focus more on British culture. Also, the majority of *Animal Rites* concerns the discourse of species in literary texts and films, whereas my thesis predominantly discusses non-fictional, scientific texts.⁸⁷

Posthumanism, Uncertainty, and the Uncanny

I cautiously characterise this thesis as posthumanist. Donna Haraway argues that ‘posthumanism is too easily appropriated’ by ‘blissed-out’ transhumanist projects, and that the terminology of ‘companion species’ and ‘zoontologies’ is less restrictive than posthumanism, as it ‘insists on its Darwinist meanings, including considering people as *Homo sapiens*’, and ‘inquires into the projects that construct us as a species’.⁸⁸ While I consider this type of inquiry crucial in challenging humanism and questioning the boundaries between humans and other animals, the term posthumanism can also be valuable in indicating a break from humanist thought without necessarily descending into ‘blissed-out techno-idiocy’: as Haraway acknowledges, ‘lots of people doing posthumanist thinking, though, don’t do it that way’. I would locate this project within the strand of posthumanism proposed by Neil Badmington in *Alien Chic*:

Humanism is there and not quite there. It comes and goes, it flickers, it drifts, and it is precisely this wandering that I want to call the possibility of posthumanism. [...] The ‘post-’ does not mark an end, a break, or novelty; it identifies, rather, a patient reckoning with – a working-through of – what follows the prefix. [...] Humanism, in fact, is eternally and unwarily becoming alien to itself, becoming posthumanism.⁸⁹

This is the type of posthumanism with which I engage here, rather than the type exemplified by N. Katherine Hayles’ *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* or Francis Fukuyama’s *Our Posthuman Future: Consequences of the Biotechnology Revolution*. As indicated by the subtitles of these works, despite the significant differences between them, they both identify posthumanism primarily with new technological developments such as artificial intelligence and genetic engineering. The posthumanism of this project is not about technological development or about announcing a new era, but rather a way of reading which brings out the contradictions that trouble humanism from within. As Badmington writes: ‘Posthumanist cultural criticism must, I think, learn to listen out

for the deconstruction of the binary opposition between the human and the inhuman that is forever happening *within* humanism itself'.⁹⁰ In this thesis, I attempt a 'patient reckoning with' humanism, to engage with it and to locate the points at which it 'unwarily' becomes posthumanism. I agree with Badmington's view that 'the task of posthumanism is to uncover those uncanny moments at which things start to drift, of rereading humanism *in a certain way*, against itself and the grain'.⁹¹ As indicated by the use of the term 'uncanny' here, an eerie or unnerving feeling can be a valuable indicator that this founding premise of humanism – that it is always possible to know who is and is not human – is under threat.

This notion of uncertainty is central to Freud's account of the uncanny, and to Ernst Jentsch's 1906 paper 'The Psychology of the Uncanny', which Freud draws on extensively:

Jentsch writes: '[...] One of the most successful devices for easily creating uncanny effects is to leave the reader in uncertainty whether a particular figure in the story is a human being or an automaton' [...]. Jentsch believes that a particularly favourable condition for awakening uncanny feelings is created when there is intellectual uncertainty whether an object is alive or not, and when an inanimate object becomes too much like an animate one.⁹²

There are two aspects of this uncertainty: whether something that appears to be merely automatic and mechanical is in fact conscious ('whether a lifeless object might not be in fact animate') and, conversely, uncertainty over whether something that appears conscious, such as a human being, is reacting in an automatic, unconscious way ('whether an apparently animate being is really alive').⁹³ Freud mentions waxwork dolls and automata in relation to the first aspect, and epileptic fits and insanity for the second; examples discussed in this thesis include representations of Neanderthals, parrots, echolalia in autism, and blushing. Throughout this thesis, I pay attention to

instances of the uncanny as important indicators that something or someone is troubling the certainty of humanism.

Animal Studies, Animal Rights, and the Production of the Human

In a review of the proceedings of the 2000 *Representing Animals* conference, Richard Kahn argues that researchers in the 'new liberal arts field, Animal Studies' can be divided into two categories: 'animal advocates', and 'their postmodern, cultural studies-oriented opponents' who 'partake in Animal Studies as if it were a form of literary field and/or transdisciplinary fad'.⁹⁴ Kahn seems to situate himself within the first group, which considers the second to be 'painfully anthropocentric', as they 'merely pontificat[e] about the intricacies of animal representations [...] [and] forget entirely about the animal presences that had helped to give rise to them'. This opposition between 'progressive' animal advocacy and postmodern critical theory is overly simplified. From Kahn's review itself, it is clear that several of the essays in the *Representing Animals* volume, such as Erica Fudge's 'A Left-Handed Blow', partake of cultural criticism while also having a political purpose.⁹⁵ Furthermore, without critical theory to demonstrate that 'human' and 'animal' are historically and culturally constructed categories, 'those involved in animal politics' all too often reinscribe the hierarchical binary opposition between the two, as is evident from Kahn's claim that they are 'the representative voices for non-human animals'.⁹⁶

A more nuanced categorisation is found in *The Postmodern Animal*, in which Steve Baker describes 'the diverse ways in which postmodern art has dealt with the animal'.⁹⁷ Baker draws on Kate Soper's *What is Nature?* in order to describe 'a spectrum [of thought] ranging from the *animal-endorsing* to the *animal-sceptical*': the

former being more closely aligned with ‘conservation’ and ‘animal advocacy’, while the latter questions ‘culture’s means of constructing and classifying the animal in order to make it meaningful to the human’.⁹⁸ In contrast to Kahn, Baker finds ‘common ground between animal advocacy and postmodern art’, for example in challenging Cartesian dualism and in re-evaluating the hierarchy that places reason above sentiment.⁹⁹ While the methods of reading employed in this thesis come from poststructuralist critical theory, this does not mean that there are no real political implications; I discuss this further in the section ‘Ethics and Humanism’, below.

While I believe that critical theory has a vital part to play in rethinking political relationships between humans and other animals, I do not situate this thesis within Animal Studies as such, since my ethical and theoretical concerns are somewhat different. For example, although this thesis examines several of the same cultural phenomena considered by Erica Fudge in her 2002 book *Animal*, such as animal language experiments, ape art, and anthropomorphism, my theoretical focus is very different from hers. Her primary concern is the way that animals are treated by humans, exemplified by issues such as animal rights, vegetarianism, vivisection, and the wearing of fur, and indicated by her discussion of philosophers such as Peter Singer. This thesis does not engage directly with the type of applied ethical issues raised by Singer, such as the ‘equal consideration’ argument and the Great Ape Project to establish a ‘bill of rights’ for apes.¹⁰⁰ By contrast, my ethical concern is the treatment of those beings who fall in the multiple, thickened, foliated borders of the human: examples are deaf, autistic and aphasic people, whose uncertain categorisation as not-quite-human is discussed in later chapters of this thesis. If, for some of those

involved in Animal Studies, the question is ‘how should we treat them?’, the question I want to ask is ‘how do “we” know who “we” are?’.

In contrast to political ‘animal advocacy’, the aim of this project is to investigate how the boundaries of the human are constructed, and to show that this construction always depends upon exclusion. In formulating this aim, I have been influenced by Diana Fuss’ introduction to *Human, All Too Human*, in which she writes:

Our purpose in this volume is not to broaden the category of the human to include previously abjected and excluded others, but to engage in a more radical interrogation of *the process by which the human comes to mean* in the production of cultural difference. (p. 2)

It seems crucial to me to approach the question of the boundaries between the human and the animal in this way: to interrogate the production of the category of the human itself rather than merely questioning where exactly the boundary-lines are drawn. As Fuss argues:

The human is a linguistic, cultural, and sociopolitical construct of comparatively recent date. [...] The human may, in fact, be one of our most elastic fictions. As the dividing lines between humans and ‘nonhumans’ have been historically redrafted to accommodate new systems of classification and new discourses of knowledge, the human has proceeded to mutate many times over. (pp. 1-2)

I find Fuss’ account of the human very convincing, and my project questions the way that the category of the human continues to ‘mutate’ within culture, and the meanings which are attributed to this ‘construct’, rather than attempting to ‘redraf[t]’ the dividing lines between humans and animals.

Popular Philosophy

There are a number of contemporary thinkers who have recently published popular books on questions relating to the human/animal boundary and how the category of the

human is constructed. These books demonstrate the current cultural significance of this issue; however, their approaches generally differ significantly from mine in this thesis, and they do not engage at any length with critical theory.

One of the best-known of these is the 2002 book *Straw Dogs: Thoughts on Humans and Other Animals* by John Gray. In this aphoristic work, Gray argues that the opposition between 'the human' and 'the animal' is culturally constructed, and that humanism still clings to the Christian belief that humans are fundamentally different from other animals. This text is particularly notable for Gray's insistence on the non-existence of humans as a species. However, having problematised the human/animal boundary, Gray repeatedly seems to return to humanism by attempting to locate 'the' difference between humans and other animals. For example, in a section entitled 'The Poverty of Consciousness', Gray argues convincingly that consciousness does not mark an absolute difference between humans and other animals. But he then reverts to insisting that there *is* an absolute difference, when he writes: 'Where other animals differ from humans is in lacking the sensation of selfhood. In this they are not altogether unfortunate'.¹⁰¹ Even though Gray qualifies this statement by suggesting that the human position is inferior, he nevertheless repeatedly employs this structure whereby he first problematises a conventional distinction between humans and other animals, but then identifies a new one. For example, he writes: 'What is distinctively human is not the capacity for language. It is the crystallisation of language in writing'.¹⁰² Perhaps Gray's repeated attempts to define 'what is distinctively human', almost in spite of himself, demonstrate the continuing pull of humanism as a powerful and dominant belief system.

Another significant recent work is Felipe Fernández-Armesto's *So You Think You're Human?*, published in 2004. Fernández-Armesto draws attention to the human as a historically variable and non-natural category, stating that 'the present limits of our concept of humankind are not obvious and not universal'.¹⁰³ He names 'six main sources' which, in his view, are responsible for the 'conceptual threat' to 'the coherence of our understanding of what it means to be human' (p. 1). Several of these correspond to discourses which I discuss in this thesis: primatology; animal rights; paleoanthropology; the 'vague, variable boundaries' of species; artificial intelligence; and genetics (pp. 1-5). Like Diana Fuss, he describes the 'elasticity' of 'the concept of humanity' (p. 6). However, unlike Fuss, his narrative is one of ever-broadening limits:

The story of the broadening of the concept of humankind – the story outlined in the pages that follow – is not over yet. [...] How far have we got to go, before we have genuinely included the whole human community, and reached a viable frontier between humans and others? Perhaps the quest is doomed to be interminable as every scientific advance blurs formerly convincing distinctions. (p. 8)

As can be seen from the use of the words 'doomed' and 'threat' here, while Fernández-Armesto draws attention to the blurring of the boundaries of the human, he sees this as something negative. This becomes even clearer towards the end of the book when he approvingly cites Francis Fukuyama's *Our Posthuman Future*:

[Fukuyama writes:] 'We might thus emerge on the other side of a great divide between human and posthuman history and not even see that the watershed had been breached'. I suspect this is true, for a reason demonstrated by this book: we do not know what humankind means; we do not know what it is that makes us human; so naturally, we will not be aware of losing it. (p. 155)

Thus, while Fernández-Armesto is aware that 'we do not know what humankind means', he still believes that there is something, some mysterious 'it' which could, potentially, be lost. At this point my view diverges radically from his.

The difference between Fernández-Armesto's view and that of Derrida, Haraway, Wolfe, and others (I locate this thesis in the second category) could be compared to Jean-François Lyotard's description of the difference between modernism and postmodernism:

The accent can fall on [...] the nostalgia for presence experienced by the human subject and the obscure and futile will which animates it in spite of everything. Or else the accent can fall on [...] what one might call its 'inhumanity' [...] and on the extension of being and jubilation which come from inventing new rules of the game. [...] These two modes [...] attest to [...] a differend between regret and experimentation.¹⁰⁴

Fernández-Armesto seems nostalgic for the ideal of the human as something present, whole and unified, whereas the opposing view emphasises the 'extension of being' that is made possible when one attempts to think beyond humanism. He spends most of the book convincingly arguing that the human is a fiction, and yet 'in spite of everything' he still fears that there is something 'that makes us human' which 'we' could lose, without even being aware of its loss. This desire for wholeness, for 'community', is expressed in very Lyotardian terms: 'How far have we got to go, before we have genuinely included the whole human community'? In this passage I read what Lyotard identifies as a 'call to order, a desire for unity, identity, security, and popularity' (p. 14). But this a desire that Lyotard warns against: 'We have paid dearly for our nostalgia for the all and the one, for a reconciliation of the concept and the sensible, for a transparent and communicable experience' (p. 24).¹⁰⁵ Like realism, humanism does not present reality, but rather 'protect[s] consciousness from doubt' (p. 15) at great cost.

Mythbusting and Semioclasm

In this thesis, I treat the human as a myth. Although I argue that the human is a cultural and linguistic construction rather than a natural entity, I have chosen to approach it as a myth rather than as a pure fiction because the definition of the human has real, tangible effects on living beings. As Catherine Belsey writes:

Greek myths are fictions, we would now say. But we might also recognise that they were attempts to make sense of the world. Myths are not just for entertainment, but stories of the origins of things. For the culture that subscribes to them, they have explanatory power.¹⁰⁶

To put it bluntly, a myth can make the difference between life and death. To cite some well-known examples, in slave societies such as ancient Rome and nineteenth-century America, slaves were defined as nonhuman objects and thereby deprived of any rights. Today chimpanzees and bonobos are excluded from the category of the human, and it is therefore considered acceptable to use them in experiments, even those with fatal consequences. As I will argue, people with autism, aphasia and mental illnesses are also excluded from the category of the human in more subtle and dangerous ways. It is because of these pressing ethical concerns that it is vital to interrogate and expose the way that the category of the human is produced in our culture through a process of differing and excluding.

The concept of myth which I employ is primarily influenced by Roland Barthes' work. In *Mythologies*, Barthes argues that 'myth is a type of speech' or 'mode of signification' which 'transforms history into nature' and produces examples of 'the falsely obvious'.¹⁰⁷ The 'essential function of myth' is 'the naturalization of the concept' (p. 131). The concept which I denaturalize in this thesis is the human. Barthes argues that 'myth has in fact a double function: it points out and it notifies, it makes us understand something and it imposes it on us' (p. 117). Throughout this

thesis, I attempt to show how humanist myths ‘impose’ norms and rules of behaviour and do not merely reflect them or ‘poin[t] [them] out’. In the Preface to the 1970 edition of *Mythologies*, Barthes explains the ‘double theoretical framework’ of his book, namely ‘ideological critique’ along with ‘semiological analysis’ (p. 9). There is a ‘necessary conjunction of these two enterprises: no denunciation without an appropriate method of detailed analysis, no semiology which cannot, in the last analysis, be acknowledged as *semioclasm*’ (p. 9). My ‘denunciation’ has a slightly different, but related, target: humanism rather than ‘the bourgeois norm’ (p. 9) in Barthes’ project. I have combined these two theoretical frameworks of ideological critique and semiological analysis by reading the myths of humanist discourse with the aim of critiquing humanist ideology.

Barthes suggests that ‘the best weapon against myth is perhaps to mythify it in its turn, and to produce an *artificial myth*’ (p. 135). The beginning of the ‘Cyborg Manifesto’, in which Haraway introduces the text as her ‘effort to build an ironic political myth’,¹⁰⁸ also echoes this idea of a myth deliberately produced for political purposes, without pretending to be ‘true’. It is intriguing that Felipe Fernández-Armesto concludes *So You Think You’re Human?* also by turning to the terminology of artificial myth. He writes:

That humans are uniquely rational, intellectual, spiritual, self-aware, creative, conscientious, moral, or godlike seems to be a myth – an article of faith to which we cling in defiance of the evidence. But we need myths to make our irresolvable dilemmas bearable. And our claims for our nature are more: not mere myths but also aspirations, still waiting to become true. [...] If we were uncompromising mythbusters, we would tear up our human rights and start again: re-think what we mean by human life and human dignity. For now, if we want to go on believing we are human, and justify the special status we accord ourselves – if, indeed, we want to stay human through the changes we face – we had better not discard the myth, but start trying to live up to it.
(p. 170)

While Fernández-Armesto recognises that the human is a myth, he views it in positive terms: as something comforting, something to aspire to. On the contrary, I believe that the myth of the human has extremely damaging consequences, because, as I have argued, it is always founded on exclusion. Instead of ‘trying to live up to’ the myth, I suggest there is indeed a need to ‘re-think what we mean by human life’. In this sense I identify myself as one of Fernández-Armesto’s ‘uncompromising mythbusters’.

In the broadest terms, by ‘the myth of the human’ I mean belief in an absolute, monolithic and hierarchical division between ‘the human’ and ‘the animal’. It begins with a story of origins, a creation myth, represented by paleoanthropological narratives which claim to tell ‘us’ where ‘we’ came from, and therefore who ‘we’ are, by identifying the exact moment that ‘we’ became human. Along with this, there is a myth of natural human behaviour: a story about how ‘we’ act. Central to this is the myth of speech as mastery of the internal self and the external world. These three myths are explored respectively in the three chapters of this thesis. Barthes’ project in *Mythologies*, although not explicitly defined as posthumanist, does touch on the subject of the human as myth, both in the essay ‘The Great Family of Man’, which critiques Edward Steichen’s photography exhibition of the same name, and in ‘Myth Today’, in which he writes that ‘the basic idea of a perfectible mobile world, produces the inverted image of an unchanging humanity, characterized by an indefinite repetition of its identity’ (p. 142). While Barthes questions the unity and identity of ‘humanity’ or ‘the human community’, he does not discuss the human/animal boundary.¹⁰⁹ However, as I will argue throughout this thesis, these two concepts are inseparable; the illusory unity of the human can only be produced through an equally illusory monolithic border with the animal.¹¹⁰

This myth is not produced in any single area of culture, but across many different types of texts, such as popular science writing, journalism, fiction, and visual representations. What unites all of these texts is their participation in the discursive production of the myth of the human. In 'Change the Object Itself: Mythology Today', Barthes writes:

Contemporary myth is discontinuous. It is no longer expressed in long fixed narratives but only in 'discourse'; at most, it is a *phraseology*, a corpus of phrases (of stereotypes); myth disappears, but leaving – so much the more insidious – the *mythical*.¹¹¹

In order for me to demonstrate how powerful and pervasive this myth is, it is necessary to show its workings in different types of discourse. The reappearance of certain 'phrases' in what might seem to be very diverse areas of cultural discourse shows the 'insidious' working of the myths of humanism. The 'mythical' is, as Barthes writes, 'anonymous and slippery, fragmented and garrulous, available both for ideological criticism and semiological dismantling'.¹¹² This thesis draws together many of these 'garrulous' and 'slippery' fragments in order to criticise and dismantle the myth of the human.

I am especially interested in those texts which explicitly attempt to define the human by differentiating it from the animal, as the production of the myth through the 'systematic play of differences' is most visible here. This thesis does not focus on texts in which animals are used purely as symbols for an aspect of the human: those in which 'the animal plays the role of the non-specific human' in order for the human reader to 'project into it', as John Isaacs puts it.¹¹³ Some obvious examples are Aesop's Fables, Franz Kafka's 'Metamorphosis', and George Orwell's *Animal Farm*.¹¹⁴ Of course, this is something of an oversimplification, as there is potential for

posthumanist readings of all of these texts, and I do discuss anthropomorphism in Chapter 2 of this thesis. However, in general I am more interested in trying to understand the way that animals are used to produce the meaning of the human through the play of differences, in particular in scientific humanist discourses such as (paleo)anthropology, psychology, ethology, and animal language and cognition research.

Ethics and Humanism

Although I do not engage in detail with philosophical ethics in this thesis, the project as a whole has an ethical motivation. One of the primary claims of humanists is that humanism is necessary to prevent people being abused. This was the motivation behind the Universal Declaration of Human Rights, for example, and the post-World-War-Two humanist discourse to which it belongs. This discourse is exemplified by Jacob Bronowski's 1973 book *The Ascent of Man*, which, like the well-known television series which it accompanies, tells the history of 'mankind'. Bronowski argues that 'the great temple architecture of every civilisation expresses the identification of the individual with the human species' (p. 116). He continues:

The monument speaks for the dead man to the living, and thereby establishes a sense of permanence which is a characteristically human view: the concept that human life forms a continuity which transcends and flows through the individual. The man buried on his horse or revered in his ship at Sutton Hoo becomes, in the stone monuments of later ages, a spokesman for their belief that there is such an entity as mankind, of which we are each a representative – in life and death. (p. 118)

Bronowski claims 'that there is such an entity as mankind', of which individuals are merely representatives. In this view, human life has a single origin, a single character, a single history, a single identity.

Bronowski's reasons for supporting this view are clear from a brief sketch of his life.¹¹⁵

He was born in Poland to a Jewish family in 1908, came to Britain in the 1920s to study mathematics at Cambridge, and then moved into biology, followed by statistical analysis. In 1945, he went to Japan as Scientific Deputy to the British Chiefs of Staff Mission to study the effect of the atomic bombs dropped on Hiroshima and Nagasaki. This visit had a profound impact on him; he gave up military research, and began instead to study literature, 'human nature', culture, and evolution. He became 'a leader in the modern movement of Scientific Humanism', and his career culminated in *The Ascent of Man* television series in 1973, the year before his death. Even from this brief sketch of Bronowski's life, it is clear to see the reasons for his humanist beliefs. He had lost members of his family in Auschwitz, and had seen the devastation of the atomic bombs in Japan. For Bronowski and his humanist contemporaries, a belief in the unity of all human life was seen as an essential part of preventing future 'inhumane' treatment. The argument that 'human life forms a continuity which transcends and flows through the individual' was a response to Nazi ideology which justified the mass murder of Jews, Gypsies, homosexuals, those with learning difficulties, and many other groups of people by categorising them as nonhuman. Bronowski was a liberal and knowledgeable man who hoped that his humanist beliefs would prevent future events like the Holocaust or the bombing of Hiroshima.

Given this history, why should anyone wish to challenge this scientific, ethical humanism? First, humanism has not succeeded in preventing human rights abuses. It is now over sixty years since the end of World War Two, and while there has not been another mass murder on the scale of the Nazi Holocaust, human rights abuses and genocides have continued, for example in Rwanda in the 1990s and in Darfur at the

present time. It could be objected that this does not necessarily invalidate the humanist project in principle. However, I believe that there is a more fundamental reason for this failure, which must be examined in order to rethink ethics beyond humanism.

Humanists claim that the concept of the human transcends race, gender, nationality, and all of the other divisive categories which make people aware of how they differ from each other, instead of what 'we' all share. This view is exemplified by the following passage from Richard Norman's 2004 book *On Humanism*:

Whatever progress there has been towards greater equality and the combating of injustice has been made possible by the clearer perception of what human beings share in common. The protest of oppressed groups has been that 'we are human beings like you', and progress comes when that truth is recognised.¹¹⁶

This 'like you' is a call for homogeneity, for the kind of dangerous unity that Lyotard warns against. Why is it necessary that others should be 'like us' in order to treat them with respect? The problematic nature of this type of ethics becomes clearer when Norman identifies 'language' and 'our capacity for emotional *identification* with one another' as the two most important aspects of shared human existence. He admits:

That is not to say that all human beings feel this (there are psychopaths and other human beings whose mental functions are severely impaired), and it is not to say that anyone feels this way all the time. Nevertheless it is a *characteristic* feature of human beings that we are inclined to relate to one another in this way [...]. In short, we *matter* to one another. It is this feature of human nature which the philosopher David Hume referred to as 'sympathy', as 'humanity' or 'fellow-feeling', and which he rightly identified as the precondition for shared moral values. (p. 93)

Leaving aside the questionable assertion that this 'fellow-feeling' really is characteristic of most human beings, it is the casual exclusion of 'psychopaths and other human beings whose mental functions are severely impaired' which demonstrates the danger of humanism's claim to be more ethical than its alternatives. By categorising a person as 'psychopath[ic]' and placing him or her outside the

category of the human, s/he is no longer entitled to ethical consideration, since this ‘fellow-feeling’ is ‘the precondition for shared moral values’. Furthermore, two of the most common indications of autism in children are that they do not speak, and they do not have the ‘capacity for emotional identification’ with others. However, it would be inaccurate to describe them as ‘severely impaired’. If they lack this ‘fellow-feeling’, this ‘humanity’, does that mean that they should be excluded from the ‘shared moral values’? This is indeed what does happen; as I argue in Chapter 2 of this thesis, autistic people are excluded from medical and psychological definitions of the human, and are treated unethically as a consequence. The ‘autistic liberation movement’ has been founded in response to this mistreatment, but in the language it uses, this movement still retains the ‘we are like you’ structure, with the human as the central point of reference. As Cary Wolfe argues, ‘Animal Studies and Disability Studies [...] pose fundamental challenges [...] to a model of subjectivity and experience drawn from the liberal justice tradition and its central concept of “rights”’. Instead, Wolfe suggests, there is a need for ‘a more ambitious and more profound ethical project: a new and more inclusive form of ethical pluralism that it is our charge, now, to frame’.¹¹⁷

Norman is keen to insist that ‘the growth of the language of human rights as an internationally shared moral vocabulary is something to be welcomed’ (p. 106). He writes: ‘One of the impressive features of utilitarianism is its universalism. It enjoins a concern for *all* human beings’ (p. 107). What this humanist argument does not take into account is, first, that it is not simple or obvious to define ‘all human beings’: that, as Diana Fuss writes, ‘the human is not, and has never been, an all inclusive category’.¹¹⁸ Second, it immediately raises the question of why ethical concern, which

Norman summarises as ‘promoting the well-being of others’, ‘respecting the autonomy of others’, and ‘accepting that their lives are their own’ (p. 106) should stop dead when it reaches a border of the human. Why are nonhuman beings not worthy of concern?

Norman does, in his own words, ‘need to respond briefly to that charge’, but his argument – that utilitarians ‘should aim to promote the well-being and prevent the suffering of *any* being capable of experiencing pain or pleasure’ (p. 112) – still concludes by reinscribing the binary opposition between humans and other animals:

In these ways, humanists can and should want to preserve the natural environment, as well as showing concern for the welfare of non-human animals – but that concern has a dimension which is properly *different* from our concern for other humans. (p. 114)

As long as that structure of absolute opposition is maintained, rather than a structure of multiple and irreducible heterogeneity, it is always possible to justify unethical acts by recategorising beings as non-human.

In other words, I take issue with the ideas of ‘*all* human beings’ and ‘all *human* beings’. Once you have these twin ideas – that it is possible to distinguish with certainty who is human and what is not, and that a special type of ethical concern should extend only to those within the privileged category – the way is open for unethical treatment for all those who are placed outside it. As Wolfe argues, ‘the discourse of species has been used historically as a chief strategy for marking and exploiting other *human* subjects as well’.¹¹⁹ In *Animal Rites*, Wolfe writes:

As long as this humanist and speciesist *structure* of subjectivization remains intact, and as long as it is institutionally taken for granted that it is all right to systematically exploit and kill nonhuman animals simply because of their species, then the humanist discourse of species will always be available for use by some humans against other humans as well. (p. 8)

By claiming that ‘there is such an entity as mankind’ of which we are all representatives, it can then be argued that some individuals are inadequate, deviant or

inappropriate representatives of this single 'entity'. Genocide can be (and has been) justified by recategorising the victims as 'inhuman', as 'animals'. There are many obvious examples that could be cited in this respect: women, black people, Jews, the working class, and those with learning difficulties or mental illnesses, among others, have been represented as mindless bodies and described as animals or beasts. As Fuss phrases it: 'That the human has a history comes as no surprise to those subjects so routinely and so violently excluded from its ideological terrain'.¹²⁰

With respect to women, Wolfe describes this as 'the strictly homologous positions of the feminine and the animal in the cultural regime of "carnophallogocentrism"'.¹²¹ The word 'homologous' is important here since the various binary oppositions that continue to dominate Western culture are not interchangeable with each other. Each opposition operates in a specific and unique way, such that being female is not 'the same' experience as being black, nor does it carry the same meanings. However, the oppositions reinforce each other, since the same figure stands at the top of each hierarchy. As Harriet Ritvo writes:

The binary opposition between humans and animals has been historically parallel to a series of other oppositions, confined within the human species: for example, man/woman, upper-class/lower-class, European/non-European, adult/child. In each case, the occupants of the second category have routinely been disparaged by the more powerful occupants of the first. Such disparagement has often been expressed in terms of the hierarchy of nature [...]. Sometimes, as is always a possibility with figuration, analogy has slipped into identity. That is, groups who are; compared to animals may also be treated like them.¹²²

It is not arbitrary or coincidental that the word 'Man' means both 'humankind' and 'male humans': as Donna Haraway writes, the human is a 'euphemistically named surrogate' for 'that odd, ethnocentric, phallogocentric, putatively universal being called Man'.¹²³ In general, the able-bodied, able-minded, middle-class, white, heterosexual,

European male has been identified with the human, and everyone who deviates from this mould has been constructed as closer to the animal: this is the ‘scheme of the *dominant*’ which is also ‘the dominant schema of subjectivity itself’, as Derrida argues.¹²⁴

This project does not deal specifically with questions of gender or race. This is because both of these issues have vast and complex histories to which I cannot do justice by relegating them to a small section of this thesis.¹²⁵ However, it is important to bear in mind that the construction of the human/animal opposition is inextricably bound up with other oppositions, such as man/woman, white/black, able-bodied/disabled, neurologically typical/autistic, heterosexual/queer, and the power relations at stake in all of these. The question of who is designated as human and who is not is *always* a matter of ethical and political (and not ‘merely’ linguistic) concern. In my view, it is crucial to demonstrate that the human/animal boundary is multiple, heterogeneous, and has a history: to expose the way that the category of the human is constructed through a process of differing and exclusion, in order to challenge its power and the acts committed in its name.

Summary of Chapters

As outlined above, each chapter of this thesis investigates a different aspect of the myth of the human: respectively, the creation myth of ‘how we became human’, the myth of natural human behaviour, and the myth of speech as mastery of the internal self and the external world. The boundary between the human and the animal is not single but is ‘multiple and foliated’; the figure of the human is always emerging, being differed and defined along these many folds. Each chapter traces a different fold or

‘foliation’ in the boundary between the human and the animal: ‘becoming human’, ‘acting human’, and ‘talking human’. Although I do not employ inverted commas in subsequent usage of these phrases, I am of course using them, as I am using the terms ‘human’ and ‘animal’ in general, ‘under erasure [*sous rature*]’.¹²⁶ Deconstruction, as Derrida argues in ‘The Ends of Man’, ‘must weave and intertwine [...] two motifs’: it must analyse a discourse from the inside ‘by repeating what is implicit in the founding concepts and in original problematics, by using against the edifice the instruments or the stones available in the house’ and must also ‘change ground [...], by stepping abruptly outside and by affirming absolute rupture and difference’.¹²⁷ It is necessary to employ the language of humanism, to use terms such as ‘becoming human’, in order to achieve this ‘change of ground’. I am not implying a belief in these ideas as actual events; that is, I do not believe that one really *becomes* human, because this whole project questions what that phrase would mean. Rather, I am referring to a discursive process, a ‘phraseology’ of mythical speech within culture.

Chapter 1. Becoming Human: Evolution, the Trace, and Differance in Time

In this chapter I examine the *chronological* boundary of the human, in order to interrogate the way in which the human is produced as different *in time* from its nonhuman animal ancestors. I argue that cultural representations of becoming human unsettle the fixed categories of human and animal. Even though fictional accounts of becoming human, such as *The Epic of Gilgamesh* and the book of Genesis, have largely been replaced by stories told by paleoanthropologists and evolutionary biologists, these scientific narratives still preserve the terminology and conceptual framework of the earlier creation myths. Paleoanthropology, the study of human evolution, is a human science and a humanist discourse; it assumes the existence of the

human as a single entity, monolithically opposed to the animal, which came into existence in a single 'magic moment'. It therefore tries to fix the objects of its study as *either human or animal*. But this binary opposition between human and animal is troubled by the possibility of crossing the border that separates them. The very possibility of transition, which takes place on both a species and an individual level, challenges the absolute opposition between human and animal. It is impossible to locate an absolute origin of the human because of the play of traces and difference that problematises the separation of human and animal, present and past, living and dead. I conclude that narratives of becoming human inevitably dissolve the human that they seek to explain. The very possibility of 'moving the goalposts', of changing the definition of what it means to be human, shows that the human is a culturally constructed category.

Chapter 2. Acting Human: Autism, Anthropomorphism, and Difference in Behaviour

In this chapter I focus on the *behavioural* boundary of the human, in order to argue that the illusion of human essence is produced through a culturally regulated performance of species norms. I draw on Judith Butler's notion of gender as performative, which has been widely taken up by theorists of gender, sexuality and race, but has not been explored as a posthumanist theory. According to humanism, acting human is a natural expression of an internal identity. Therefore, humanism is threatened when the behaviour does not match the supposed essence, and tries to suppress the threatening being by representing him/her/it as anomalous, false, or unintelligible. Those who do not act human in the correct way, such as feral children and autistic people, are constructed as nonhuman and punished for their failure. The 'autistic liberation

movement' responds by trying to extend the category of the human. However, this strategy retains the centrality of the term 'human' as a privileged category. An alternative strategy is to challenge the power of the human as the site of knowledge and power. The second behavioural threat to humanism is posed by animals who act human. Humanism attempts to suppress this by describing the phenomenon as anthropomorphism; in other words, suggesting that the performance is false or fictional. However, the ferocity of anti-anthropomorphism reveals that there is something very important at stake, and that the performance does indeed threaten the secure category of the human. Although these performances may be presented as false or fictional, the fact that an animal *can* act human undermines the idea that human behaviour is a natural manifestation of an internal essence, and instead makes visible the performativity of all instances of acting human.

Chapter 3. Talking Human: Speech, the Unconscious, and Differance in Communication

In this chapter I analyse the *linguistic/communicatory* boundary of the human, in order to deconstruct the opposition between human *language* and animal *communication* which underpins contemporary humanist discourse. This chapter incorporates a wide range of texts, reading biological, psychological and (paleo)anthropological explanations alongside philosophy and critical theory, in order to deconstruct the humanist myth of language. Humanists claim that spoken language, in its specific physical form, is 'what makes us human'. The human voice is identified with presence, truth, subjectivity, while animals are mute, inarticulate objects. However, the existence of 'talking' birds, especially parrots, threatens this structure of oppositions. Humanism attempts to contain this threat by representing parrots' 'speech' as 'not

really talking'. Parroting is represented as a mechanical imitation of true human speech, but the representations of parrots which I analyse show that human speech itself does not guarantee truth or presence. I then interrogate the idea that humans 'have' language. Human speech inevitably exceeds conscious control and intention; even the voice itself is not a pure expression of internal thoughts, but signifies in extraverbal ways. It is necessary to recognise both the shared aspects of human and nonhuman communication while also respecting the radical otherness of animals' experience. I conclude that if the human is defined by 'having language' and language is 'what humans have', then the signifiers 'language' and 'the human' are constituted only by referring to each other. There is no ultimate signified, no human essence.

Chapter 1

Becoming Human

Evolution, the Trace, and Differance in Time

One of the great scientific detective stories may finally have been solved: when did our ancestors cease being brute animals and first become truly human?

'The Day We Learned To Think', *Horizon*. First broadcast 20 February 2003 on BBC Two.

In a series of forms graduating insensibly from some ape-like creature to man as he now exists, it would be impossible to fix on any definite point where the term 'man' ought to be used. But this is a matter of very little importance.

Charles Darwin, 'The Descent of Man, and Selection in Relation to Sex' (1871), in *From So Simple a Beginning: The Four Great Books of Charles Darwin*, ed. by Edward O. Wilson (London and New York: W. W. Norton, 2006), pp. 767-1248 (p. 910).

When does ‘the animal’ end and ‘man’ begin? Did ‘our’ ancestors become human when they started to create art and wear clothes forty thousand years ago, or a hundred thousand years ago, when the first *Homo sapiens* evolved? Or perhaps the border between animal and human lies further back, a million years ago, marked by the evolution of *Homo erectus*: characterised by Richard Leakey as ‘distinctly human’,¹ even though Noel Boaz and Russell Ciochon see it as ‘still in essence a tropical animal’.² Perhaps the first humans were ‘our’ *Australopithecus afarensis* ancestors who lived four million years ago, described by Ian Tattersall as ‘more humanlike than apelike’,³ but by John Lynch and Louise Barrett as ‘small and chimp-like, with nothing obviously human about their behaviour’.⁴ Looking back in time, how can humans, ‘those living creatures who have given themselves the word that enables them to speak of the animal with a single voice’,⁵ know where to draw a line between ‘themselves’ and the animal other?

What these conflicting definitions of the human suggest is that the chronological limit between human and animal is not single and indivisible, but is a ‘plural and repeatedly folded frontier’.⁶ In this chapter I focus specifically on the chronological boundary of the human, in order to interrogate the way in which the human is produced as different *in time* from its nonhuman animal ancestors. I argue that cultural representations of becoming human, of crossing the boundary from animal to human, unsettle the fixed

categories of human and animal. As outlined in the Introduction to this thesis, my aim is ‘not to efface the limit, but to multiply its figures, to complicate, thicken, delinearize, fold, and divide the line precisely by making it increase and multiply’.⁷ The drawing of this limit is necessary in order to construct the category of the human. As Derrida writes in *Of Grammatology*:

Man *calls himself* man only by drawing limits excluding his other from the play of supplementarity: the purity of nature, of animality, primitivism, childhood, madness, divinity. [...] The history of man *calling himself* man is the articulation of *all* these limits among themselves.⁸

In this chapter, I read narratives of human evolution in order to argue that they draw a chronological limit between human and animal, which excludes ‘nature’, ‘animality’, and ‘primitivism’ in order to define the human: to enable ‘man [to] call[1] himself man’.

The theory of evolution has profound implications for humanism as it fundamentally challenges the concept of species and of absolute boundaries between species. Human evolution is a topic which is frequently discussed within popular culture, the news media, and scientific research, but has received relatively little attention within critical and cultural theory. Posthumanist theorists have been more interested in announcing the end of the human (as is suggested by the very word posthumanism) than in looking back at its origins; the potential successors of the human have attracted more interest than its extinct predecessors. However, the creation myth of the human, the story of how ‘we’ became human, is central to the mythology of humanism. It is my argument that this story is centred on a process of becoming differed from the animal. The basic components of this story, such as hunting animals, learning language, and wearing clothes, have persisted for millennia. Even though fictional narratives of becoming human, such as *The Epic of Gilgamesh* and the Biblical account in the book of Genesis,

have largely been replaced by scientific stories, these scientific narratives of evolution still preserve the terminology and conceptual framework of the earlier creation myths.

Paleoanthropology, the study of human evolution, is a human science and a humanist discourse: it assumes the existence of the human as a single entity, monolithically opposed to the animal. Because paleoanthropology postulates a human essence, it cannot tolerate an ambiguously or partially human figure; therefore, paleoanthropological texts attempt to fix various extinct hominid species as *either* human *or* animal. In this chapter, I read a number of texts that represent *Homo erectus* – a key transitional figure between animal and human – in opposing ways, in order to show how they try to fix its meaning as either human or animal, and thereby preserve the human/animal binary opposition. I then turn to representations of Neanderthals and show that they trouble this binary opposition because they cannot be fixed as either human or animal. I argue that Neanderthals signify within culture as a mirror or uncanny double of the human subject, and that the possibility of ‘them’ passing as ‘us’ challenges the idea of a human essence.

The binary opposition between human and animal is troubled by the possibility of crossing the border that separates them. The very possibility of transition challenges the absolute separation between human and animal. This transition, this becoming human, takes place not only on the level of the species – human evolution over millions of years – but also on the level of the individual – each child must learn to become human. In cultural discourse, phylogenesis, becoming human as a species, is identified with ontogenesis, the development of each individual child. This conflation

stems from the nineteenth-century ‘biogenetic law’ (the argument that ‘ontogeny recapitulates phylogeny’) which is still a highly influential analogy.⁹

I conclude that narratives of becoming human inevitably dissolve the human that they seek to explain. The very possibility of ‘moving the goalposts’, of changing the definition of what it means to be human and where the limit between the animal and the human lies, suggests that the human is a culturally constructed category. The search for a point of absolute origin is problematised by the play of traces ‘across and despite all the limits that the strongest philosophical or cultural tradition thought it could recognize between “man” and “animal”’.¹⁰ Narratives of human evolution cannot help but deconstruct the absolute opposition between humans and other animals. The human does not constitute a radical break from the pre-human animal, but ‘retains the mark’ of that animal as part of itself, and the pre-human animal is only understood as ‘hollowed out by the mark of its relation to a future element’, the human.¹¹

The Origin of Species

Before the publication of Charles Darwin’s *The Origin of Species* in 1859, it was generally believed within Western culture that species were divinely created, immutable entities. According to the Old Testament, God created all of the species of animals, and then created man as a kind of proxy to rule over them:

God made the wild animals according to their kinds, the livestock according to their kinds, and all the creatures that move along the ground according to their kinds. And God saw that it was good. Then God said, ‘Let us make man in our image, in our likeness, and let them rule over the fish of the sea and the birds of the air, over the livestock, over all the earth, and over all the creatures that move along the ground’.¹²

Species were seen as fixed, unchanging entities; creatures were, as the word implies, *created* 'according to their kinds' and were fundamentally distinct from each other. As well as the Judeo-Christian Bible, there was the influence of Platonic philosophy, in which each living animal was merely an imperfect copy of the species ideal, which resided in some supernatural realm: 'pre-Darwinian biologists felt [...] that earthly horses were merely imperfect replicas of some ideal horse, and earthly lions were rough and ready copies of the original, heavenly lion'.¹³ These belief systems suggest that there is an absolute separation between humans and all other animals, and a core identity which is shared by all humans.

Even when the possibility of some kind of change or evolution in humans was considered, there was no suggestion that one species might actually become another. Jean-Jacques Rousseau opens his 1754 'Discourse on the Origin and the Foundations of Inequality among Men' with the following passage:

However important as it may be, in order to judge soundly regarding Man's natural state, to consider him from his origin, and to examine him, so to speak, in the first Embryo of the species, I shall not follow his organization throughout its successive developments: I shall not pause to search in the animal System what he may have been at the beginning, if he was eventually to become what he now is; I shall not examine whether, as Aristotle thinks, his elongated nails were at first hooked claws; whether he was as hairy as a bear and whether, walking on all fours, his gaze directed to the Earth, and confined to the horizon of a few paces, determined both the character and the limits of his ideas. [...] Comparative Anatomy has as yet made too little progress, the observations of Naturalists are as yet too uncertain to permit establishing the basis of a solid argument on such foundations; so that, without resorting to the supernatural information we have on this point, and without taking into account the changes that must have occurred in man's internal and the external conformation, as he gradually put his limbs to new uses, and took up new foods, I shall assume him always conformed as I see him today, walking on two feet, using his hands as we do ours, directing his gaze over the whole of Nature, and with his eyes surveying the vast expanse of Heaven.¹⁴

Even though Rousseau alludes to the possibility of some kind of 'successive developments' of 'man', these were still within the category of 'vague and almost

imaginary conjectures'. Furthermore, even though Rousseau considers that 'changes [...] must have occurred in man's internal and [...] external conformation', he imagines these changes to be the result of 'put[ting] his limbs to new uses' and eating 'new kinds of foods': that is, changes *within* the human species. The possibility that the human might have emerged from a completely other, inhuman, animal species – that there might not have been such a thing as 'Man' – does not even form part of any 'imaginary conjectures'. Rousseau proceeds on the then-plausible basis that 'man' has 'always conformed as I see him today'. His description of this state – 'walking on two feet, using his hands as we do ours, directing his gaze over the whole of Nature' – emphasises the superiority of the human in comparison to the rest of the world: 'Man' is depicted as a bipedal, dextrous godlike animal who can survey 'the vast expanse of Heaven'.

From this perspective, Darwin's theory of the origin of species by means of natural selection constituted an immense shock. Its impact was famously described by Sigmund Freud in 'Fixation To Traumas – The Unconscious':

In the course of centuries the *naïve* self-love of men has had to submit to two major blows at the hands of science. The first was when they learnt that our earth was not the center of the universe but only a tiny fragment of a cosmic system of scarcely imaginable vastness. This is associated in our minds with the name of Copernicus, though something similar had already been asserted by Alexandrian science. The second blow fell when biological research destroyed man's supposedly privileged place in creation and proved his descent from the animal kingdom and his ineradicable animal nature. This revaluation has been accomplished in our own days by Darwin, Wallace and their predecessors, though not without the most violent contemporary opposition.¹⁵

It is now nearly one hundred and fifty years since *The Origin of Species* was published, but humanism still does not seem to have accepted its full implications.

Freud's argument that Darwin's work was a 'blow' to 'the *naïve* self-love of men', and that it incurred 'the most violent contemporary opposition', is disputed by Chris

Fleming and Jane Goodall in their paper 'Dangerous Darwinism', published in the journal *Public Understanding of Science*. They criticise the 'rhetorical narrative' instigated by Freud, which claims that Darwin's theory 'came as a horrible shock to the Victorians and that it is still a profound psychological threat, and therefore widely resisted'.¹⁶ They argue that 'the overwhelming weight of evidence indicat[es] that Darwin's work was neither generally shocking nor regarded as particularly dangerous in his own time' (p. 266). It is their contention that this 'culture-shock myth', as they call it, is still used by pro-Darwinian scientists such as Richard Dawkins and Stephen Jay Gould to deny 'that there was a genuine rational debate about the new theories, built around cogent arguments on several sides' (p. 266).

While I am sympathetic to the goal of increasing public understanding of science and to the demand that scientists should take 'some responsibility for what may be highly complex configurations of evidence when they make statements about cultural issues' (p. 261), I do not accept their argument that Darwin's theory did not and does not provoke resistance as a result of its impact on the place of humans in the world.

Fleming and Goodall argue that the 'culture-shock narrative, and the paradigm-shift drama to which it belongs' ultimately serve to 'promote not understanding but dramaturgy, not science but myth' (pp. 269-70). It is true that others before Darwin had speculated about evolution (including his grandfather, Erasmus Darwin), but *The Origin of Species* did mark a major shift in cultural understanding. As Colin Tudge writes:

Darwin was not the first person to think of evolution: of course not. But he it was who established that evolution is a fact – the natural way of things. He succeeded in this partly by providing the first plausible mechanism of evolution – 'by means of natural selection'; and this made the idea generally credible. He also established the idea of evolution through the sheer mass of evidence that he brought to bear, and the inexorable logic of his arguments.¹⁷

Therefore, while Darwin's work can be understood as part of a wider historical narrative, it is not unreasonable to also identify it as a significant turning point.

Fleming and Goodall's primary criticism of those who promote the 'culture-shock myth' is that they do not provide an 'evidential basis' for their claims, but merely repeat the myth (p. 261). I would argue that there is still a great deal of resistance to the full implications of evolutionary theory, even within the scientific community, and that the 'evidential basis' for this resistance can be read in many cultural texts. For example, in a 2004 *New Scientist* article on the sequencing of the chimpanzee genome, Robin Orwant writes:

The results of the human genome project suggest the figure [the number of human genes] is closer to 30,000 – only five times as many as your average bacterium and roughly the same as mice. To add insult to injury, most of our genes are virtually identical to those of chimps.¹⁸

The language of violence here – the idea that humans have actually been somehow 'injur[ed]' by these discoveries – closely echoes Freud's characterisation of the Copernican and Darwinian revolutions as 'blows'. Similarly, a 1997 article in *Scientific American* entitled 'Rambling Road to Humanity' located a recent paleoanthropological discovery in an anti-humanist narrative very similar to Freud's:

Science has, over the centuries, humbled humans, gradually forcing us to abandon the illusion that our species represents the ultimate end of creation. Copernicus and Galileo displaced Earth from the center of the universe; Darwin dashed the conceit that humans originated in a special way, distinct from all other species. Now a group of researchers [...] throw cold water even on the notion of steady 'improvement' within the human line.¹⁹

The article discusses recent discoveries that the brain size of *Homo sapiens* has diminished over the last seventy-five thousand years, and that Neanderthals had a significantly larger average brain capacity, before concluding: 'So this is what it has come to. The favored son of the Garden of Eden has been demoted to the incredible shrinking human'. Texts like these show that discoveries about human evolution still

have the power to ‘humbl[e] humans’ and that they are frequently interpreted in a negative way.

Perhaps more significantly, what articles like these demonstrate is that scientific discoveries cannot be disentangled from the cultural myths that surround them. Fleming and Goodall criticise the ‘culture-shock narrative’ for promoting ‘not science but myth’, but this formulation assumes that it is possible to separate scientific discoveries from the way that they are narrated. In order to be disseminated, scientific research must be narrativized and thus transformed into myth. This is particularly true of scientific fields such as evolutionary biology and human genetics which are so closely tied to cultural and philosophical beliefs about who ‘we’ are. While it is the theory of evolution which is generally regarded as the central part of *The Origin of Species*, Darwin’s argument that there is no such thing as a species is more deeply challenging to humanist discourse. Darwin writes:

I can entertain no doubt, after the most deliberate study and dispassionate judgment of which I am capable, that the view which most naturalists entertain, and which I formerly entertained – namely, that each species has been independently created – is erroneous. I am fully convinced that species are not immutable; but that those belonging to what are called the same genera are lineal descendants of some other and generally extinct species, in the same manner as the acknowledged varieties of any one species are the descendants of that species.²⁰

A species is not a divinely created entity, but simply a convenient label for grouping individual organisms. Darwin writes that ‘no one definition [of species] has yet satisfied all naturalists’, apart from ‘the unknown element of a distinct act of creation’.²¹ an observation which still holds true today. Furthermore, a species is not created at a single moment, but emerges from within another species: as Darwin puts it, ‘varieties are species in the process of formation, or are, as I have called them, incipient species’.²² This changes the notion of species from ‘a group of animals all of

which were supposed to be identical with a type' to 'a live population occupying space during time in nature'.²³ This idea has profound implications for humanism, as it means there is no simple and absolute boundary between human and nonhuman.

Furthermore, if the human species has evolved from nonhuman animals, then prior to a certain date, humans did not exist. It must, therefore, have a chronological boundary; if one goes far enough back in time, one must encounter a limit. As Ian Tattersall observes:

Darwin had to concede, of course, that species had some type of reality in space – though he was keenly aware of the practical difficulties frequently encountered in defining them. The idea of natural selection, however, cleverly enabled Darwin to attack the notion of immutability by denying species reality in *time*.²⁴

Evolutionary theory thus adds a historical dimension to the concept of the human. The human is no longer a universal, eternal being, but has a beginning and an end: as Darwin argues, 'every production of nature [...] has had a history'.²⁵ The modern project of taxonomy, begun by Linnaeus, aimed to place each living being in the correct position in the overall scheme of life.²⁶ However, the dream of a perfect classification becomes an impossibility when one adds the dimension of time, which dissolves the boundaries between species, meaning that 'every generalisation about biology is a slice in time'.²⁷ Similarly, Richard Dawkins writes: 'If we consider all animals that have ever lived instead of just modern animals, such words as "human" and "bird" become just as blurred and unclear at the edges as words like "tall" and "fat"'.²⁸ The fact that species change over time means that the category of the human is 'blurred and unclear at the edges'.

This implication is clear in *The Descent of Man*, in which Darwin argues that there is no way of pinning a definite date of origin on the human species:

Whether primeval man, when he possessed very few arts of the rudest kind, and when his power of language was extremely imperfect, would have deserved to be called man, must depend on the definition which we employ. In a series of forms graduating insensibly from some ape-like creature to man as he now exists, it would be impossible to fix on any definite point when the term 'man' ought to be used. But this is a matter of very little importance. So again it is almost a matter of indifference whether the so-called races of man are thus designated, or are ranked as species or sub-species; but the latter term appears the most appropriate.²⁹

As Darwin writes, being human is not a question of identifying any real essence, but merely a question of 'deserv[ing] to be called man'. It is a linguistic construction, and therefore 'depend[s] on the definition which we employ'. This work was first published in 1871, but its implications – most significantly, the non-existence of the human species – have still not really been accepted or understood. Ideas based on evolution are still frequently used to reinscribe, rather than challenge, pre-Darwinian notions of human superiority. As Stephen R. L. Clark writes: 'Liberal humanists need to believe in the myth of a common human nature, but have abandoned belief in the human soul, and so equate that imagined natural kind with the human species. They should think again'.³⁰ Similarly, John Gray points out:

Species do not exist. This applies equally to humans. Yet it is forgotten whenever people talk about 'the progress of mankind'. They have put their faith in an abstraction that no one would think of taking seriously if it were not formed from cast-off Christian hopes.³¹

The fact that people still frequently make reference to the idea of a single human entity, such as 'mankind', 'humanity', or 'the human race', demonstrates that the full implications of Darwin's work, in particular his insistence on the non-existence of species, have still not been fully incorporated into cultural understandings of what it means to be human.

The persistence of these pre-Darwinian ideas is demonstrated by their appearance in the most unlikely texts. In the 2006 edition of Darwin's four major works (*From So Simple a Beginning: The Four Great Books of Charles Darwin*), its editor E. O.

Wilson writes:

By 4 million years before the present, the earliest direct human ancestor (*Australopithecus afarensis*, known best from the female fossil 'Lucy') had acquired an erect posture and bipedal locomotion but still possessed a chimpanzee-sized brain. The first 'truly human' species (*Homo habilis*) arose by 2.2 million years ago and possessed a brain capacity one-third larger. It gave rise within half a million years to *Homo erectus*, who possessed a brain nearly as large as that of modern *Homo sapiens*.³²

Wilson uses the phrase 'truly human', even though the text which he is introducing (*The Descent of Man*) makes it very clear that various developments attributed to 'the human', such as large brain size, bipedalism, and tool making, emerged over millions of years, so that there is no such thing as the first 'true' human. However, the fact that he places it in inverted commas suggests a certain hesitation on his part; this humanism is not entirely secure.³³ Darwin is insistent that there is no such thing as a 'true' species, and that this realisation should follow from his work: as a consequence of understanding evolution, he writes, 'we shall at least be freed from the vain search for the undiscovered and undiscoverable essence of the term species'.³⁴ It may be the case that naturalists no longer engage in 'endless disputes about whether or not some fifty species of British brambles are true species'³⁵ but when it comes to the human, even scientific experts in evolutionary theory, such as Wilson, seem unwilling or unable to give up on that 'vain search for the undiscovered and undiscoverable essence'.

This search for the essence of the human is now the main goal of paleoanthropology: the scientific study of human evolution, generally conducted through the search for and analysis of fossil remains. As can be seen from the word itself – from the Greek *palai*,

long ago, and *anthropos*, man – the discipline investigates the question of human origins specifically, as distinct from paleontology, which studies the fossil remains and evolutionary history of *all* organisms. However, as well as being a research science, paleoanthropology is also a human science. It seems reasonable to categorise it in this way, since there is no agreed-upon definition of which disciplines count as ‘human sciences’, except that they focus on the human as their object of study. For example, Oxford University’s Human Sciences course ‘studies humans as biological, social and cultural species [...] from the contrasting perspectives of the biological and social sciences’.³⁶ Another Human Sciences department, at Loughborough University, describes its subject area as ‘Psychology, Ergonomics, Human Biology’.³⁷

Paleoanthropology fits well into this cross-disciplinary area of study because it straddles the line between ‘biological’ and ‘social’ sciences. The archaeologist Ralph Solecki explicitly describes the study of prehistory as a ‘humanistic’ discipline:

Prehistory partakes of allied interdisciplinary fields such as palaeozoology, palaeobotany, geology, climatology – among some of the more obviously useful sciences. But the subject matter of prehistory is man, and one must never lose sight of this fact. Hence prehistorians, if they wish to present their data in humanistic terms, should be knowledgeable in the other fields of anthropology (physical anthropology, linguistics and cultural anthropology).³⁸

Similarly, the *Oxford English Dictionary* describes the discipline as ‘a branch of anthropology’.³⁹ This interdisciplinarity, which combines the authority of ‘the more obviously useful sciences’ with the cultural importance of anthropology, means that paleoanthropology plays a very significant role in constructing contemporary understandings of the human.

Paleoanthropological texts do not simply recount scientific research, but also (re)produce cultural myths: as Matt Cartmill notes, ‘the stories that we tell about human origins, even if they are true stories, are myths’.⁴⁰ The stories are built around

fossilised bones and stone tools which are materially real, but, as I will argue, these physical objects are woven into imaginary stories and fantasies. Sometimes this process of myth-making is explicit. For example, Wilson writes:

The evolutionary epic is probably the best myth we will ever have. It can be adjusted until it comes as close to truth as the human mind is constructed to judge the truth. And if that is the case, the mythopoeic requirements of the mind must somehow be met by scientific materialism so as to reinvest our superb energies.⁴¹

However, not all of those who produce this myth acknowledge that they are responding to 'mythopoeic' and not simply factual desires, even though these two modes cannot be fully separated. As Christopher Nash argues:

The narrative mode of discourse is omnipresent in human affairs. We're obliged to consider the ungainly fact that in our culture, where we least expect it and even most vociferously disclaim it, there may actually be storytelling going on, and that the implications may indeed be 'considerable'.⁴²

Narratives of human evolution are, precisely, narratives, and paleoanthropologists are storytellers. The story they tell has serious political and ethical consequences because it is the story of how 'we' came to be, and by implication who 'we' are. As Barbara Katz Rothman writes, 'evolutionary history [is] the story of how we came to be, the collective origins tale we can tell'.⁴³ I will now briefly look at some pre-scientific versions of this 'collective origins tale' in order to demonstrate how they still influence paleoanthropological storytelling today.

Creation Myths

Stories of becoming human and of becoming differed from the animal are among the very earliest known texts. *The Epic of Gilgamesh*, the oldest surviving story in existence, tells the story of a 'wild man' who goes through a process of becoming human which is very similar to the dominant narrative of becoming human today.

Gilgamesh, first written down in Mesopotamia in the third millennium B.C.E., is in its current form a combination of several different, related versions of a tale based around a real historical figure: Gilgamesh, king of Uruk. The fictionalised Gilgamesh is a tyrant whose uncontrollable lust and violence is ruining the lives of his subjects. So they pray to Aruru, the goddess of creation, to create an 'equal' to Gilgamesh who can fight with him and leave the citizens in peace: a man who will be 'his own reflection, his second self'.⁴⁴ In answer to their prayers, Aruru makes a man from clay. This is the wild man Enkidu, who is described as a mixture of god, human and animal:

There was virtue in him of the god of war, of Ninurta himself. His body was rough, he had long hair like a woman's; it waved like the hair of Nisaba, the goddess of corn. His body was covered with matted hair like Samuqan's, the god of cattle. He was innocent of mankind; he knew nothing of the cultivated land. (p. 63)

Enkidu seems to be a figure of true 'divinanimality', to use Derrida's term.⁴⁵

Gilgamesh too embodies the divine, the human, and the animal; he is described as two-thirds god, one-third man, and 'terrifying like a great wild bull' (p. 61). Enkidu is a kind of *Homo ferus*: a man untouched by human culture,⁴⁶ who lives in peaceful harmony with animals: 'Enkidu ate grass in the hills with the gazelle and lurked with wild beasts at the water-holes; he had joy of the water with the herds of wild game' (p. 63).

But this idyllic scene is disrupted by the practice of hunting. Because Enkidu continually thwarts the hunters' attempts to trap animals, the men set a trap for him in return. This trap is 'a harlot, a wanton from the temple of love' who goes naked to Enkidu in order to lure him into having sex with her (p. 63). The woman is used as a bridge between the world of animals and the world of men. Rather than being

primarily erotic, her nakedness emphasises her status as intermediate between human and animal:

The trapper spoke to her: 'There he is. Now, woman, make your breasts bare, have no shame, do not delay but welcome his love. [...] For when he murmurs love to you the wild beasts that shared his life in the hills will reject him.' She was not ashamed to take him, she made herself naked and welcomed his eagerness. (p. 64)

The emphasis on the woman's lack of shame about her nakedness suggests that she is more animal than human. In the Bible, it is Adam and Eve's awareness of and shame about their nakedness which makes them fully human. The relationship between nakedness and shame also plays a key part in 'The Animal that Therefore I Am (More to Follow)', which Derrida begins by posing the question of why he feels ashamed if a cat sees him naked. He writes:

It is as if I were ashamed, therefore, naked in front of this cat, but also ashamed for being ashamed. [...] Ashamed of being as naked as an animal [*bête*]. It is generally thought, although none of the philosophers I am about to examine actually mention it, that the property unique to animals and what in the final analysis distinguishes them from man, is their being naked without knowing it.⁴⁷

(I discuss the concepts of blushing and shame, and how they relate to the border between human and animal, in more depth in Chapter 3.) In *Gilgamesh*, the harlot's lack of shame about her nakedness suggests that she is not fully human, and this enables her to make contact with Enkidu where other people cannot.

But sexual contact with the harlot has the same effect for Enkidu as eating the apple does for Adam and Eve: it banishes him from his Edenic paradise. After six days and seven nights lying with the woman, Enkidu tries to return to the beasts he has always lived with, but they reject him:

Then, when the gazelle saw him, they bolted away; when the wild creatures saw him they fled. Enkidu would have followed, but his body was bound as though with a cord, his knees gave way when he started to run, his swiftness

was gone. And now the wild creatures had all fled away; Enkidu was grown weak, for wisdom was in him, and the thoughts of a man were in his heart. (p. 65)

Enkidu has unwittingly and unwillingly crossed the border from animal to human, and is forever cut off from the animals. The hunt has been successful. Unable to return to the animals, Enkidu goes with the harlot to Uruk, where Gilgamesh is king, and she helps him to complete the process of becoming human:

She divided her clothing in two and with the one half she clothed him and with the other herself; and holding his hand she led him like a child to the sheepfolds, into the shepherds' tents. [...] But Enkidu could only suck the milk of wild animals. He fumbled and gaped, at a loss what to do or how he should eat the bread and drink the strong wine. Then the woman said, 'Enkidu, eat bread, it is the staff of life; drink the wine, it is the custom of the land.' So he ate till he was full and drank strong wine, seven goblets. He became merry, his heart exulted and his face shone. He rubbed down the matted hair of his body and anointed himself with oil. Enkidu had become a man; but when he had put on man's clothing he appeared like a bridegroom. He took arms to hunt the lion so that the shepherds could rest at night. (pp. 67-68)

The key parts of this process of becoming human involve becoming differed from the animal. Once Enkidu has made the transition from human to animal (when he has 'grown weak' and 'the thoughts of a man were in his heart'), he must learn to wear clothes, eat human food and drink wine, and groom himself, in order to live with other humans. Finally, he takes 'arms to hunt the lion'; he has changed sides, so that instead of protecting the animals from the human hunters, he now participates in hunting them.

Although this story is over five thousand years old, these behaviours still correspond closely to those which are now seen as marking the differences between human and animal. For example, on the BBC's website you can play a game called 'Caveman Challenge', the aim of which is to 'move along the evolutionary scale from ape to man'.⁴⁸ The game consists of completing successive stages in the process of becoming human; these include walking upright, eating meat, making tools, controlling fire,

hunting animals, using language, and using your imagination. This cultural representation of becoming human is remarkably similar to that in *Gilgamesh*, despite the five thousand years that separate them, and this demonstrates that ancient mythological accounts of becoming human still inform scientific narratives today.

Gilgamesh is a very ancient depiction of becoming human, of establishing a distance between humans and other animals, and yet the text repeatedly describes humans by likening them to animals. Gilgamesh is 'like a wild bull' (p. 65), the goddess Ninsun 'is as strong as a wild ox in the byre' (p. 69), and when Enkidu dies, Gilgamesh begins 'to rage like a lion, like a lioness robbed of her whelps' (p. 95). There is a fascinating tension in the text between the explicit storyline of Enkidu becoming separated from the animals, and the underlying sense of affinity between humans and animals, shown by the recurrent animal metaphors. John Berger observes a similar sense of proximity in the metaphors used in *The Iliad*: '*The Iliad* is one of the earliest texts available to us, and in it the use of metaphor still reveals the proximity of man and animal, the proximity from which metaphor itself arose'.⁴⁹ Berger suggests that the relation of humans to animals is one of both sameness and difference. He writes:

Animals are born, are sentient and are mortal. In these things they resemble man. In their superficial anatomy – less in their deep anatomy – in their habits, in their time, in their physical capacities, they differ from man. They are both like and unlike. (p. 2)

It is this interplay of sameness and difference – like a lion, but not a lion – which, according to Berger, means that 'the essential relation between man and animal was metaphoric. Within that relation what the two terms – man and animal – shared in common revealed what differentiated them' (p. 5). Each attempt to differentiate the human from the animal brings with it an awareness of the similarities as well, and the

'proximity of man and animal' is shown in the significance of animals in the earliest texts and works of art.

As noted above, many of the earliest known texts, such as *The Epic of Gilgamesh*, *The Iliad*, and the Bible, are full of animal metaphors. Similarly, the prehistoric cave paintings of Lascaux, Altamira, and others all depict animals. As Jacob Bronowski writes:

We find in caves like Altamira [...] the record of what dominated the mind of man the hunter. There we see what made his world and preoccupied him. The cave paintings, which are about twenty thousand years old, fix for ever the universal base of his culture then, the hunter's knowledge of the animal that he lived by and stalked.⁵⁰

As Bronowski says, these paintings suggest that 'the animal' preoccupied 'man the hunter', as do the frequent animal metaphors in stories. Hunting appears explicitly in many of these images: in some cases there are small stick-figure humans attacking the animals with spears, while others depict animals already killed by hunters. The relationship between humans and animals is crystallised in the painted pictures of hunting. Just as the human subject produces the animal as object of the artistic gaze, it also produces the animal as object of the hunt.

In both fictional and scientific creation myths, hunting animals is represented as a central part of the process of becoming human. In the mid-twentieth century, the most widely accepted explanation of human evolution was known as 'Man the Hunter'.

This theory suggests that hunting was the driving force behind the evolution of many human characteristics, such as bipedalism, (relative) hairlessness, co-operation, and even language. For example, Desmond Morris writes: 'This change [from fruit picking to hunting] was to forge our human personality, making us more cooperative, more

communicative, more dextrous and more intelligent'.⁵¹ This theory places the differentiation from the animal other at the very inception of the human; in order to become human, the animal must be defined 'as a thing', as Georges Bataille has written.⁵² Bataille argues that this process of defining the animal as an object is central to the process of defining oneself as human:

The definition of the animal as a thing has become a basic human given. The animal has lost its status as man's fellow creature, and man, perceiving the animality in himself, regards it as a defect. [...] But to kill the animal and alter it as one pleases is not merely to change into a thing that which doubtless was not a thing from the start; it is to define the animal as a thing beforehand.⁵³

Of course, animals also hunt and kill each other, but Bataille argues that this is a different process, since 'the animal that another animal eats is not yet given as an object'.⁵⁴ I do not agree with Bataille's absolute distinction between 'animality' and 'humanity', nor with his argument that the animal 'like the plant, has no autonomy in relation to the rest of the world'.⁵⁵ However, his theory does suggest that it is necessary to produce the animal as an object that can be killed and eaten in order to bring the human subject into existence.

While the animal must be produced as object in order to construct the human as subject, this relationship is unstable. At a moment's notice, the power relations can be subverted, and 'Man the Hunter' can suddenly become the hunted animal, as in the case of Enkidu's entrapment in *Gilgamesh*. Derrida notes this structure at work in the story of Cain and Abel: 'Having fallen into the trap and killed Abel, Cain covers himself with shame and flees, wandering, hunted, tracked in turn like an animal'.⁵⁶ If hunting animals is part of becoming human, then these reversals of power in hunting stories indicate that the category of the human is never fully secure. A man can slip

from the category of the human and become 'tracked in turn like an animal', defined 'as a thing' which can be killed and eaten.

As can be seen from the importance of hunting in both mythical and scientific narratives of becoming human, the new scientific versions often preserve elements of the ancient stories. When Western culture rejected the literal truth of the Bible, it lost its dominant creation myth, and had to replace it with a scientific one; however, this can be seen as a reinscription of the same story with a new vocabulary. This process of reinscription is often explicit; for example, when Jacob Bronowski recounts the history of humans in *The Ascent of Man*, he asks in his first chapter: 'Where should one begin?' and answers: 'With the Creation – with the creation of man himself' (p. 24). Note the hesitation in the middle of his answer, marked by the dash and the repetition. One must begin with the Creation, but the second time around, the capital letter has disappeared; this indicates the disappearance of God, and the inception of a new type of creation myth. Bronowski visibly struggles with the disjunction between the Biblical account and the scientific version:

The ancient stories used to put the creation of man into a golden age and a beautiful, legendary landscape. If I were telling the story of Genesis now, I should be standing in the Garden of Eden. But this is manifestly not the Garden of Eden. And yet I am at the navel of the world, at the birthplace of man, here in the East African Rift Valley, near the equator. (p. 25)

This account is undoubtedly more accurate than the Biblical story. But it is still phrased as a creation myth, with references to the 'birthplace of man' and 'the navel of the world'. Texts which tell the scientific humanist creation myth continually use the language of the (apparently superseded) religious one. For example, Richard Dawkins' book, despite being subtitled 'A Darwinian View of Life', is entitled *River out of Eden*.⁵⁷ Desmond Morris describes how climate change drove 'ancestral apes' out of

‘their forest of Eden’: ‘in an almost Biblical sense, they had to face expulsion from the Garden’.⁵⁸ Adam and Eve are given new prefixes, such as ‘Y-chromosomal Adam’ and ‘mitochondrial Eve’: ideas in which, as Rod Caird writes, ‘the fundamental conceptual clash between evolution and the Biblical story of Creation seems to have found a sort of common ground’.⁵⁹ I am not questioning the scientific research which underlies these texts; however, the continued resort to these Biblical names demonstrates that contemporary scientific storytellers are still framing their myths in the language of creation.

Another example of the persistence of the idea of creation in scientific texts is the frequent use of the word ‘creature’, which derives from the past participle of Latin *creare*, to create. The word is used especially often to describe beings which exist somewhere on the ambiguous frontier between human and animal. For example, the paleoanthropologist Sonia Cole writes: ‘Over half a million years ago, astonishing creatures lived in South Africa [...] which are so difficult to classify on anatomical grounds that it is still doubtful whether they must be regarded as man-like apes or ape-like men’.⁶⁰ Similarly, in *Walking with Cavemen* John Lynch and Louise Barrett frequently use the word ‘creature’ to refer to beings who trouble the opposition between human and animal. For example, they write that, while ‘we tend to think of our ancestry as a continuous line of progression from one extinct “human” to the next’, in the past ‘there were many other “human” creatures that shared the world’.⁶¹ The use of inverted commas around ‘human’ here indicates a lack of certainty about the status of these ‘creatures’. The word is generally used without conscious awareness or acknowledgement of its etymology, but its continued use demonstrates that religious concepts of human origins still unconsciously inform scientific humanism. As I will

demonstrate, however, it is not possible to simply transfer ‘the Creation’ into a new scientific version – ‘the creation of man himself’ – because with a full understanding of evolution and the origin of species comes the realisation that there is no such thing as ‘man himself’.

Paleoanthropology as a Humanist Discourse

The human, or ‘Man’, is the primary object of paleoanthropological inquiry. In its very name, the discipline relies on the notion that there *is* something called ‘man’ (*anthropos*): as if, in Lyotard’s words, ‘at least man were a certain value, which had no need to be interrogated’.⁶² Paleoanthropology is not only a human science, but is also a humanist discourse. Paleoanthropological investigation begins with the idea that there is an intangible quality called ‘humanness’ which distinguishes ‘us’ from ‘them’. In his prologue to *Origins Reconsidered: In Search of What Makes Us Human*, co-authored with Roger Lewin, the leading paleoanthropologist Richard Leakey outlines what he sees as the purpose of his research. He writes:

Surprisingly, there is no agreed-upon definition of the quality of humanness. It hardly seemed necessary, partly because it appeared so obvious: humanness is what we *feel* about ourselves. Those who tried to define humanness found themselves molding Jell-O: it kept slipping through the fingers. But if this sense of humanity came into being in the course of evolutionary history, then it must have component parts, and they in turn must be identifiable. [...] It is the business of paleoanthropologists to reconstruct that history, not to obscure it.⁶³

This is a strongly humanist project, which asserts that there is such a thing as ‘humanness’, which ‘we’ all *feel*. Although Leakey objects to those who ‘make humanness a unique and scientifically inexplicable mark of humanity’, arguing that this position ‘smacks of a kind of creationist obfuscation’ (p. xxi), nevertheless elsewhere in the book he refers to ‘that intangible, indefinable, and yet intensely felt sense in us that we identify as true humanity’ (p. 82). I am not at all sure that I do have

this ‘intensely felt sense’ of ‘humanness’ or that I would be able to identify the feeling of ‘true humanity’, but the narratives of paleoanthropology do not simply describe this state; they create it. The ‘we’, the all-inclusive pronoun that unites all human beings, is constructed by the stories of paleoanthropology. As Nash writes in his foreword to *Narrative in Culture: The Uses of Storytelling in the Sciences, Philosophy, and Literature*:

The authors speaking here describe narrative by-and-large as a technique for getting coherence. (I use this rough predicate – ‘getting’ – to leave open, as I think they are disposed to do, the issue as to whether the process alluded to is the discovery or the production of coherence.)⁶⁴

Within paleoanthropology, the aim is to bring ‘coherence’ to the idea of ‘true humanity’: to create a single human identity. Most contemporary paleoanthropologists would argue that they are discovering, rather than producing, this coherence. In general, their view is that there is such a thing as ‘true humanity’, and that the difficulty of defining it (its slippery ‘Jell-O’-like nature, as Leakey puts it) can be overcome by scientific investigation.

This view is representative of contemporary scientific humanism. It starts from the idea that ‘we’ all somehow ‘feel human’, that this feeling marks an absolute opposition between ‘us’ and ‘them’, and then aims to provide a scientific justification for it. For example, a similar viewpoint is expressed by Ian Tattersall in *The Monkey in the Mirror: Essays on the Science of What Makes Us Human*:

There are six billion human beings (for the moment); and no matter how bizarrely some of us behave or view the world, we usually have no great difficulty in interpreting each other’s motives, or at least in explaining them away. But what about other species, even close relatives? Here we have to confess ourselves nonplussed, for it turns out that we are simply incapable of imagining states of consciousness other than our own.⁶⁵

There is contemporary scientific humanism in a nutshell: the belief that we have an instinctive understanding of each other that is shared with *all* humans and *no* nonhumans. ‘We’ are essentially all the same, regardless of our individual psychology, culture, and beliefs; conversely, the states of consciousness of other animals are utterly unimaginable. It is on this basis of humanist belief, founded on an absolute opposition, that the ‘business’ of paleoanthropology proceeds.

Many paleoanthropologists claim that all humans share a single identity; Leakey, for example, refers to the ‘search for the identity of all mankind’ (p. 16). The biological anthropologist Matt Cartmill suggests that the emphasis in post-war paleoanthropology on the identity of all humans, and the complementary emphasis on the absolute dividing line between humans and all other animals, results from the rejection of pre-war ‘racist doctrine’.⁶⁶ He writes:

In this new context, in which all anthropological argument began by affirming the unity of the family of man, the line separating humanity from the beasts became sharper and more symbolically important for anthropologists; and human uniqueness was widely stressed as a presupposition of anthropological discourse. (p. 177)

As Cartmill argues here, post-war paleoanthropology places great importance on ‘the line separating humanity from the beasts’. I would add a theoretical slant to this analysis by arguing that in order to produce ‘the unity of the family of man’, in order to define the human as a single unified concept, it was necessary to differ it from the animal (which also had to be constructed as a single, unitary category). The meaning of ‘the’ human, of ‘man’ in the singular, could only be produced by defining it against ‘the’ animal, also in the singular, with a sharp and singular boundary-line dividing the two. Thus in place of Darwin’s image of a multitude of individual organisms, each a unique variation, all connected to each other in a complex web of resemblance and

genealogy, the post-war scientific humanists created a monolithic opposition between the human and the animal. As discussed in the introduction to this thesis, it is this monolithic opposition with which Derrida takes issue in 'The Animal that Therefore I Am (More to Follow)':

This abyssal rupture doesn't describe two edges, a unilinear and indivisible line having two edges, Man and Animal in general. [...] Beyond the edge of the *so-called* human, beyond it 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 inorganic, of life and/or death.
(p. 399)

It is this 'heterogeneous multiplicity' which was denied in the post-war paleoanthropology which sought to affirm 'the unity of the family of man', as Cartmill phrases it. The discipline has still not shaken off its preoccupation with human uniqueness and with 'a unilinear and indivisible line' between 'Man and Animal in general'.

There is a pressing ethical need to question the humanist claims of paleoanthropology. Narratives of human evolution can be used to justify inequalities by providing apparently eternal, natural and unquestionable facts about being human. Leakey argues that 'the pursuit of human origins [...] addresses questions that arise from our need to understand the nature of humanity and our place in the world' (p. xvi). This assumption that understanding 'our' origins can address the question of 'our place in the world' means that claims about how and when 'we' became human are frequently prescriptive rather than descriptive; as John Berger writes: 'All theories of ultimate origin are only ways of better defining what followed' (p. 6). That is, by attempting to define the origin of the human, paleoanthropologists and evolutionary biologists must

define what is proper to the human, and effectively prescribe what is normal human behaviour. In these narratives, ‘we are’, in Roland Barthes’ words, ‘directed to this ambiguous myth of the human “community”’.⁶⁷ In his critique of Edward Steichen’s *Family of Man* exhibition, Barthes argues that the ‘unity’ which is ‘magically produced’ by emphasising ‘universal human nature’ conceals real historical conditions and injustices, and ‘suppress[es] the determining weight of History’.⁶⁸ Similarly, paleoanthropological storytelling produces a ‘unity’ which ignores history by projecting present-day Western cultural norms back in time, and presenting them as natural and essential human attributes.

For example, paleoanthropological texts tend to essentialise contemporary stereotypical gender roles by claiming that they have a prehistoric origin.

Summarising the paleoanthropological discourse of the mid-twentieth century, John Reader comments: ‘Early man went out hunting for food, it was said, while early woman stayed at home and cared for the children, a style of living strikingly similar to that of suburban man in the post-war decades’.⁶⁹ Donna Haraway has also written about the use of paleoanthropology to naturalise ‘the species-defining sharing way of life, rooted in hunting and the heterosexual nuclear family’, which for her is exemplified by Jay Matternes’ famous 1970s painting *Fossil Footprint Makers of Laetoli*.⁷⁰ The painting is based on a trail of fossilised *Australopithecus afarensis* footprints which were discovered by Mary Leakey at Laetoli in Tanzania in 1978. It depicts three hominids – a male, and a female carrying a baby – walking across the African savannah with the volcano erupting in the background.⁷¹ Haraway points out that there are many other ways to interpret the two sets of footprints and many other potential ways of imagining the scene:

The germ of human sociality was the couple and their offspring, not a mixed foraging group, a group of related females with their kids, two males with one carrying a kid, or any of the other many possibilities for those first small steps for mankind left in the dust at Laetoli. (p. 261)

Haraway describes this as ‘the numbing and hegemonic sameness of the universal way of life [...] in the new physical anthropology’ (p. 261). She also notes that the feminist reworkings of the myth, which emphasised for example ‘Woman the Gatherer’ rather than ‘Man the Hunter’, did not fundamentally challenge the notion that imaginary reconstructions of prehistoric life could be used to make claims about how humans should ‘naturally’ behave.

It is evident that this notion, this ‘numbing and hegemonic sameness’, still has currency today. For example, the BBC’s website offers a ‘Sex ID’ test, first published online in 2002, which gives you ‘a brain sex profile and find[s] out if you think like a man or a woman’.⁷² This test involves a number of tasks, such as identifying the differences between two pictures, measuring the length of your fingers, and judging the angle of a line. After completing the test, an article explains the rationale behind these tasks:

In prehistoric times, a man’s vision may have been more narrowly focussed and he would have to have been good at judging space and distance in order to be a good hunter. These skills could be related to the ability to focus on the laws governing a system. Women, on the other hand, spent more time foraging for food and watching over their children. These jobs would require wide vision and the ability to differentiate nuances of tone – skills that would help them sense another person’s emotions. It may sound crude and there’s no scientific proof, but it’s plausible.⁷³

By referring to ‘prehistoric times’, this article suggests that there is an eternal and biological basis for differences in gender roles, even while admitting that ‘there’s no scientific proof’. It is not only gender roles which are made to ‘look eternal’,⁷⁴ in this way, but many other aspects of contemporary Western society, such as sexuality and

economic relations. The scientific humanism of paleoanthropology seeks to ground cultural norms in biological nature. This is why it is politically important to pay close attention to this humanism, and particularly to the moments where it deconstructs itself: in Derrida's terms, to 'oppose [humanism] to itself'.⁷⁵

The Magic Moment

Since many paleoanthropologists believe that there is a single human identity, they must define the limits of this identity. Therefore, a major part of the project of paleoanthropology is to identify the origin of the human: the moment at which 'we' became human. Bronowski asks: 'At what point can we say that the precursors of man become man himself?'.⁷⁶ This same question can be found, in various forms, in almost every text about human evolution. For example, Jared Diamond asks: 'What happened at that magic moment in evolution around 40,000 years ago, when we suddenly became human?'.⁷⁷ This emphasis on a 'magic moment' or 'a great leap forward',⁷⁸ is common to virtually all paleoanthropological texts from the 1960s onwards: as Nancy Makepeace Tanner writes, 'there is a strong desire to see [...] a remarkable break rather than a slow and very unremarkable change separating us from all other animals'.⁷⁹ Cartmill points out that this emphasis detracts from paleoanthropology's scientific credentials: 'a genuinely singular occurrence cannot be explained with reference to the laws of nature. A science centered around the animal-human boundary must, therefore, be a science that lacks theoretical connections' (p. 177). However, as he maintains, 'although accepting a qualitative discontinuity between people and animals has diminished the theoretical content of paleoanthropological discourse, it has augmented its moral and cultural significance' (p. 178). If, as I argue, the human is

defined by being differed from the animal, the paleoanthropologists' job of identifying that difference – what it consists of, and when it took place – is a crucial cultural role.

This concept of a 'magic moment' is taken to its logical extreme in the 2003 BBC *Horizon* documentary entitled 'The Day We Learned to Think'.⁸⁰ The programme claims that there was a single day in human evolution that marked the simultaneous inception of language, thought, art, and dominance over nature: in short, of the human.

It poses the question:

When, in the course of our evolution from apes to modern humans, did we acquire the ability to talk, to give meaning to the world around us, to think? When did we really stop being animals and become truly human?

This is a classic example of a text which represents the human and animal as two totally separate, opposed terms. The human does not emerge from the animal; rather the moment of becoming human is represented as a complete, clean break: 'we really stop[ped] being animals'. This programme represents humans as superior to all other animals: a dominant, creative, powerful species. Having asserted that animals cannot think, the programme then argues that thought and language are inseparable, and that art is also inextricably linked to both:

For archaeologists this realisation that art, language and thought were all the same thing was a huge breakthrough. Suddenly what they had to look for was clear. Discover the earliest forms of human art and you would have found the day we learned to think.

Although the idea of identifying a single day as 'the day we became human' sounds ridiculous, it is a logical consequence of the belief that there is an absolute binary opposition between the human and the animal. If the two categories are completely separate, if there is such a thing as a human essence, which is absent one moment and present the next, there must have been an instantaneous switch from one to the other.

Despite the superficial acceptance among paleoanthropologists that the human has evolved gradually, there remains an underlying belief in a moment of ‘flip’ between human and animal: what Derrida calls a ‘leap’, ‘the instantaneous crossing of a line of discontinuity’.⁸¹ Therefore, every hominid species must be categorised as either human or animal. Even though paleoanthropologists recognise that the fossils of human ancestors have a combination of both ‘humanlike’ and ‘apelike’ features, they must always end by categorising the species as either one or the other. For example, in this description of Lucy, the famous *Australopithecus afarensis* skeleton named after the Beatles song ‘Lucy in the Sky with Diamonds’, Rod Caird lists two sets of conflicting characteristics:

Lucy has the human-like characteristics of upright stance, arched feet, and relatively long thumbs. But she also has the ape-like features of small size, short legs and long arms, a small brain, somewhat hunched shoulders, and moderately curved fingers.⁸²

The doubt over whether this particular individual should be categorised as human or animal is indicated by the linguistic uncertainty over which pronoun to use: ‘she’ or ‘it’? This uncertainty is evident in the following passage, in which Ian Tattersall discusses the same fossil skeleton:

What kind of creature was *it*? As is probably inevitable, even though we know *it* walked upright, and thanks to Lucy we know a lot about its skeleton, there’s still controversy about how *it* lived and moved. The anatomist Owen Lovejoy, who carried out the original analysis of Lucy’s skeleton, thinks of *her* as a virtually perfectly adapted biped.⁸³

From one sentence to the next, Tattersall moves from ‘it’ to ‘her’. It is as if by granting this particular individual a name, ‘she’ also acquires some sort of human status and therefore must be treated as a person, not an object; *A. afarensis* may be an ‘it’, but Lucy is a ‘she’. However, this undecidability cannot be tolerated, so after some further discussion, Tattersall concludes that ‘the total effect, however, is more humanlike than apelike’.⁸⁴

Homo Erectus: A True Man?

In order to demonstrate that humanism cannot tolerate this undecidability, I will now look in more detail at the case of one particular species, *Homo erectus*, and the way that it is represented in texts as either human or animal. From the time that it was first discovered by Eugène Dubois in the 1890s, *Homo erectus*' categorisation has swung back and forth between animal and human; it has been subject to a 'spectrum of interpretations'.⁸⁵ Dubois believed that the fossils discovered by his team represented the 'Missing Link': a 'speechless primeval man' intermediate between ape and human, whose existence was first postulated by Ernst Haeckel in 1879.⁸⁶ Dubois initially named it *Anthropopithecus erectus* (upright man-like ape) and then decided that *Pithecanthropus erectus* (upright ape-like man) was more accurate.⁸⁷ The ambiguity of the fossil is indicated by these awkward Latin binomials, which combine elements of the human (*anthropos*) and ape (*pithe*).⁸⁸ F. Clark Howell writes:

Ahead of its time, it faced a society and a scientific world both unready for it. It was by far the oldest and most primitive human fossil known. As a result, its ape-like qualities were emphasized more than its manlike ones.⁸⁹

By the time Howell was writing in 1965, the orthodox paleoanthropological view had shifted, partly because of further discoveries of *Homo erectus* remains in the first half of the twentieth century, such as the 'Peking Man' fossils found in a cave in Choukoutien (or Zhoukoudian) in China. The dominant view in the 1960s is perfectly expressed by a chapter title in Howell's book: 'Homo Erectus: A True Man at Last' (p. 77). Although Howell admits in the chapter that the overall understanding of *Homo erectus* is 'hopelessly vague' (p. 84) and that many of the assumptions he makes 'may seem wildly speculative' (p. 83), he nevertheless categorises *H. erectus* as definitely human, the first 'true man'. He writes that 'we may assume that most of his kind used

fire' (p. 80) and describes 'him' as 'a superb walker' whose leg bones 'cannot be distinguished from those of a modern man' (p. 82). At the end of the chapter, he concludes that '*Homo erectus* might be labelled as a kind of migratory worker within a fairly diverse habitat, a fellow who returned to certain sites with some regularity' (p. 84). This fixes *Homo erectus* as human: 'a fellow', one of 'us'.

Writing in the early 1990s, Richard Leakey also categorises *Homo erectus* as human, but for him, it is a quasi-mystical sense of 'humanness' which is the deciding factor.

He writes:

Homo erectus stands at a pivotal point in human evolutionary history; in a very real way it is the harbinger of humanity. Everything earlier than *Homo erectus* was more apelike (except the short-lived, somewhat enigmatic *Homo habilis*). Everything after *Homo erectus* was distinctly humanlike. (p. 46)

The word 'harbinger', which occurs frequently in discussions of human evolution, derives from the Old High German *heriberga*, a lodging or shelter for an army, and later came to mean a person who runs ahead to arrange that shelter: a forerunner.⁹⁰ Therefore, it has a double meaning; it is the first human, but also comes before or foreshadows the human. This places *Homo erectus* in an ambiguous position; is it inside or outside the category of the human? Like Howell, Leakey lists the various attributes of *Homo erectus* which would seem to classify it as human, and also those which would classify it as an ape. He concludes:

It is true, I know, that the probable immediate ancestor of *Homo erectus*, a species called *Homo habilis*, is in many ways simply a smaller-brained version. [...] But in a sense difficult to explain, *Homo erectus* seems to have 'arrived', to be at the threshold of something extremely important in our history. (p. 55)

Leakey cannot justify his decision in rational terms; it is 'difficult to explain' why he feels that *Homo erectus*, but not *Homo habilis*, is 'distinctly human' (p. 55). Once again, a humanist narrative cannot allow the question of humanness to remain open, as

this would blur the boundaries of the human. Despite *Homo erectus*' mixture of apelike and humanlike characteristics, it must be placed on one or the other side of the line that divides human from animal.

In recent years, paleoanthropologists have begun to argue, once again, that *Homo erectus* was more animal than human. In a 2004 *New Scientist* article, entitled 'The Brute of Dragon Bone Hill', Boaz and Ciochon describe their research into the Peking Man fossils. The gist of their research is that Peking Man was not, in fact, 'the first hominid to possess many traits we consider to be human', but should be categorised as a nonhuman animal. They write:

Our re-analysis shatters the myth of a heroic early nimrod pitted against wild beasts and the elements, occasionally cannibalistic, managing to establish a cave home with primitive tools. Instead, it depicts a hungry scavenger skulking off to the cave, fire and sharp stones in hand, to steal away the half-chewed haunches of big carnivore kills, some of which by chance happen to be remains of its fellow hominids.⁹¹

Despite the fact that Peking Man was able to emigrate from Africa to Asia, they argue that

H. erectus was still in essence a tropical animal, shunning the cold and with a tenuous grasp on fire that probably terrified them almost as much as the other animals with whom they competed for food. (p. 32)

In this description, Peking Man is demoted from 'his' human status and transformed into one 'tropical animal' among others. The use of the phrase 'in essence' indicates that Boaz and Ciochon are reading these behaviours as *indications* of an internal core essence that is either human or animal, as opposed to the behaviour itself constituting the human. I discuss this concept of performativity, or acting human, in more detail in Chapter 2. They argue that *Homo erectus* was an animal because of 'his' 'strangely static' cultural life:

We believe this indicates these hominids were incapable of speaking as we do, a conclusion supported by the small size of the *H. erectus* brain [...]. It is only with the evolution of complex language that our ancestors would have been capable of the sorts of behaviours we think of as uniquely human. (p. 35)

The overall aim of their research is to establish that ‘Peking Man was far less like us than has previously been suggested’ (p. 35). This ‘us’ again refers to all humans, and so their aim is to resituate *H. erectus* on the other side of the boundary line dividing animals from humans. This also entails defining the line itself; the boundary between human and animal is not fixed, but is constructed in these debates.

As discussed above, the question of whether *Homo erectus* was ‘really human’ or not cannot have a real answer. There were never two nonhuman parents who miraculously gave birth to a human child. Rather, as time went on, our ancestors evolved to be more like ‘us’. In his conclusion to *The Origin of Species*, Darwin suggests that once the theory of evolution is understood, the notion of ‘true’ species will become obsolete.

He writes:

Systematists will be able to pursue their labours as at present; but they will not be incessantly haunted by the shadowy doubt whether this or that form be in essence a species. This I feel sure, and I speak after experience, will be no slight relief.⁹²

However, it seems that paleoanthropologists are still ‘incessantly haunted by [...] shadowy doubt[s]’. Representations of *H. erectus* seesaw between two totally incompatible images, one human and one animal, even if most of that difference comes from the choice of words (‘a heroic early nimrod pitted against wild beasts and the elements’ opposed to ‘a hungry scavenger skulking off to the cave’) and not from any fundamental factual difference. It is the vocabulary used which differs these two representations, not the behaviour being described. But because humanism needs the

borders of the human to be secure, *Homo erectus* must be placed on one side or the other: human or animal.

Neanderthals: Simple-Minded Brutes or the First Flower People?

Like *Homo erectus*, the representation of *Homo neanderthalensis* has swung back and forth between human and animal. When Neanderthal remains were first discovered in 1856, no other extinct humans were known, and Darwin had not yet published *The Origin of Species*.⁹³ Many scientists refused to accept that the fossil represented a different species of human, and instead argued that it was the skull of a deformed *Homo sapiens*.⁹⁴ After many more remains were discovered, it was finally accepted that the Neanderthals had been a separate species.

At first, Neanderthals were represented as stupid, primitive, cannibalistic animals. In the early twentieth century the Neanderthal was 'cast in the role of a brutish figure, slow, dull and rather bereft of sentiment'.⁹⁵ Paintings and sculptures from this period depict them as stooped, bestial and nearly naked; a famous example is the series of murals created by Charles R. Knight for the American Museum of Natural History.⁹⁶ A typical description of Neanderthals from this time is found in H. G. Wells' *The Outline of History*. He refers to 'an extreme hairiness, an ugliness, or a repulsive strangeness in his appearance over and above his low forehead, his beetle brows, his ape neck, and his inferior stature'.⁹⁷ This description suggests that the Neanderthals were as much animal as human: as well as being hairy and ugly, their animalistic characteristics are reinforced by the terms 'beetle' and 'ape'. This bestial image persisted throughout the first half of the twentieth century. The word Neanderthal took on the meaning of 'primitive, uncivilized, loutish; [...] politically or socially

reactionary'.⁹⁸ To call someone a Neanderthal was, as the *Oxford English Dictionary* states, 'derogatory'.

In the 1960s and 1970s, the image shifted as the Neanderthals began to be represented as a gentle, loving species who were more 'in tune with nature' than *Homo sapiens*. For example, Jay Matternes' paintings from the late 1960s depict the Neanderthals living an idyllic existence reminiscent of hippie culture, with bare-breasted women listening to men playing musical instruments.⁹⁹ This view was strengthened by Ralph Solecki's 1971 book *Shanidar: The First Flower People*, an account of his archaeological dig in Shanidar cave in the Kurdish region of Iraq. Solecki's team found skeletal remains which indicated that injured and chronically ill Neanderthals had been cared for by other members of the group. They also found traces of pollen in a Neanderthal grave, which suggested they had been buried with flowers. Solecki writes:

It is the purpose of this book to show that Neanderthal Man is closer to us than we have been heretofore willing to believe. The fact that flowers were found in a Neanderthal grave, I believe, will have a profound effect in breaking down the last objections to the inclusion of Neanderthal Man in our family tree. No more can we study him impartially as a kind of laboratory animal bereft of feeling and sentiment. He is part and parcel of our past, the beginnings, actually, of our own human tradition, even though his body did not as yet quite compare with ours.¹⁰⁰

Thus Solecki explicitly argues for resituating the Neanderthals on 'our' side of the line dividing humans from other animals; they should be considered part of 'our human tradition', rather than seen 'as a kind of laboratory animal'. It is not just a matter of changing taxonomy, but of accepting what had previously been seen as the animal other as 'part and parcel of our past', as part of 'us'.

In recent years, some scientists, such as Ian Tattersall, have tried to correct what they view as a pendulum swinging too far. Tattersall argues that instead of trying to argue that the Neanderthals were 'the same as us', they should be understood as a radically different species. He writes: 'The people of the Upper Paleolithic were us, and can be understood as such; the Neanderthals were not, and cannot'.¹⁰¹ However, in most cultural representations of Neanderthals, the binary opposition between human and animal remains regardless of which side of the boundary Neanderthals are placed on. For example, a recent BBC television documentary, entitled 'Neanderthal', began by asking: 'Was Neanderthal the simple-minded brute of legend? Or a rival to our own species?'.¹⁰² This question of whether Neanderthals should be viewed as 'us' or 'them', a 'rival' or merely a 'simple-minded brute', dominates the way that they are represented in the media. For example, several recent articles on BBC News have reported on scientific research on Neanderthals, such as 'Neanderthals "Not Close Family"',¹⁰³, 'Neanderthals "Had Hands like Ours"',¹⁰⁴ and 'Late Neanderthals "More like Us"'.¹⁰⁵ These headlines demonstrate the desire to fix Neanderthals as human or animal, 'us' or 'them'. But they also reveal that, in each case, the perceived significance of the discovery is how it affects the relationship between Neanderthals and *Homo sapiens*, and consequently, what it implies about 'us'. I suggest that this is because the Neanderthal is a border figure which is used to define the human through difference: this 'systematic play of differences' which constitutes the category of the human.¹⁰⁶

The history of cultural representations of Neanderthals, which I have briefly outlined above,¹⁰⁷ can be understood further by examining Roland Barthes' description of how

myths represent 'the Other' by either reducing 'him' to 'sameness' or by presenting 'him' as a 'pure object'. Barthes writes:

If [the petit-bourgeois] comes face to face with [the Other], he blinds himself, ignores and denies him, or else transforms him into himself. In the petit-bourgeois universe, all the experiences of confrontation are reverberating, any otherness is reduced to sameness. The spectacle or the tribunal, which are both places where the Other threatens to appear in full view, become mirrors. This is because the Other is a scandal which threatens his essence. [...] Sometimes – rarely – the Other is revealed as irreducible [...]. There is here a figure for emergencies: exoticism. The Other becomes a pure object, a spectacle, a clown. [...] He no longer threatens the security of the home.¹⁰⁸

The Neanderthal 'threatens the security of the home', of humanism, because 'he' does not fit comfortably into either category, human or animal. 'He' threatens the security of the opposition between human and animal by destabilising the boundary. The first strategy of humanism, when Neanderthal remains were initially discovered, was to 'ignor[e] and den[y] him', or 'transfor[m] him' into a version of the human by claiming that he was simply a deformed *Homo sapiens*. When the evidence that Neanderthals could not be 'reduced to sameness' in this way became overwhelming, the Neanderthal was then represented as 'a pure object', an exotic animal.

Face to Face: Neanderthal as Mirror

While the possibility of 'com[ing] face to face' with a Neanderthal is threatening to humanism, it is clear that it is also desired, since there are so many fictional representations of this meeting. An encounter with another hominid species would provide confirmation of 'our' existence. As Barthes writes, it is impossible to truly see yourself from the outside: 'You are the only one who can never see yourself except as an image; you never see your eyes unless they are dulled by the gaze they rest upon the mirror or the lens'.¹⁰⁹ Imaginary narratives of encounters between *Homo sapiens* and other hominids provide 'us' with the illusion of seeing 'ourselves', as a species, from

the outside. These illusory encounters are most commonly imagined to take place between *Homo sapiens* and Neanderthals, probably because this has some basis in reality. The two groups co-existed in Europe and the Middle East for several thousand years, and there is strong evidence that they encountered one another; for example, they traded tools and/or tool-making techniques.¹¹⁰ Furthermore, while most other hominid species are seen as inferior predecessors of modern humans, the Neanderthals were in many ways very much like ‘us’; evidence suggests that they wore clothes, made tools, hunted, used fire, possibly buried their dead, and may even have had a spoken language.¹¹¹ Within both fiction and the narratives of paleoanthropology, Neanderthals occupy a special position as a kind of twin, or uncanny double, of the human.

The fantasy of seeing ‘ourselves’ from the outside is played out in fictional tales of encounters between *Homo sapiens* and Neanderthals. One classic example is William Golding’s *The Inheritors*, a 1955 novel which (with the exception of the final chapter) is told from the point of view of one of the last surviving Neanderthals.¹¹² Golding wrote it in response to the description of Neanderthals in H. G. Wells’ *The Outline of History*, quoted above, which he uses as an epigraph. In Golding’s novel, the protagonist Lok is a member of a small Neanderthal tribe who find their territory invaded by a terrifying group of ‘new people’: the ‘inheritors’ of the title. These are presumably *Homo sapiens*, although they are never named as such. The ‘new people’ are portrayed as violent, murderous, drunken and monstrous. They kill almost all of the Neanderthal group, kidnap the child and the baby, leaving only Lok and one woman, Fa. Lok’s first glimpse of a *Homo sapiens* is as follows:

The bushes twitched again. Lok steadied by the tree and gazed. A head and a chest faced him, half-hidden. There were white bone things behind the leaves

and hair. The man had white bone things above his eyes and under the mouth so that his face was longer than a face should be. (p. 106)

This grotesque image of bones in the wrong places and a misshapen face is reinforced when Lok and Fa encounter the *Homo sapiens* group for the second time, when they go to try to rescue the kidnapped children. Watching from the bushes outside the camp, they observe ‘the new people’:

The new people sat on the ground between Lok and the light and no two heads were the same shape. They were pulled out sideways into horns, or spired like a pine tree or were round and huge. [...] The stag appeared. He moved springily on his two hind legs and his forelegs were stretched out sideways. His antlered head was among the leaves of the trees, he was looking up, past the new people, past Fa and Lok, and it swayed from side to side. The stag began to turn and they saw that his tail was dead and flapped against the pale, hairless legs. He had hands. (p. 128)

These monstrous, misshapen creatures blur the boundaries between human and animal. The human hands on the antlered stag appear uncanny, because they create uncertainty about whether this being is or is not human: the uncertainty which is central to Freud’s account of the uncanny.¹¹³ In other passages, the *Homo sapiens* (‘the new people’) are described as ‘wasp-like’, with ‘grey, furry skin’, with skin ‘the colour of big fungi’ and with leg and arm joints ‘like the nodes in a twig’ (p. 138). These descriptions differ the human from itself by likening it to inhuman, even abject animals and plants. Whereas for Wells and his contemporaries, the Neanderthals were characterised by ‘an ugliness, or a repulsive strangeness in [their] appearance’, here it is ‘us’, the *Homo sapiens* who are ugly, repulsive and strange.

At the end of the book, the point of view shifts away from the protagonist, Lok, just before he lies down to die. For the first time, there is a description of Lok from the outside: Golding calls him ‘the red creature’ (p. 216) or simply ‘the creature’ (p. 218): a word which, as I have argued above, is frequently used to describe beings whose

humanness is uncertain. In the final chapter, both the perspective and the style of writing change completely. It is written from the point of view of one of the 'new people' as they sail away from the scene of their conflict with the now-dead Neanderthals, carrying the Neanderthal baby (which they refer to as 'the devil') with them. The book concludes: 'He peered forward past the sail to see what lay at the other end of the lake, but it was so long, and there was such a flashing from the water that he could not see if the line of darkness had an ending' (p. 233). This sense of isolation and darkness permeates *The Inheritors*. It suggests that a kind of alienation resulted from the extinction of the Neanderthals, leaving *Homo sapiens*, as the only humans, fundamentally alone in the world: what John Berger calls 'the loneliness of man as a species'.¹¹⁴

A very different and more conventionally humanist view of the relationship between *Homo sapiens* and Neanderthals is found in Jean M. Auel's *The Clan of the Cave Bear*.¹¹⁵ This novel tells the story of Ayla, a young *Homo sapiens* girl who is the sole survivor when her tribe is killed by an earthquake. She is then taken in by a Neanderthal group (the Cave Bear Clan of the title). At first, Ayla and the Neanderthals see each other as animal-like; Ayla thinks that the Neanderthal face is 'like a muzzle' (p. 45) and that their words sound 'like a growl or grunt of some animal' (p. 46). Conversely, the clan's first impression of Ayla is 'what appeared to be an animal without fur' (p. 20). But as time goes on, Ayla becomes very close to her adoptive family. She learns to communicate as they do, through hand gestures, and to obey the laws of the clan. However, there is a limit to how far Ayla can fit into the clan. As she grows older, she repeatedly breaks its strict rules: for example, she

secretly hunts and kills animals, even though women are forbidden to do so, and refuses to submit to sexual advances:

It shocked him to see the girl pitting her will against a male. No woman of the Clan would consider it. They were content with their place, their position was not a veneer of culture, it was their natural state. (p. 202)

Auel is a contemporary North American female writer, whose emphasis on the power of the 'medicine woman', and so on, fits into a particular strand of feminism. As with paleoanthropological narratives, this book also constructs a normative form of human society: it implies that female empowerment is essentially and naturally human, and makes contemporary ideas about human behaviour 'look eternal'.¹¹⁶ From this position, Auel condemns the Neanderthals as inherently and unchangeably sexist. This viewpoint has no real basis in archaeological discoveries, although the book as a whole uses many facts gleaned from archaeology and paleoanthropology to add verisimilitude.¹¹⁷

As the story proceeds, Ayla's presence has an increasingly disruptive effect on the Neanderthal clan, because she refuses or is unable to obey their laws and customs. The story can be read as an argument that culture can only have a limited effect: Ayla has been brought up in a Neanderthal community, but it is her *Homo sapiens* biology that dictates her character. In support of this view, Auel depicts the two species as literal physical mirror images of each other:

[Ayla] was one of the Others; a newer, younger breed, more vital, more dynamic, not controlled by hidebound traditions from a brain that was nearly all memory. Her brain followed different paths, her full, high forehead that housed forward thinking [sic] frontal lobes, gave her an understanding from a different view. She could accept the new, shape it to her will, forge it into ideas undreamed by the Clan, and, in nature's way, her kind was destined to supplant the ancient, dying race. At a deep, unconscious level, Broud sensed the opposing destinies of the two. Ayla was more than a threat to his masculinity, she was a threat to his existence. His hatred of her was the hatred of the old for

the new, of the traditional for the innovative, of the dying for the living. (p. 196)

As can be seen in this passage, Auel represents the relationship between Neanderthals and modern humans as a series of hierarchical binary oppositions: body / mind, past / future, tradition / innovation, concrete / abstract, and so on. The Neanderthals are stuck in an evolutionary dead end, while *Homo sapiens* are inherently more 'vital' and 'dynamic' and are therefore destined to survive. A similar argument was put forward in the BBC documentary 'Neanderthal', discussed above, which argued that the Neanderthals had greater bodily strength which was well suited to the Ice Age climate, but that they were unable to innovate and adapt when the climate changed.

It seems that the very features that made Neanderthal perfectly adapted to the rigours of the ice age had also locked him in to an evolutionary dead end. Modern humans may not have been adapted to the cold, but they were tailor made for the open plains.¹¹⁸

As in *The Clan of the Cave Bear*, this represents the Neanderthals as closer to animal than human; they are 'locked' in, tied to their bodies and to a particular environment, whereas 'we' are able to use our mental agility to adjust to varying conditions.

In general, in these texts the Neanderthal is used as a way of defining the human through difference. By mirroring *Homo sapiens*, these representations of Neanderthals define what it is to be human by providing a glimpse of a similar, but crucially different, alternative.

The Ghost in the Mirror: Neanderthals and the Uncanny

This interplay of sameness and difference, this not-quite-mirroring, is typical of contemporary cultural representations of Neanderthals. The fascination stems from the fact that they were, as Jean M. Auel writes, 'so different, yet so provocatively similar':



Sprung from the same ancient seed, the progeny of their common ancestor took alternate routes, both leading to a richly developed, if dissimilar, intelligence. Both sapient, for a time, both dominant, the gulf that separated them was not great. But the subtle difference created a vastly different destiny. (p. 100)

It is this combination of similarity and dissimilarity which makes the Neanderthals and other extinct hominids simultaneously intriguing and frightening: as Diana Fuss argues, ‘sameness, not difference, provokes our greatest anxiety (and our greatest fascination) with the “almost human”’.¹¹⁹ This sense of same-yet-different occurs in virtually every text that mentions Neanderthals. For example, the BBC *Horizon* programme describes Neanderthals as ‘a species of human in many ways so similar to us, and yet also very different’.¹²⁰ Similarly, Douglas Palmer writes: ‘Just 30,000 years ago there were people living in Europe who looked like us, who behaved and walked like us, and yet were not us’.¹²¹ This is an odd and unsettling idea; if they were so much ‘like us’, how can ‘we’ be sure that they were ‘not us’? And, since the definition of the human is dependent upon differing it from its animal others, how can ‘we’ be sure who ‘we’ are?

The unsettling potential of this same-yet-different idea can be seen in *The Last Neanderthal*, when Ian Tattersall writes: ‘Familiar yet unfamiliar: these behaviors perfectly matched the equivocally human morphology of the Neanderthals’. The notion of something being ‘equivocally human’ is disturbing to humanism. The concept of the ‘uncanny valley’, invented in 1970 by the Japanese roboticist Masahiro Mori, is useful here. Mori argues that when we encounter a ‘humanlike’ machine, the more closely it resembles a human, the more positively we respond to it. However, if it resembles a human *too* closely, we find it disturbing or even disgusting. Mori gives the example of realistic prosthetic hands:

This kind of prosthetic hand is too real and when we notice it is prosthetic, we have a sense of strangeness. So if we shake the hand, we are surprised by the lack of soft tissue and cold temperature. In this case, there is no longer a sense of familiarity. It is uncanny. In mathematical terms, strangeness can be represented by negative familiarity, so the prosthetic hand is at the bottom of the valley. So in this case, the appearance is quite human like, but the familiarity is negative. This is the uncanny valley.¹²²

This 'sense of strangeness' occurs frequently in paleoanthropological discourse, for example in Boaz and Ciochon's description of Peking Man (*Homo erectus*) as 'our almost human ancestor'.¹²³ This same ambiguity, of something that is nearly but not quite 'the same' as us, also appears in Richard Leakey's fantasy of hominid life a million years ago: 'So much activity, so very familiar, and yet uncannily different'.¹²⁴

The notion of human uniqueness is profoundly disturbed by the existence of something that is almost human; how can something 'almost' have a human essence? As I have argued, humanism needs to fix the borders of the human by differing the human from its nonhuman others. Something that is 'equivocally human' questions the fixity of those borders and destabilises the meaning of the human.

In order to use the Neanderthal as a mirror to define the human, it is necessary that the differences between Neanderthals and *Homo sapiens* should be evident. If those differences comes into question, if it is no longer possible to tell the difference between the human subject and the nonhuman other, then the definition of the human is troubled. This need to tell the difference is evident in the issue of 'passing'.

Paleoanthropological texts frequently pose the question of whether a Neanderthal could 'pass' as a human being. Some, such as Jared Diamond, argue that a Neanderthal would be visibly inhuman:

Neanderthals' head anatomy was so distinctive that, even if a Neanderthal dressed in a business suit or a designer dress were to walk down the streets of New York or London today, everybody else (all the *homines sapientes*) on the street would be staring in shock.¹²⁵

This scenario reassures the humanist subject that s/he will never be in doubt; the inhuman is 'so distinctive' that it could never be mistaken for the human. But others disagree. F. Clark Howell, for instance, writes: 'Put [a Neanderthal] in a suit of clothes and send him down to the supermarket for some groceries and he might pass completely unnoticed'.¹²⁶ This ability to pass 'unnoticed' threatens our ability to tell human from inhuman, us from them, and thus threatens humanism itself. If we cannot tell the difference, what does that imply about human essence? As I argue in more detail in Chapter 2, since there is no tangible human essence, it is only possible to judge whether someone is human from the outside, by looking at how s/he behaves. If someone or something behaves in an 'equivocally human' manner, this is experienced as uncanny and threatens the structure of humanism, which requires an absolute division between human and inhuman.

This ability to tell the difference has recently been even more profoundly troubled by a theory which suggests that the Neanderthals disappeared not because they were killed by *Homo sapiens*, but because the two groups interbred. The Neanderthals as a group became extinct within ten thousand years of *Homo sapiens* arriving in Europe, but opinion is divided on the reason for this. If 'we' killed them, either directly, or indirectly by consuming the same resources, then 'they' remain separated from 'us'. However, if their distinctness was lost through interbreeding, then at some point 'they' became 'us'. This theory has gained more currency in recent years, since the discovery of a controversial skeleton in the Lapedo Valley in Portugal in 1998. This skeleton, known officially as Lagar Velho 1 and informally as the Lapedo Child, appears to have both *Homo sapiens* and Neanderthal characteristics. It has provoked an immense amount of debate about the possibility of Neanderthals and *Homo sapiens*

interbreeding.¹²⁷ A 2007 *New Scientist* article, entitled ‘The Neanderthal Within’, discusses the possibility that ‘interbreeding not only happened, but that it played an important role in our evolution’. The article continues: ‘Like it or not, we may have to accept that our species is, to some extent, a hybrid. There’s a little bit of Neanderthal in all of us’.¹²⁸ The idea was also explored in an Australian radio show entitled ‘Are We Neanderthals?’.¹²⁹ This radical question has deeply unsettling implications; it suggests that ‘we’ may not be able to tell the difference between ‘them’ and ‘us’, that the Neanderthal, once represented as grotesque, bestial and utterly other, may in fact be inside ‘us’. As Palmer writes:

Although the consensus is that the Neanderthals did die out, for some there is still that nagging, lingering doubt and the possibility that behind the face in the mirror is the ghostly vestige of a Neanderthal in everyone of Eurasian origin.¹³⁰

This possibility is deeply troubling to humanism, which relies on being able to tell the difference between human and nonhuman. Instead of using the Neanderthal as a mirror to reflect ‘ourselves’ from the outside, this ‘nagging, lingering doubt’ casts uncertainty over where the self ends and the other begins: uncanniness results when ‘the subject identifies himself with someone else, so that he is in doubt as to which his self is, or substitutes the extraneous self for his own’, as Freud writes.¹³¹ This doubt suggests not only that the boundaries between the human and nonhuman could be transgressed, but that ‘we’ might not even know that this transgression has taken place.

As I have argued, the debate over whether Neanderthals should be categorised as human or animal is not due to inherent interest in Neanderthals *per se*, but because the figure of the Neanderthal is needed to define ‘what it means to be human’. Consider for example Ian Tattersall’s claim that ‘there is certainly no better way in which we *Homo sapiens* can judge our own uniqueness in the living world than by measuring

ourselves against the Neanderthals and their achievements'.¹³² The way that the definition of the human depends upon differing it from the Neanderthal is evident in this passage from Palmer's *Neanderthal*:

Not far beneath the surface of all the historic problems of recognizing the Neanderthals for what they are lurks another fundamental difficulty. If *Homo neanderthalensis* is, as William King claimed, a separate species of human, then what are the Neanderthals to us? And beyond that question lies our human difficulty with knowing what exactly we are. (p. 25)

Here, it is possible to read the way that meaning is produced by difference: how 'the elements of signification function not by virtue of the compact force of their cores but by the network of oppositions that distinguish them and relate them to one another'.¹³³ The first 'difficulty' is 'recognizing the Neanderthals for what they are'. This then leads to the question of 'what are the Neanderthals *to us*?': that is, how does one element of signification (the Neanderthal) relate to another (*Homo sapiens*)? How do they 'relate [...] to one another'? Finally, the ultimate 'difficulty', as Palmer phrases it, is 'knowing what exactly we are'. There is no 'core' which can be identified, which will show 'what exactly we are'; instead, it is necessary to use a related 'element of signification' to see how it differs from the human. If meaning can only be produced through difference, the Neanderthals occupy a highly significant structural position as the beings that are most like 'us' without actually being 'us'. Identifying the differences between *Homo neanderthalensis* and *Homo sapiens* is necessary to produce the meaning of the human: 'The Neanderthals were different from us, but how different?'.¹³⁴ These representations of Neanderthals and *Homo sapiens*, with their obsessive desire to demarcate the differences between the two, show that the concept of the human is 'never present in itself, in an adequate presence that would refer only to itself' but is 'necessarily and essentially inscribed in a chain or system, within which it refers to another and to other concepts, by the systematic play of differences'.¹³⁵ If

those differences are in question, as in the case of Neanderthals, then the category of the human itself is also brought into question.

Border Crossings, Border Control

These representations of Neanderthals reveal great anxiety about whether or not ‘they’ could have become ‘us’. Could they have crossed the border from nearly-human to fully-human? Humanism is profoundly disturbed by the notion that something nonhuman could become human, because this troubles the security of the human category. However, in order to define ‘ourselves’ as human today, it is necessary that this border crossing must have taken place at some time in the past. It is the job of paleoanthropologists and evolutionary biologists to decide when this took place: to decide who is ‘in’ and who is ‘out’. Jeffrey H. Schwartz has observed this tendency to treat the category of the human as a kind of ‘fraternity’:

The debate over whether a fossil is or is not a true member of *Homo sapiens* tends to sound more like a debate on the admission of an underclassmate to a fraternity than it does a rigorous discourse on the specimen’s phylogenetic affinities.¹³⁶

This formulation also highlights that there is power in deciding who is admitted to this exclusive club. For example, Raymond Dart, who discovered the fossil skull known as the Taung child, saw it as ‘a representative of a creature that was knocking on the door of humanity, but hadn’t quite crossed the threshold of humanity’.¹³⁷ Similarly, Tattersall argues that ‘the 3.6-million-year-old bipeds of Laetoli had crossed a major adaptive threshold, and by crossing it they had gained admission to the human family’.¹³⁸ The term threshold, as well as indicating a doorway, border, or entrance, also means ‘the limit below which a stimulus is not perceptible; the magnitude or intensity of a stimulus which has to be exceeded for it to produce a certain

response',¹³⁹ which indicates a point on a continuum, rather than a qualitative change. This metaphor signals the disturbing weakness of categorisation and classification. Neighbouring categories must come up against each other, and the places where they meet call into question the idea of essence. 'The door of humanity' may be a barrier that prevents entry, but it is also a weak point in a wall: a place where absolute division is subverted by the possibility of crossing the border.

In these texts, 'humanity' or 'the human family' is represented as the desirable inside, and the almost-human animal other is still outside, hoping to be allowed in.

Paleoanthropologists act as the security guards who guard the door, size up potential entrants, and decide who can and cannot enter. This policing of the borders of the human may seem relatively trivial when discussing the categorisation of a fossilised skull of a long-extinct species, but it has very real effects when it takes place with living beings: when, for example, those making the decision are psychiatrists or legislators and those being excluded are people who are autistic or deaf. I examine these contemporary situations, and the effect of being excluded from the category of the human, at greater length in Chapters 2 and 3 of this thesis. Here, I want to note that decisions about who is and is not included within the category of the human always entail the exercise of power.

The Ascent of Man: Bipedalism and Humanism

The process of becoming human is most frequently represented as an ascent or rise. This has a physical basis in that bipedalism is one of the most obvious physical differences between humans and other primates. Human ancestors began to walk on two legs about four million years ago, and this development is central to

paleoanthropological definitions of what it means to be human. Richard Leakey, for example, argues: ‘The origin of a bipedal form of locomotion was so fundamental a change, so replete with profound evolutionary potential, that we should recognize the roots of our humanity where they really are’.¹⁴⁰ While there is some scientific basis for this emphasis on bipedalism, the connection between walking on two legs, freedom and ‘true humanity’ can be traced back to long before the relevant archaeological discoveries were made. For example, as long ago as 1754 Rousseau speculated about early ‘Man’: ‘Walking on all fours, his gaze directed to the Earth, and confined to the horizon of a few paces, [would have] determined both the character and the limits of his ideas’.¹⁴¹ This idea that walking on all fours is constraining, while bipedalism is liberating, is still current. For example, the 2002 BBC book *Walking with Cavemen* describes an *Australopithecus afarensis* female as follows:

By standing on her own two feet, she represents the key to our future. Her hands, no longer needed for locomotion, will free those that follow her to discover other uses. Shaping tools with them, they will gradually gain control over their environment and, eventually, they will create art and herald the beginning of a truly human culture. Her bipedal stance will also release the hominid line from the constraints that keep *afarensis*’s brains small and ape-like.¹⁴²

This passage exemplifies the representation of bipedalism within humanist discourse. ‘Standing on two feet’ is represented as a move from bondage to freedom: it ‘release[s] [...] constraints’ and the hands become ‘free’ to make tools, create art, and produce a ‘truly human culture’. This vocabulary is common to almost all narratives of human evolution. For example, Wilson writes:

The earliest men or man-apes started to walk erect when they came to spend most or all of their time on the ground. Their hands were freed, the manufacture and handling of artifacts were made easier, and intelligence grew as the tool-using habit improved.¹⁴³

Within humanist narratives, then, becoming bipedal is represented as a shift from constraint to freedom, from submission to dominance, and from fixity to choice. In

Chapter 3, I argue that humanism represents spoken language in a similar way, as a release from constraints. The human is distinguished from the animal because the animal is seen as the product of automatic, determined, reactions, while the human is the subject in control of its own responses. Similarly, the hand is represented within both philosophical and scientific texts as a key difference between human and animal.¹⁴⁴ In addition to the freeing of the hands, bipedalism has also been linked with all of the other major differences which are claimed to differentiate humans from other apes. For example, it has been claimed that it led to the development of a larger brain due to the need for additional ‘sensorimotor control’, and to the ‘evolution of complex vocalization’ as a result of the change in position of the larynx.¹⁴⁵ Walking on two feet, rather than four, is thus associated with all of the other central differences said to ‘make us human’: large brain, articulate speech, and use of the hands.¹⁴⁶

The physical fact of walking upright is inseparable from the metaphorical values associated with it. For example, the section on bipedalism in *Walking with Cavemen* is entitled ‘Walking Tall’ (p. 36); this implies pride and self-confidence, in addition to being descriptive. The two meanings – ‘erect on the feet or end; in or into a vertical position; perpendicular to the ground or other surface’ and ‘of persons: adhering to or following correct moral principles; of unbending integrity or rectitude; morally just, honest, or honourable’¹⁴⁷ – blur into each other, so that humans’ bipedalism is represented as a marker of moral superiority. As William King Gregory writes, ‘the erect posture which has enabled man to look down on the world of quadrupeds may well be one of the bases of man’s colossal and impregnable superiority complex’.¹⁴⁸ This echoes a more general use of ‘up’ as a metaphor for ‘good’ and ‘down’ for ‘bad’, which is deeply ingrained in the English language. In *Metaphors We Live By*, George

Lakoff and Mark Johnson claim that these ‘orientational metaphors [...] arise from the fact that we have bodies of the sort we have and that they function as they do in our physical environment’.¹⁴⁹ They suggest that the metaphorical use of ‘up’ to mean ‘happy’ may have a physical basis, since ‘drooping posture typically goes along with sadness and depression, erect posture with a positive emotional state’ (p. 15). They also offer the following explanation for the association of ‘up’ with ‘rational’ and ‘down’ with ‘emotional’:

In our culture people view themselves as being in control over animals, plants, and their physical environment, and it is their unique ability to reason that places human beings above other animals and gives them this control. CONTROL IS UP thus provides a basis for MAN IS UP and therefore for RATIONAL IS UP. (p. 17)

Here, Lakoff and Johnson relate the metaphorical use of ‘up’ to the idea of humans being ‘in control over’ and ‘above other animals’. While they do not specifically mention bipedalism, the fact that humans are bipedal while other apes are (generally) not could be usefully added to their list of physical bases for these metaphors. The metaphorical use of ‘up’ to mean ‘superior’, ‘rational’, or ‘in control’ tends to creep into the language used to describe the physical differences between humans and other apes, as in this example from Bronowski’s *Ascent of Man*: ‘[The Taung child] was a child that held its head up. That is one man-like feature; for in the monkeys and apes the head hangs forward from the spine, and does not sit upright on top of it’ (p. 29). The wording of this passage suggests that there is something admirable about the Taung child that ‘held its head up’, in contrast to the ‘head hang[ing] forward from the spine’ in monkeys and apes.

Children: Becoming Human and the Biogenetic Law

As is suggested by the title *The Ascent of Man*, Bronowski depicts the human species as hierarchically above the rest of the living world. In the first chapter, this 'ascent' is shown quite literally in a series of monochrome photographs which depict a naked toddler raising itself from a prone position on its stomach, to standing upright with its arms thrown out wide (pp. 30-33). This triumphant series of photographs resembles Rudolf Zallinger's famous illustration of human evolution as a 'march of progress'. Originally appearing in Time-Life's *Early Man* book, the image has been reproduced and parodied so often that it has become iconic.¹⁵⁰ It depicts fifteen figures, starting with the stooped, hairy 'proto-ape' *Pliopithecus* on the left, tentatively standing up and walking forwards, to the upright, naked, fully human figure on the right, his (and they are all male) humanness indicated by the spear grasped in his hand.¹⁵¹ The resemblance between these two pictorial representations of becoming human is symptomatic of a general tendency to conflate the development of the individual with the evolution of the species. Like the human species as a whole, each individual child must go through the process of becoming human, and these two processes are represented in very similar ways, such as the visual representations of gradual ascents, described above. For example, Bronowski writes that 'by fourteen months [...] the child has entered the human commitment to walk upright',¹⁵² and Anne Karpf claims that 'the newborn baby's use of its voice is the rite of passage through which it is conferred membership of the human species'.¹⁵³ These metaphors echo those used in texts about human evolution: for example, Tattersall argues that *Homo ergaster* is 'a convincing contender for early membership in our genus'.¹⁵⁴ The shared vocabulary of these genres demonstrates that the biogenetic law still informs discourses of becoming human.

The biogenetic law – the hypothesis that ‘ontogeny recapitulates phylogeny’ – was initially put forward in the 1820s by Karl Ernst von Baer, and more famously in a modified form by Ernst Haeckel in 1866. It suggests that as embryos of any species grow, their development repeats the evolutionary development of the species as a whole.¹⁵⁵ Although the biogenetic law is no longer accepted in its strict, literal form, it is still a highly influential analogy. In his 1977 book *Ontogeny and Phylogeny*, Stephen Jay Gould writes: ‘The microcosm: ontogeny. The macrocosm: cosmic history, human history, organic development. This comparison may be the most durable analogy in the history of biology’.¹⁵⁶ Gould demonstrates the massively pervasive influence of the biogenetic law on many fields, claiming for example that ‘twentieth-century psychoanalytic [...] theories cannot be properly assessed or even understood without recognising their links to the biogenetic law’.¹⁵⁷ The same is true of paleoanthropology. Contemporary texts about human evolution are still heavily influenced by the biogenetic law; as Kathleen Gibson notes, ‘ontogenetic perspectives have become the rule, rather than the exception, among serious scholars of cognitive and linguistic evolution’.¹⁵⁸ For example, Leakey states that ‘human infants effectively recapitulate a segment of our evolutionary history’.¹⁵⁹

The conflation of the phylogenetic and ontogenetic processes of becoming human is indicated by phrases such as ‘the childhood of humanity’ and ‘the cradle of civilisation’ to refer to the early stages of human evolution. For example, the complex of ancient caves containing fossilised human remains in Gauteng, South Africa is known as the ‘Cradle of Humankind’;¹⁶⁰ similarly, Bronowski describes the Great Rift Valley as ‘the navel of the world’ and ‘the birthplace of man’.¹⁶¹ Just as ‘our’

ancestors had to become human at a certain time in the past, so each individual child has to go through this same process in miniature: learning to speak, to walk, to dress itself, and so on. This process is represented as equivalent to the humanization of the species. For example, Tim Ingold argues that “‘becoming human’, then, is tantamount to the process of enculturation which virtually all children of our species undergo in their passage to maturity’.¹⁶² There seems something paradoxical in the idea that children are ‘of our species’, and yet have to undergo a process which is ‘tantamount’ to ‘becoming human’. This paradox is discussed by Jean-François Lyotard in *The Inhuman*, in which he asks: ‘What shall we call human in humans, the initial misery of their childhood, or their capacity to acquire a “second” nature which, thanks to language, makes them fit to share in communal life, adult consciousness and reason?’.¹⁶³ This question problematises the security of the category of the human since, as Cary Wolfe writes, ‘it posits a permanently incipient multiplicity and self-difference at the very core of subjectivity as such’.¹⁶⁴ Not only in evolutionary terms, but in each individual lifetime, ‘our’ humanness is always already inhabited by the inhuman.

But for Lyotard, it is the ‘initial misery’ of childhood, the ‘native lack’, which somehow makes the child ‘eminently’ human. He continues:

Shorn of speech, incapable of standing upright, hesitating over the objects of its interest, not able to calculate its advantages, not sensitive to common reason, the child is eminently the human because its distress heralds and promises things possible. Its initial delay in humanity, which makes it the hostage of the adult community, is also what manifests to this community the lack of humanity it is suffering from, and which calls on it to become more human. (p. 4)

It seems strange to describe the child as ‘shorn of speech’: ‘shorn’ suggests something that was present, and has been taken away, whereas the child has never spoken.

Similarly, is it reasonable to suggest that the ‘distress’ and ‘suffering’ of a crying infant be attributed to its ‘lack of humanity’? Lyotard’s formulation is paradoxical because, although he argues that it is necessary for children to become human, he still seems to view them as essentially human. He defines the child in terms of its relation to its potential future ‘humanity’. In this way, the child, like the pre-human animal ancestor, is always defined in its relation to the human that it will one day become. This relationship can be understood in terms of the Derridean idea of differance, which

makes the movement of signification possible only if each element that is said to be ‘present’, appearing on the stage of presence, is related to something other than itself but retains the mark of a past element and already lets itself be hollowed out by the mark of its relation to a future element.¹⁶⁵

In Lyotard’s text, the ‘present’ child is ‘hollowed out by the mark of its relation to a future element’, namely the adult human. It only makes sense to read the child as ‘shorn of speech’ and ‘suffering’ from ‘a lack of humanity’ if it is understood in terms of this ‘relation to a future element’.¹⁶⁶ At the same time, its animal-like characteristics and its apparent recapitulation of long-ago stages of human evolution also indicate that it ‘retains the mark of a past element’.

This ‘movement of signification’, these traces, trouble the idea of an absolute opposition between human and animal. Indeed, the notion of becoming human suggests that the boundary between human and nonhuman must be permeable, as it can be transgressed. For Darwin, the way that children develop proves that, on a phylogenetic level, human ‘faculties’ could have evolved gradually. He writes:

I shall make some few remarks on the probable steps and means by which the several mental and moral faculties of man have been gradually evolved. That this at least is possible ought not to be denied, when we daily see their development in every infant.¹⁶⁷

That is, the fact that children gradually develop their ‘mental and moral faculties’ proves that it is possible to become human. The possibility of crossing the boundary calls the division itself into question. Similarly, in his history of paleoanthropology, John Reader writes:

[Sir Arthur] Keith now attempted to define the point at which the man-like ape could be said to have become man. In *A New Theory of Human Evolution* he proposed brain size as the measure, suggesting that just as the eruption of the first permanent molar provides a convenient mark for determining the end of infancy and the beginning of childhood in the individual, so the acquisition of a certain brain size could mark the species’ evolutionary transition from apehood to manhood.¹⁶⁸

Like Darwin, Keith uses an ‘ontogenetic perspective’; he looks at ‘childhood in the individual’ to try to understand the development of the human species. Although he is trying to define the limits of the human, his argument makes it clear that there is no single boundary. There is no crucial difference between the individual at ‘the end of infancy’ and the same individual at ‘the beginning of childhood’; the eruption of the tooth is ‘a convenient mark’ rather than a dramatic change. This calls into question the idea of an absolute difference between ‘apehood’ and ‘manhood’. What I want to emphasise here is that if ‘we’ are not born human, but become human, the category itself is not secure, since the boundary between animal and human can be crossed. Thus the very notion of becoming human destabilises the stability of the category of the human.

DNA, the Origin, and the Trace

The process of becoming human does not mark a complete break between two separate categories, but is, precisely, a process. As I have suggested above, this process involves a play of traces across the boundary that separates human from animal; both past and future elements inflect the present. For Derrida, the trace and differance are

deeply connected with the human/animal opposition. For example, in *Of Grammatology*, he writes that ‘the trace [...] must be thought before the opposition of nature and culture, animality and humanity’ (p. 70). More explicitly, in *For What Tomorrow...* he states that: ‘There is differance (with an “a”) as soon as there is a living trace, a relation of life/death or presence/absence. This became linked for me very early on with the immense problematic of animality’.¹⁶⁹ The texts about human evolution which have been discussed in this chapter reveal the play of the ‘living trace’ across the limits that separate human from animal, presence from absence, life from death. Darwin’s *Descent of Man*, which could be considered the founding text of this genre, uses the terms ‘trace’ and ‘traces’ repeatedly; for example, he writes that ‘man bears in his bodily structure clear traces of his descent from some lower form’ (p. 797).¹⁷⁰ These traces mean that there can be no point of absolute rupture between past and present, animal and human: no single day on which ‘we really stop[ped] being animals and bec[a]me truly human’.¹⁷¹ As John Gray writes:

The lesson of evolutionary psychology and cognitive science is that we are descendants of a long lineage, only a fraction of which is human. We are far more than the traces that other humans have left in us. Our brains and spinal cords are encrypted with traces of far older worlds.¹⁷²

These ‘traces of far older worlds’ mean that the animal other is fundamentally part of the human; within the very core of the human, in the brain and central nervous system, are traces of the nonhuman, long-dead but still living within ‘us’. Many other texts use the word ‘traces’ in this context, including *The Ascent of Man*, in which Bronowski notes that ‘each one of us traces his make-up back through the evolutionary process right to the beginnings of life’ (p. 309), the programme ‘Are We Neanderthals?’ which refers to ‘traces’ of nonhuman viruses in human DNA,¹⁷³ and the *Companion Species Manifesto*, in which Donna Haraway refers to the need to understand ‘companion species in both storied deep time, which is chemically etched in the DNA of every cell,

and in recent doings, which leave more odoriferous traces'.¹⁷⁴ These 'chemically etched [...] traces' mean that no absolute, single limit can be drawn between human and animal, life and death.

In the radio programme 'Are We Neanderthals?', discussed above, the biology professor Alan Templeton comments that 'DNA molecules can travel through time. So in fact DNA is kind of a living fossil'.¹⁷⁵ Each living being thus contains 'a living fossil' within itself: traces of billions of years of previous beings.¹⁷⁶ Indeed, as Michel Foucault has observed, all fossils lie in an 'uncertain frontier region' between life and death:

Just as the zoophyte stands on the ambiguous frontier between animals and plants, so the fossils, as well as the metals, reside in that uncertain frontier region where one does not know whether one ought to speak of life or not.¹⁷⁷

The troubling ambiguity of fossils, which calls into question the boundaries between life and death, present and past, also questions the opposition between human and animal. Howell quotes a psychiatrist saying 'one of the best relics we have of early man is modern man'.¹⁷⁸ The notion that 'we' are living fossils, modern relics, disrupts the relationship between subject and object, since the subject doing the investigation is simultaneously a 'relic' of the object that s/he is investigating. In this interplay of subject and object, the human is both alive and dead, both present and absent. This reversal of living and dead, active and passive, also appears in this passage from Leakey's *Origins Reconsidered*, in which the trace of the long-dead *Homo erectus* seems to magically manifest itself:

When I hold a *Homo erectus* cranium in my hand and look at it full face, I get a strong feeling of being in the presence of something distinctly human. It is the first point in human history at which a real humanness impresses itself so forcefully. (p. 55)

In this almost mystical passage, the relationship between the scientist and the object of study is once again reversed, as the ‘humanness’ of the fossil apparently takes on an active, even forceful, role. The trace of the other (the living *Homo erectus*), retained within the same (the dead cranium), appears to be reactivated, as the absent past is transformed into presence, both here and now. Some trace of life, of being, is active within the fossil skull. In the paleoanthropologist’s imagination, death becomes life, and the inhuman ‘cranium’ once again becomes the living human being.

The human does not suddenly spring into existence, but begins within the nonhuman animal: as Bronowski writes, the human has ‘its beginnings in the animal’.¹⁷⁹ There is no pure moment of origin, but an infinitely complex process of differentiation. Darwin describes this process of differing as ‘the principle of divergence’ by which ‘varieties [within a species] become augmented into the greater difference between species’.¹⁸⁰ This is a radical contrast to the Biblical tale of separate creations, which still informs the paleoanthropological search for ‘that magic moment [...] when we suddenly became human’. The human emerges from the animal, and this emergence is never an absolute break; rather, it retains the trace of the nonhuman other within. In *The Descent of Man*, Darwin discusses what he calls ‘the principle of reversion, by which long-lost dormant structures are called back into existence’ (p. 848). He describes cases in which the human body develops abnormally, but in ways which resemble the normal development of other, ‘lower’ animals (p. 847). These cases, Darwin argues, ‘reveal the descent of man from some lower form in an unmistakable manner’ (p. 851). In Derridean terms, this suggests that the animal other is always already within the human subject; traces of the other can threaten to reappear within ‘us’. The human literally ‘retains the mark of a past element’.

That each element is also ‘hollowed out by the mark of its relation to a future element’ can be seen in narratives of human evolution which describe pre-human ancestors as, precisely, pre-human. Just as Lyotard describes the child as ‘suffering from’ a ‘lack of humanity’, these hominids are represented as moving towards the goal of humanness, as if they somehow already have the trace of their future human descendants within. For example, Lynch and Barrett write that *Australopithecus afarensis* ‘represents one of the first steps on our journey towards humanity’.¹⁸¹ Even when they add the disclaimer that *afarensis* ‘is not an inferior kind of human, not a superior type of ape, but a highly successful species in its own right’, in the next sentence they say ‘*afarensis*’s small steps are already paving the way for the giant leaps of mankind’ (pp. 52-53). An *afarensis* female is significant ‘not so much because of what she and her species are now, but because of what they make possible’: because ‘standing upright has been the first step on the way to all of us’ (p. 64). In this text, *afarensis* is represented as already being ‘hollowed out by the mark of [their] relation’ to the present, to ‘all of us’, ‘our future’. These pre-humans cannot be understood without reference to the ‘future element’ of *Homo sapiens*. They are always conceived in their relation to the human to come: a relation of both similarity and difference.

This combination of similarity and difference can have a disturbing effect, as in this description of *Homo ergaster* from *Walking with Cavemen*: ‘Yet at the top of this very human body there rests a distinctly un-human head [...]: the face of an animal, but an animal with a new intelligence’ (p. 121). This combination of ‘very human’ and ‘distinctly un-human’ is an uncanny image because it creates uncertainty over whether *ergaster* is or is not human, is or is not conscious.¹⁸² It fundamentally troubles the

distinction, so crucial to humanism, between human and animal; this is one of ‘those uncanny moments at which things start to drift’.¹⁸³ Even though this encounter is described in the language of humanism, with references to ‘ourselves’ and ‘our humanity’, this humanism is ‘unwarily becoming alien to itself, becoming posthumanism’.¹⁸⁴ Perhaps the most uncanny realisation is that the human that is now present is ‘hollowed out by the mark of its relation’ to its own future absence.

Derrida describes the trace as the place ‘where the relationship with the other is marked’,¹⁸⁵ where one term of an opposition inscribes itself within the other. This inscription, this play of traces, can be read in another description of *Homo ergaster* in

Walking with Cavemen:

Ergaster was tall, smooth-skinned, proportioned in a way that we would instantly recognize as human, but, if we were able to look closer, we would see the head and face of something very different indeed. With a low forehead and heavy brow-ridge, his face would be that of a wild animal, although one with a glimmer of humanity within. (pp. 12-13)

Echoing this notion of ‘a glimmer of humanity within’, Leakey writes: ‘In the enlarged brain, the newly emerging tool-making ability, and the beginnings of a hunting-and-gathering subsistence, we recognize hints of ourselves, our humanity’.¹⁸⁶ The ‘glimmers’ and ‘hints’ of the human in these descriptions suggest the play of traces across the limits of human/animal, present/past, living/dead. This play means that the human is never simply present or absent, and this makes it impossible to sustain an absolute opposition between ‘us’ and ‘them’. The impossibility of sustaining this opposition can be read in Lynch and Barrett’s description of ‘Lucy’, the

Australopithecus afarensis fossil skeleton discussed above:

Lucy walked upright, and that is the clue that tells us she is our ancestor. It is perhaps all we would recognize, but it is not all that binds us to her. In the wrinkle of an ear, the purse of a lip, the furrow of a brow and in a myriad other tiny hidden ways, there are parts of Lucy alive in us all. (p. 14)

These ‘tiny hidden’ connections, these parts of the animal other that are still ‘alive in us all’, demonstrate the movement of differance, of the ‘living trace’ which plays ‘across and despite all the limits that the strongest philosophical or cultural tradition thought it could recognize between “man” and “animal”’.¹⁸⁷ Lucy and Peking Man may be dead and fossilised, but ‘we’ are bound to ‘them’: ‘they’ are still living within ‘us’.

This ‘living trace’ means that it is impossible to identify the ‘magic moment [...] when we suddenly became human’. The impossibility is encapsulated in this passage from F. Clark Howell’s *Early Man*:

Once the idea of man’s evolutionary development is accepted, his origins can theoretically be traced back to the origin of life itself – a matter of some 2,000 million years. For practical purposes, however, the point at which to study the beginnings of man is when he began to have the first faint traces of ‘mannishness’. How far into the past to dig for such traces – what, even, to keep an eye out for – is something of a problem. (p. 31)

Howell takes it for granted that ‘man’ is an object which can be defined and studied, and that ‘mannishness’ is something identifiable. However, his text also indicates that locating the limits of the human ‘is something of a problem’. He repeatedly uses the word ‘trace’: man’s origins can ‘be traced back’, the ‘first faint traces’ of mannishness, the uncertainty over what would even constitute ‘such traces’. It is the play of these traces which makes it impossible to locate a pure origin of the human. In *Of*

Grammatology, Derrida writes:

The trace is not only the disappearance of origin – within the discourse that we sustain and according to the path that we follow it means that the origin did not even disappear, that it was never constituted except reciprocally by a nonorigin, the trace, which thus becomes the origin of the origin. (p. 61)

There is no such thing as ‘the origin of the human’, since every organism necessarily contains the trace of its parents, right back to the first life on earth. As Foucault writes,

‘it is always against a background of the already begun that man is able to reflect on what may serve for him as origin’; there can be no such thing as a pure origin of the human as a biological species, since all life ‘has its roots in the first organic formations’.¹⁸⁸ This echoes Darwin’s observation that: ‘From the first dawn of life, all organic beings are found to resemble each other in descending degrees’.¹⁸⁹ An investigation of human origins leads inexorably back to ‘the first organic formations’ and ‘the first dawn of life’, which pre-dates anything that could conceivably be called human by billions of years. There is no pure origin to be found here either, as the line between pre-organic and organic chemical formations is not a clean break.¹⁹⁰

The movement of the trace, of the hidden ‘them’ that problematises the very concept of ‘us’, is not confined to hominids or primates or even animals, but can be traced back far beyond any beings that resemble us:

For most of the planet’s history, creatures have been faceless. Tracing the journey from them to us is, like most evolutionary stories, full of staggering timescales and unpronounceable names of long-extinct creatures. But they are all ‘part of us’ today, for their features were the forerunners of our features.¹⁹¹

Even the terrifying, faceless, nameless, long-dead animal other is ‘part of us’. The search for ‘our’ origin can never succeed, because the nonhuman animal can never be excluded from the play of traces that constitutes the human.

Conclusion: Paleoanthropology Dissolves the Human

At the beginning of this chapter, I suggested that paleoanthropology as a humanist discourse aims to identify a single boundary between human and animal, in order to preserve the binary opposition. I have shown how paleoanthropological discourse attempts to fix the meaning of the human. However, it is my contention that this is

impossible. Paleoanthropology's humanism cannot be sustained, and it is doomed to dissolve the object of its study. In a prosaic way, the discoveries of paleoanthropology undermine the humanism that originally motivated them by showing that the human is simply one animal species among many. In comparison to a Biblical creation myth that presents humans as separate from and superior to all other life on earth, any scientific investigation of 'our' place in nature is going to be a demotion.

However, the humanist mission of paleoanthropology also undermines itself in a more profound way. There is no shared definition of 'human' among paleoanthropologists. Initially, it might seem that the division of fossils into *Homo* (for example *H. ergaster*, *H. erectus*, *H. sapiens*) and *Australopithecus* (for example *A. afarensis*, *A. africanus*) marks a clear dividing line between human and pre-human ape. However, this dividing line is no less arbitrary and disputed than that between human and animal; as Herbert Wendt has observed, 'we can no longer say where the "ape-man", *Australopithecus*, ends and "genuine man", *Homo*, begins'.¹⁹² Sometimes the inability to decide whether a fossil is 'human' or not is so profound that paleoanthropologists resort to inventing new terms, such as *Paranthropus* (near-man or resembling man), *Plesianthropus* (near-man), *Anthropithecus* (man-like ape), and *Pithecanthropus* (ape-like man). Although these particular terms have now been rejected, they represent an inability to categorise species as definitively human or nonhuman.

Furthermore, there is no simple correspondence between *Homo* and 'human'. As Ian Tattersall writes, 'the adjective 'human' is extremely ill-defined, having entered the language long before anyone realized that we are connected by ancestry to the rest of the living world'.¹⁹³ Once again, it is the dimension of time which causes the adjective

'human' to be 'ill-defined'. For example, Tattersall uses it to refer to all species which have existed since the human evolutionary line split from the chimpanzee line:

As used here [in *The Last Neanderthal*], 'human' does not refer to beings possessing precisely those capacities that make modern *Homo sapiens* unique in nature; rather, it is more loosely employed to refer to all primates that share a common ancestry uniquely with us, from *Australopithecus* on. This interpretation makes 'human' equivalent to the traditional term 'hominid'.¹⁹⁴

The definition 'primates that share a common ancestry uniquely with us' is an arbitrary limit which is defined by the fact that all other species which shared that ancestry, such as Neanderthals, are now extinct. In this definition, the human begins approximately five million years ago. However, in other narratives of human evolution, 'human' is used to mean only 'anatomically modern humans' (*Homo sapiens*). For example, in *Ape Man*, Rod Caird writes:

The word 'hominid' [...] is used to describe all those creatures, preceding and including humans, which have lived on the evolutionary lines between the split with the chimpanzees and modern humans. It is a very valuable term because its use avoids having to attach the label 'human' to creatures which may very well be our ancestors but lack some of the characteristics generally accepted as specifically human. In this book 'human' is interchangeable with *Homo sapiens* – anatomically modern people, recognizable as such. (p. 33)

For Caird, then, the shift between human and pre-human animal happened perhaps 200,000 years ago. Steven Mithen employs yet another idiosyncratic usage: 'It is useful to refer to *Homo ergaster*, *Homo erectus* and *Homo heidelbergensis* as Early Humans rather than early hominids because this acknowledges their evolutionary status'.¹⁹⁵ Mithen thus draws his own boundary line somewhere between Tattersall's and Caird's. Finally, Jared Diamond restricts the word to 'behaviourally modern humans'. He excludes the anatomically modern Cro-Magnon *Homo sapiens* of 100,000 years ago; because they 'had no preserved art' and 'couldn't even catch fish', he writes, they 'still rank as less than fully human'.¹⁹⁶ In four different texts, then,

there are four different meanings of the word 'human', and four different limits between human and animal. To quote Derrida:

If I am unsatisfied with the notion of a border between two homogeneous species, man on one side and the animal on the other, it is not in order to claim, stupidly, that there is no limit between 'animals' and 'man'; it is because I maintain that there is more than one limit, that there are many limits. There is not *one* opposition between man and non-man; there are, between different organizational structures of the living being, many fractures, heterogeneities, differential structures.¹⁹⁷

The plurality of the oppositions between 'man and non-man' is evident from the diverse meanings of the word 'human' in these texts. Each of the writers discussed here locates a different fracture in the movement from nonhuman to human. But because of the persistent belief that there is a monolithic opposition, they each try to claim that one particular limit is *the* origin of the human, the single limit between 'man and non-man'.

As these examples demonstrate, scientists who study evolution are aware of the slipperiness of the signifier 'human', since each finds it necessary to explain his own definition. Tattersall ascribes this instability to the fact that the term predates the discovery of evolution, and identifies it as 'merely' a problem with language.

However, this linguistic uncertainty indicates a deeper way in which the meaning of the human itself is 'extremely ill-defined'. To demonstrate this, consider the concept of the 'cerebral Rubicon', a term which was coined by the anatomist Sir Arthur Keith in the 1940s. In his book *A New Theory of Human Evolution*, he 'proposed a cranial volume of 750 cubic centimetres as the "cerebral Rubicon" to be crossed before the ancestors of mankind may be called truly human'.¹⁹⁸ Since he was specifically concerned with *human* evolution, he had to try to 'define the point at which the man-like ape could be said to have become man'.¹⁹⁹ But as with Darwin's observation that

‘whether primeval man, when he possessed very few arts of the rudest kind [...] would have deserved to be called man, must depend on the definition which we employ’, it is clear that this is a linguistic debate.²⁰⁰ The question is at which point could ‘our’ ancestors ‘be *said* to have become man’: when ‘the ancestors of mankind may be *called* truly human’. This demonstrates that the process of defining is constitutive, not descriptive. It constructs the border between ‘man-like ape’ and ‘man’, and therefore the category of the human. It does not simply locate it.

Keith’s cerebral Rubicon of 750 cubic centimetres was problematised in the 1960s when Louis Leakey discovered a new fossil species known as *Homo habilis*. The story is told in the BBC’s *Walking with Cavemen* book. I quote it at length as it demonstrates the way that the category of the human is brought into question by paleoanthropological debate:

Ever since it was first discovered and described, *Homo habilis* has been a controversial species. Louis Leakey, who discovered the fossils at Olduvai Gorge in Tanzania in 1961, was convinced that it was *Homo* because they were found with stone tools and, as far as he was concerned, only a human could make such items. However, there was something of a problem with this, as the estimated brain capacity of the fossil was 640 cubic centimetres whereas, at the time the fossils were found, a figure of 750 cubic centimetres was considered to be the ‘cerebral rubicon’ – the brain size that had to be reached before a species could be considered human. In order to get round this, Leakey and his colleagues, John Napier and Phillip Tobias, redefined the cerebral rubicon and decided that a brain size of 600 cubic centimetres should mark the boundary of human brain size, thus allowing their fossil a comfortable entry into the human world. Obviously, some scientists felt that this was moving the goalposts to suit Leakey’s notions about what made a human. (p. 116)

This paleoanthropological debate exposes the way that the boundaries between the human and the pre-human are constructed. When a fossil is discovered, it must be named and classified as either human or nonhuman. It is generally assumed in these discussions that there is such a thing as ‘true humanity’, and that what is at stake is correctly identifying it. However, these decisions themselves produce the limits of the

human; that the human is not a pre-existing entity, and that humanness is not 'unmistakable' or 'obvious', is indicated by the very possibility of 'moving the goalposts', of 'redefin[ing] the cerebral rubicon'. In the example above, for Leakey it was inconceivable that a nonhuman could make stone tools; for other paleoanthropologists, a human could not have such a small brain capacity. Therefore Leakey decided to change the 'boundary of human brain size', whereas others would have preferred to change the behavioural boundary of the human and say that nonhuman animals can make tools. From one point of view, tool-making is an essential part of what it is to be human; from another, brain size above 750 cubic centimetres is the absolute marker of humanness. What emerges is that what human means for Leakey is different from what it means for another scientist.

The project of paleoanthropology is presented as 'the search for human origins' and 'the pursuit of human origins': terms which suggest a search for something that definitely exists.²⁰¹ In these debates, the category of the human is very visibly under construction, but those who are doing the constructing do not explicitly question the reality of 'humanness': an essential quality that unites all of 'us' and excludes all of 'them'. Rather, the debate is presented as merely a disagreement over the exact moment that this humanness begins. 'When did we become human?' is a question that assumes that becoming human has indeed taken place, so it takes the *current* existence of the human for granted. But the question 'when did we become human?' is inseparable from the question 'what does it mean to be human?'. As the paleoanthropologist Sonia Cole writes:

Before beginning a study of man, it is important to define what is, in fact, meant by 'man'. This sounds obvious and simple enough, yet when we try to arrive at such a definition, we find ourselves up against considerable difficulties.²⁰²

It is because paleoanthropological research takes the human as its primary object of study that these debates take place. Yet at the same time, they deconstruct the opposition between human and animal on which they are premised.

The attempt to locate a moment of becoming human cannot help but dissolve the concept of the human itself. Paleoanthropology begins with a belief in the human and tries to fix its meaning by establishing a single limit which separates it from the animal. But precisely because paleoanthropologists try to determine the exact moment at which the human originates, they are constantly confronted by the instability of its borders and the lack of consensus about what it means to be human. In *Origins Reconsidered*, a thoroughly humanist text, Leakey writes: ‘Least certain of all is an understanding of the precise evolutionary change on which modern humans – the complete essence of humanity – is founded’ (p. 236). The ‘complete essence of humanity’ remains elusive. The human sciences wish to study ‘man’ but inevitably discover the impossibility of defining who or what this ‘man’ might be. In his discussion of psychoanalysis and ethnology, which ‘are not so much two human sciences among others, but [...] span the entire domain of those sciences’, Michel Foucault writes:

Not only are they able to do without the concept of man, they are also unable to pass through it, for they always address themselves to that which constitutes his outer limits. One may say of both of them what Lévi-Strauss said of ethnology: that they dissolve man. [...] They ceaselessly ‘unmake’ that very man who is creating and re-creating his positivity in the human sciences.²⁰³

The human(ist) science of paleoanthropology cannot take the ‘concept of man’ for granted, since it must ‘always address [...] his outer limits’. In confronting the instability and plurality of those limits, ‘man’ is ‘unmade’.

The possibility of becoming human troubles the opposition between human and animal. It suggests that the boundaries between 'us' and 'them' are plural and permeable. If the human can only be defined as differed-differing animal, as what the animal is not, then the instability of these boundaries means that the category of the human is itself unstable.

Chapter 2

Acting Human

Autism, Anthropomorphism, and Differance in Behaviour

Thus nature made us to be lower than animals or at least to exhibit all the more, because of that native inferiority, the wonderful efficacy of education which alone raises us from the level of the animals and lifts us above them. But shall we grant the same distinction to the deaf and to the blind, to imbeciles, madmen, or savages, or to those who have been brought up in the woods with animals; to those who have lost their imagination through melancholia, or in short to all those animals in human form who give evidence of only the rudest instinct?

Julien Offray de La Mettrie, *Man a Machine* (1748), trans. by Gertrude C. Bussey and Professor M. W. Calkins (La Salle: Open Court, 1912), p. 114.

Because there is neither an 'essence' that gender expresses or externalizes nor an objective ideal to which gender aspires, and because gender is not a fact, the various acts of gender create the idea of gender, and without those acts, there would be no gender at all.

Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity*, 2nd edn (London and New York: Routledge, 1999), p. 178.

The difference between the theatrical and the social may then only be a matter of the legibility or otherwise of quotation marks, but these quotation marks make all the difference.

Geraldine Harris, *Staging Femininities: Performance and Performativity* (Manchester and New York: Manchester University Press, 1999), p. 77.

In this chapter I focus specifically on the *behavioural* boundary of the human, in order to interrogate the way that an illusion of human essence is produced through performance. I am drawing on Judith Butler's notion of gender as performative, in the sense that 'acts, gestures, and desire produce the effect of an internal core or substance'.¹ In *Gender Trouble*, originally published in 1990, Butler argues that gender is a sustained, repeated, primarily unconscious performance of norms learned from the surrounding culture. The existence of those who do not correctly perform their gender, such as homosexuals and transvestites, reveals the performativity of gender in general, as it demonstrates that gendered behaviour is not natural or essential. This contradicts the hegemonic view of gendered behaviour as a natural expression of an internal essence. Within *Gender Trouble*, there are many suggestive allusions to the process of becoming human and the ways that this process intersects with that of becoming gendered. However, although Butler's model has been widely taken up by theorists of gender, sexuality and race, its potential as a posthumanist theory has not been explored.

According to humanism, humans naturally and by definition act human: for example, by socially interacting with other humans, wearing clothes, and walking upright. They act human because they are essentially human. Their internal identity is expressed externally by their behaviour. In this view, you can infer the presence (or absence) of a

human essence through the way they act; what they do tells you who (or what) they are. However, this structure is problematised when the behaviour does not match the supposed essence. This disturbance can work in two directions: people who do not act human, for example by not speaking, refusing to interact with other people, walking on all fours, or eating raw meat; and nonhuman animals who do act human, for example using language or tools or creating art. In these cases, from a humanist perspective, there is a mismatch between external behaviour – the performance – and internal identity – the essence. This mismatch produces an uncanny effect, as there is uncertainty over whether someone / something is or is not human.

In the first part of this chapter, I ask what it might mean to fail to act human. I look specifically at two examples, feral children and people with autism, and argue that they do not conform to norms of human behaviour. In a range of examples to which I will turn, the encounter with autistic people is experienced as uncanny because they do not act human in some crucial ways, which results in uncertainty over whether or not they are human. When humanism is threatened by this uncertainty, it tries to contain the threatening being by representing it as anomalous, false, or unintelligible. For example, autistic people are excluded from the category of the human by being represented as animals, inanimate objects, culture-less beings or even extraterrestrials. They are also forced to attempt to conform to the ‘correct’ behaviour. According to Butler, ‘we regularly punish those who fail to do their gender right’.² Similarly, people who fail to act human are routinely subject to punishments including physical violence, incarceration, psychological experiments and psychiatric treatment. In response to this treatment, the ‘autistic liberation movement’ aims to extend the boundaries of the human. However, this strategy retains the centrality of the term ‘human’ as a

privileged category. An alternative strategy is to represent autism differently, such that the human is no longer the site of knowledge and power.

In the second part of this chapter, I turn to the second behavioural threat to humanism, animals who act human, and analyse the way that humanism responds to this challenge. One way is to use the accusation of anthropomorphism; in other words, to suggest that the performance is false or fictional. However, the ferocity of the reaction reveals that there is something very important at stake, and that the performance does indeed threaten the secure category of the human. Some instances of animals acting human are ‘authorized transgression’, to borrow Linda Hutcheon’s term.³ These are cases that do not pose a risk to humanism, since they are clearly marked as imitative, fictional, theatrical, or otherwise unreal. However, even these ‘authorised’ anthropomorphic performances have an uncanny effect. Although they may be presented as false or fictional, the fact that an animal *can* act human undermines the idea that human behaviour is a natural manifestation of an internal essence. Instead, it makes visible the performativity of all cases of acting human, no matter who is performing.

Theoretical Approach: Descartes and Butler

The idea that the presence or absence of a human essence can be detected by observing behaviour can be traced back to Descartes’ 1637 *Discourse on the Method*.⁴ In a famous passage from the *Discourse*, Descartes argues:

If any such machines had the organs and outward shape of a monkey or of some other animal that lacks reason, we should have no means of knowing that they did not possess entirely the same nature as these animals; whereas if any such machines bore a resemblance to our bodies and imitated our actions as closely as possible for all practical purposes, we should still have two very

certain means of recognizing that they were not real men. The first is that they could never use words, or put together other signs, as we do in order to declare our thoughts to others. [...] Secondly, even though *such machines might do some things as well as we do them*, or perhaps even better, they would inevitably fail in others, which would reveal that they were *acting* not through understanding but only from the disposition of their organs. [...] It is for all practical purposes impossible for a machine to have enough different organs to *make it act in all the contingencies of life in the way in which our reason makes us act*. Now in just these two ways we can also know the difference between man and beast. (pp. 139-40, emphasis added)

What I would like to draw attention to here is the centrality of *behaviour*, of acting human, in this passage. Although it is an abstract, internal feature ('reason') that is the absolute difference between the human and the nonhuman, there is no direct access to this feature. Reason is not something which can be made visible. Therefore, in order to ascertain whether these machines (or animals) are 'really men' we must examine their behaviour.

The first sign, that a machine 'could never use words, or put together other signs, as we do in order to declare our thoughts to others', is probably still the most widely accepted criterion of the absolute difference between the human and the animal. I discuss the importance of language in constructing the human/nonhuman boundary in Chapter 3 of this thesis, 'Talking Human'. What I wish to emphasise here is that speaking or using signs to communicate thought is a *behaviour*: an action that must be performed. Even though the existence of internal thoughts is the real, underlying difference, these thoughts cannot be directly accessed. In order to tell the difference, we must look at the act of using words. The second sign that would reveal the machines to be nonhuman is that they would 'inevitably fail' in some tasks, which 'would reveal that they were acting not through understanding but only from the disposition of their organs'. Once again, while the intangible 'understanding' is the actual distinction, it is the behaviour, the failure to perform correctly, which reveals that it is not human. The

importance of behaviour is indicated in the penultimate sentence of the quotation above: that it is ‘for all practical purposes impossible’ for a machine to ‘act in all the contingencies of life in the way in which our reason makes us act’. The repetition of the word ‘act’ here confirms the central importance of behaviour in this influential account of what it means to be human. Our reason ‘makes us act’; therefore, without this internal reason, a machine or animal could not act in the way ‘we’ do.

I would like to keep Descartes’ framework in mind throughout this chapter; according to humanism, in order to know whether or not something *is* human, one must look at what it *does*. Many contemporary humanists explicitly align themselves with this belief. E. O. Wilson, for example, writes: ‘The impressive recent advances by computer scientists in the design of artificial intelligence suggests the following test of humanity: that which behaves like man *is* man’.⁵ However, the belief that ‘human is as human does’⁶ has the potential to challenge humanism by questioning the idea that a core human essence or ‘human nature’ necessarily underlies this ‘doing’. In *Gender Trouble*, Judith Butler writes:

Because there is neither an ‘essence’ that gender expresses or externalises nor an objective ideal to which gender aspires, and because gender is not a fact, the various acts of gender create the idea of gender, and without those acts, there would be no gender at all.⁷

While the external markers of gender are conventionally read as signifiers of an internal essence, Butler argues that these acts themselves constitute gender. Descartes’ influential account of telling the difference between human and nonhuman, as discussed above, relies on behaviour truthfully signifying the presence or absence of an internal human essence. But because this essence is intangible, it is possible that the behaviour in fact ‘create[s] the idea of [the human], and without those acts, there would be no [human]’. Does the essence produce the performance, or does the

performance produce the (illusion of) essence? Any anomalous case, where a person fails to act human, calls the existence of a human essence into question. Therefore, humanism must try to deal with these 'mismatches' by either forcing them to act human, or categorising them as nonhuman.

I am aware that it is not possible to simply take a theory of gender performance and transplant it into a discussion about being human. There are theorists who specifically object to the over-use of Butler's theory, or rather its indiscriminate application to other 'areas of existence'. For example, Geraldine Harris writes:

Both *Gender Trouble* and *Bodies that Matter* sometimes do seem to have been seized upon as representing a single and 'unimpeachable position' which can be transferred across into any and all areas of existence in a fashion that ignores the specificity of the terrain that Butler covers.⁸

To demonstrate that I am not transferring the theory arbitrarily, it is important to show that the terrain under discussion here (namely, the construction of the human through performance) is not merely related to Butler's subject area, but in fact inseparable from it. Many theorists have noted the close association between becoming human and becoming gendered. For example, Harriet Ritvo, in a discussion of hermaphrodites, writes: 'As individuals of apparently mixed sex threatened to unsettle human gender categories, they could also undermine the equally well-defended barrier that separated human beings from the rest of the animate creation'.⁹ According to Ritvo, this is because it was known that hermaphroditism 'occurred routinely in some organisms, but only in plants or in such animals as snails and worms, which seemed very different from people' (p. 173). Because of this, hermaphrodites risked being excluded not only from the categories of 'male' and 'female,' but from the category of the human. Ritvo concludes the discussion by pointing out: 'Not only did their anomalous sex exclude them from the social order, but it made them hard to fit into the order Primates (or

Bimana) and the class Mammalia' (p. 174). The binary division of sex is an essential part of designating someone as human. A hermaphrodite does not only call into question gender categories, but also what Ritvo calls the 'well-defended barrier' between humans and other animals. This echoes Butler's statement in *Gender Trouble* that

the very notion of 'the person' is called into question by the cultural emergence of those 'incoherent' or 'discontinuous' gendered beings who appear to be persons but who fail to conform to the gendered norms of cultural intelligibility by which persons are defined. (p. 23)

That is, we cannot conceive of a human who is not coherently gendered; gender is needed to produce a human subject.¹⁰

Butler herself repeatedly refers to the process of becoming human, for example arguing that 'discrete genders are part of what "humanizes" individuals within contemporary culture' (p. 178). Implicit in this idea that individuals are 'humanized' is the concept that becoming human is a *process*, and a culturally specific process. It is inseparable from the process of becoming gendered; as Butler argues, 'persons only become intelligible through becoming gendered in conformity with recognizable standards of gender intelligibility' (p. 22). In the 1999 Preface to the second edition of *Gender Trouble*, she asks:

What will and will not constitute an intelligible life, and how do presumptions about normative gender and sexuality determine in advance what will qualify as the 'human' and the 'livable'? In other words, how do normative gender presumptions work to delimit the very field of description that we have for the human? (p. xxii)

Once again, this quotation indicates that Butler sees the human as something that must be culturally constructed, and that this construction is inextricably linked with the construction of 'normative gender and sexuality'. In a similar passage, she argues: 'To the extent the gender norms [...] establish what will and will not be intelligibly

human, what will and will not be considered to be “real”, they establish the ontological field in which bodies may be given legitimate expression’ (p. xxiii). As a final example, Butler takes issue with Simone de Beauvoir’s claim that ‘one is not born a woman, but rather *becomes* one’. Butler disputes the existence of a pre-gendered human subject:

Are there ever humans who are not, as it were, always already gendered? The mark of gender appears to ‘qualify’ bodies as human bodies; the moment in which an infant becomes humanized is when the question, ‘is it a boy or girl?’ is answered. Those bodily figures who do not fit into either gender fall outside the human, indeed, constitute the domain of the dehumanized and the abject against which the human itself is constituted. (p. 142)

In short, all of these quotations demonstrate that *Gender Trouble* is permeated by an awareness of the human as a culturally constructed category which is deeply connected with the construction of gender. The process of defining the ‘humanized’ and the ‘domain of the dehumanized’ is an integral concern in *Gender Trouble*. Indeed, I would describe it as an incipiently posthumanist text.¹¹ The category of the human is shown to be a construction, and one which can only be constructed ‘against’ the ‘domain of the dehumanized and the abject’. I suggest that because *Gender Trouble* is primarily concerned with gender and sexuality, and has therefore been categorised as belonging to ‘Gender Studies’, attention has been deflected from this aspect of Butler’s theory.

Butler herself makes the link more explicitly in the introduction to *Bodies that Matter*, in which she writes:

The matrix of gender relations is prior to the emergence of the ‘human’. [...] Indeed, the construction of gender operates through *exclusionary* means, such that the human is not only produced over and against the inhuman, but through a set of foreclosures, radical erasures, that are, strictly speaking, refused the possibility of cultural articulation. Hence, it is not enough to claim that human subjects are constructed, for the construction of the human is a differential operation that produces the more and the less ‘human’, the inhuman, the

humanly unthinkable. These excluded sites come to bound the 'human' as its constitutive outside, and to haunt those boundaries as the persistent possibility of their disruption and rearticulation.¹²

This demonstrates the relevance of Butler's theory to the project of this thesis: to argue that the human is produced as differed-differing animal, or as Butler writes here, that 'the construction of the human is a differential operation', and those 'excluded sites' persistently threaten the stability of its boundaries. Butler herself explores a particular boundary of the human, that of gender, in order to argue that for 'those abjected beings who do not appear properly gendered it is their very humanness that comes into question'.¹³ My project here is to explore the sites inhabited by those who are excluded from the human because of other aspects of their behaviour (rather than gender), and to examine the possibility of the 'disruption and rearticulation' of species boundaries.

However, there is no straightforward equivalence between the production of gender and the production of the human. In the Preface to the 1999 edition of *Gender Trouble*, responding to work that followed its original publication, Butler discusses the question of 'whether or not the theory of performativity can be transposed onto matters of race', and suggests that

race and gender ought not to be treated as simple analogies. I would therefore suggest that the question to ask is not whether the theory of performativity is transposable onto race, but what happens to the theory when it tries to come to grips with race. [...] These categories always work as background for one another, and they often find their most powerful articulation through one another. (p. xvi)

I realise that in applying a theory of the relationship between race and gender to the relationship between gender and the human, I am proposing yet another level of analogy. But I believe that a similar structure applies: becoming gendered and becoming human are not identical processes, and the theory of one cannot simply be

transposed on to the other. However, they are ‘powerfully articulated through one another’ and interact in complex ways. Therefore, the question to ask is: what happens to the theory when it tries to come to grips with being human? What would it mean to consider the human in the way Butler construes gender?

Animals in Human Form: Feral Children and Autism

In Butler’s theory of gender performance, the failure to perform gender correctly is an important clue which signals that the heterosexual matrix is not essential and natural, but a cultural construction. What would it mean to fail to act human correctly? ‘Feral children’ are perhaps the most obvious example. The phrase refers to people who have grown up without normal human interaction, and have therefore not learned language and other cultural customs. Feral children, biologically human but without culture, are mythologically associated with animals. They are given names like ‘wolf-boy’ and ‘bear-girl’, and there are stories of them being brought up by animals; a well-known example is the story of Romulus and Remus, who were suckled by a wolf.¹⁴ A typical representation is this description of Peter the Wild Boy, who was discovered in Germany in 1724:

Always alert and suspicious, he sat on his haunches or waited on all-fours, as would a four-footed animal. Seemingly unused to beds, he rolled back and forth on the straw pallet provided. He did not care for cooked foods but readily ate raw vegetables and grass. He captured birds, dismembered them, and ate the pieces. He showed approval of foodstuffs by beating his chest with his fists.¹⁵

This is a classic list of how not to act human: humans stand upright and not on all fours, they eat cooked rather than raw food, and express approval by speaking rather than by beating their chests. Peter has the body of a human, but he does not act like one: as Michael Newton writes, the many pamphlets published about Peter at the time of his discovery depict him as ‘a human in bestial form, and also as a human-machine,

having a human shape but lacking the essential guarantee of the human: that is, the possession of a soul'.¹⁶ For example, in his 1726 pamphlet *Mere Nature Delineated: or, A Body without a Soul*, Daniel Defoe describes Peter as 'a Thing in human Shape'.¹⁷ The uncertainty over whether feral children should be categorised as human is indicated by Linnaeus' inclusion of *Homo ferus* as a separate sub-species of *Homo* in his *Systema Naturae*, from the tenth edition of 1758 onwards. Giving specific examples of feral children, such as 'Juvenis Ursinus lithuanus' (the Lithuanian bear-child), Linnaeus characterises *Homo ferus* as 'tetrapus, mutus, hirsutus' (four-footed, mute, hairy): all attributes usually descriptive of animals rather than humans.¹⁸

This disjunction between human physical form and animal behaviour is also discussed by Julien Offray de La Mettrie in the 1748 text *Man a Machine*:

Thus nature made us to be lower than animals or at least to exhibit all the more, because of that native inferiority, the wonderful efficacy of education which alone raises us from the level of the animals and lifts us above them. But shall we grant the same distinction to the deaf and to the blind, to imbeciles, madmen, or savages, or to those who have been brought up in the woods with animals; to those who have lost their imagination through melancholia, or in short to all those animals in human form who give evidence of only the rudest instinct?¹⁹

As La Mettrie argues, feral children ('those who have been brought up in the woods with animals') disturb the boundaries of the human. They demonstrate that the features which distinguish humans from animals are not innate, but are learned through 'the wonderful efficacy of education'. Their failure to act human poses the question of what, if anything, differentiates them from other animals. How can a human essence be identified? La Mettrie's question – is someone human if s/he has not experienced 'the wonderful efficacy of education'? – is also asked by Jean-François Lyotard in his introduction to *The Inhuman*:

The institutions which we call culture supplement this native lack. What shall we call human in humans, the initial misery of their childhood, or their capacity to acquire a 'second' nature which, thanks to language, makes them fit to share in communal life, adult consciousness and reason?²⁰

This passage indicates doubts about the meaning of the signifier 'human'. Lyotard points out that each individual must learn to act human in order to become fully human (a concept which is discussed in Chapter 1 of this thesis), but at the same time, the 'initial misery' seems to represent a 'true' or natural humanity, unaltered by culture.²¹

La Mettrie calls feral children 'animals in human form': a persistent concept which suggests that while behaviour may be culturally learned, the physical materiality of the body is fixed, outside culture, and cannot transgress species boundaries. However, this belief in the 'irreducible materiality' of the body, 'posited as prior to the sign', as Butler phrases it, can be problematised.²² Accounts of feral children suggest that even their physical form can alter and become less human-like. Myra Shackley recounts that the 'wolf child' of Hesse, discovered in 1344, could only walk on all fours, 'so his legs were then strapped to boards to "help" him assume normal human posture'.²³ In another example, the Indian 'wolf-girls' Kamala and Amala showed evidence of physical alterations as a result of being 'mothered' by a wolf. The missionary who discovered them and took them in, Reverend J. A. L. Singh, writes:

The jaws also had undergone some sort of change in the chewing of bones and constant biting at the meat attached to the bone. When they moved their jaws in chewing, the upper and lower jawbones appeared to part and close visibly, unlike human jaws [...]. They could see better by night than by day [...]. They had a powerful instinct and could smell meat or anything from a great distance like animals. [...] The nails of the hand and foot were worn on the inside to a concave shape. This was due to scratching the ground with the fingers.²⁴

Even in their physical form, then, Kamala and Amala blur the boundaries between wolf and girl. These examples show that even the body, which is conventionally thought of as being 'naturally human' and outside culture, must be trained to have the correct

form. This suggests that acting human, performing in the correct way, can have such a profound effect that it alters the materiality of the body.

If feral children do not behave like humans and even their physical materiality is not human, what then is it that differentiates them from animals? The traditional answer is that they have the potential to become human. In order to re-establish the boundary between humans and animals, feral children must be taught to act human. This teaching process forms an important part of almost all narratives of feral children.²⁵ Singh describes the process of teaching Kamala and Amala as ‘taming’.²⁶ This teaching was only partially successful. Amala died less than a year after being discovered, but Kamala lived for another nine years, in which time she developed a vocabulary of about thirty sounds, the concept of colour, and a preference for wearing clothes, although she was only partially toilet-trained and ate dead birds or animals that she found.²⁷ Probably the most detailed account of teaching a feral child to act human is Dr Jean-Marc-Gaspard Itard’s *Mémoire sur les premiers développements de Victor de L’Aveyron* (1801) and *Rapport sur les nouveaux développements de Victor de L’Aveyron* (1806), as well as François Truffaut’s 1969 film adaptation, *L’Enfant sauvage*. In attempting to teach Victor to act human, Itard repeatedly punishes him. For example, he withholds water when Victor is ‘burning with thirst’ in order to try to make him ask for it verbally:

In vain, in the moments when his thirst was most ardent, I held in front of him a vase full of water, by crying frequently water, water; by giving the vase to a person who pronounced the same word beside him, and reclaiming it myself by the same means, the unfortunate was tormented in all of his senses, waved his arms around the vase in an almost convulsive manner, made a sort of whistle and did not articulate any sound. It would have been inhumanity to have insisted further.²⁸

This attempt to force Victor to imitate the cries of ‘water, water’ could be seen as an example of ‘the forcible citation of a norm’, as Butler writes, ‘one whose complex historicity is indissociable from relations of discipline, regulation, punishment’.²⁹ In other instances, Itard forces Victor to study for so long that he has fits, strikes him on the fingers with a drumstick for not taking his lessons seriously, and punishes him when he has done nothing wrong in order to test whether he has ‘le sentiment intérieur de la justice’ rather than merely a conditioned response to his punishments.³⁰ Itard’s description of this last experiment as ‘vraiment pénible’ (truly difficult or disturbing), and his reference to the ‘inhumanity’ of withholding water from Victor, show that he finds it distressing to inflict these punishments. This indicates that he is carrying them out not for sadistic reasons, because he feels it is necessary to try and make Victor human. He is being punished for not acting human.

Feral children are intriguing because they highlight the fundamental questions of what makes someone human: as Newton writes, the ‘feral child [is] a key symbolic figure in Enlightenment culture’.³¹ But they are not statistically significant. There are very few indisputably factual instances of feral children: most of the cases are ambiguous, mythological or outright fictional. Furthermore, it could be argued that their failure to act human is just an accidental result of unfortunate circumstances. Indeed, it is in part the contingency of feral children that makes them so fascinating, as it suggests the terrifying possibility that any one of ‘us’ could have failed to become human.

However, the category of feral children overlaps with another category – people with autism – which is, by comparison, a common condition.³² Many accounts of feral children describe features that sound very similar to autism; in fact, Andrew Ward claims that Itard’s *Mémoire sur les premiers développements de Victor de L’Aveyron* is

‘generally considered to be the first documented account of an autistic child’.³³ There is no conclusive answer as to the explanation for this similarity; there is a question as to ‘whether [feral children] became autistic due to being abandoned, or whether they were abandoned because they were autistic’, or whether they were never in fact ‘feral’ at all.³⁴ However, for the purposes of this thesis, I want to concentrate on the representation and treatment of people with autism rather than feral children. This is because, as a far more widespread and empirically important issue, it raises pressing questions about the way that the category of the human is constructed within contemporary culture, and the effects of being excluded from it.

Today, the commonsense view is that while mistakes may have been made in the past, there is now absolute certainty about who is and is not human. However, I do not believe that the boundaries of the human have been fixed, and there are many subtle ways of excluding people who do not perform correctly from the category of the human. This exclusion takes place within our own society and, while not always explicit, is often surprisingly easy to read. For example, the way that autistic people are represented shows that the category of the human is not as fixed and permanent as a commonsense view would have it.³⁵

Autism is a complex neurological condition, or more accurately a spectrum of related syndromes, in which people have difficulties with social interaction and language.

While there is still disagreement over the causes and diagnosis of autism, there is broad consensus about the main symptoms. In children, the early signs are ‘impairments in social interaction, lack of social smile, lack of appropriate facial expression, hypotonia, and poor attention’ followed by ‘ignoring people, preference for aloneness, lack of eye

contact, lack of appropriate gestures, and lack of emotional expression'.³⁶ In adults, depending on the severity of their autism, symptoms can range from complete absence of any language and social interaction, to so-called 'high functioning' autistic people, who are capable of holding jobs and looking after themselves, but whose social and interpersonal behaviour is noticeably unusual. For example, this is an observation of a young autistic man during his sheltered employment placement:

After making a similar sarcastic remark to his supervisor, he turned away without a word indicating the end of the interaction, walked past a colleague brushing shoulders, stopped about ten inches away from a senior adviser's face, and said, without a greeting, and in a loud and mechanical tone of voice, that his computer was 'too slow even for a professor'. He then moved to his open office space, and paced back and forth in front of his computer talking to himself, completely oblivious to the fact that several employees and outsiders were observing him.³⁷

In a less formal tone, Oliver Sacks, describing his visit to see Temple Grandin, the famous autistic Professor of Animal Science, notes: 'She sat me down with little ceremony, no preliminaries, no social niceties, no small talk about my trip or how I liked Colorado. [...] I was feeling somewhat exhausted, hungry, and thirsty [...] and I kept hoping Temple would notice and offer me some coffee. She did not'.³⁸ These passages should give an idea of the sort of specific behaviours of autistic people that are characterised as not acting human.

Autism and the Uncanny

These passages describe how autistic people do not behave in the 'correct' human way, but it is also striking that in many cases, the behaviours described do not endanger or upset the autistic person. A preference for aloneness or failure to offer your guest a coffee may be social *faux pas*, but they are not actually dangerous. However, what emerges from many texts dealing with autism is that it is often non-autistic people who

are disturbed by the condition. They are made uncomfortable, disconcerted, and even angry by the autistic person's failure to interact with them. The word autism comes from this sense of being entirely absorbed in your own self (from the Greek *αυτός*, self).³⁹ In her book *Nobody Nowhere: The Remarkable Autobiography of an Autistic Girl*, Donna Williams states specifically that she did not want to be human: 'I became angry at any need to go to the toilet, to eat, or any call to participate in the family [...]. In short my humanness, my mere physical existence, was my failing'.⁴⁰ Williams describes her childhood dislike of having to interact with people and the echolalic behaviour she developed as a result:

Words were no problem, but other people's expectations for me to respond to them were. This required my understanding what was said, but I was too happy losing myself to want to be dragged back by something as two-dimensional as understanding.

'What do you think you're doing?' came the voice. Knowing I must respond in order to get rid of this annoyance, I would compromise, repeating 'What do you think you're doing?' addressed to no-one in particular.

'Don't repeat everything I say,' scolded the voice. Sensing a need to respond, I'd reply: 'Don't repeat everything I say'. Slap. I had no idea what was expected of me.⁴¹

Although Williams was desperately unhappy for most of her childhood, in the incident described here she does not suffer as a direct result of her autism. She describes herself as 'too happy losing myself to want to be dragged back', but her mother becomes angry at her failure to respond correctly and slaps her. Throughout Williams's autobiography, she recounts stories of the people around her – parents, teachers, friends, boyfriends – who become angry and frustrated when she does not interact with them, and abuse her physically and verbally as a result.

If being human requires being recognised as such by other humans, I suggest that these violent reactions arise, in part, because autistic people do not confirm the human status of those around them. In his 1943 account, in which he coined the term 'autism', Leo

Kanner wrote of an autistic child: 'He never looked up at people's faces. When he had any dealings with persons at all, he treated them, or rather parts of them, as if they were objects'.⁴² Similarly, Niko and Elisabeth Tinbergen write: 'Most children will not even look at the observer's face (this accounts for the statement, often found in the literature, that autists do not interact with you 'as a person')'.⁴³ Many other clinical and personal descriptions of autistic people refer to the discomfort caused by the autistic person's failure or refusal to acknowledge others as human: 'Most of the children looked physically normal – it was their remoteness, their inaccessibility, that were so uncanny'.⁴⁴ The use of the word 'uncanny' here is significant, as it appears frequently in texts about autism. As Ernst Jentsch writes, 'one of the most successful devices for easily creating uncanny effects is to leave the reader in uncertainty whether a particular figure in the story is a human being or an automaton'.⁴⁵ This uncertainty causes the uncanny feeling associated with autistic people and feral children, for example in Reverend Singh's account of his first encounter with Kamala and Amala. He first hears about the girls when a local tribesman tells him 'in great fear about a man-ghost in the jungle close by'.⁴⁶ Singh goes with some villagers to find 'the so-called ghost'. Suddenly, a mother wolf and her two cubs appear out of a hole in the ground:

Close after the cubs came the ghost – a hideous looking being – hand, foot, and body like a human being; but the head was a big ball of something covering the shoulders and the upper portion of the bust, leaving only a sharp contour of the face visible, and it was human. Close at its heels, there came another awful creature exactly like the first, but smaller in size. Their eyes were bright and piercing, unlike human eyes. I at once came to the conclusion that these were human beings.⁴⁷

This passage shows an remarkable uncertainty about whether the 'ghosts' are human or not. On the one hand, Singh says their eyes are 'unlike human eyes,' yet he also says he 'at once came to the conclusion' that they were human; it is not clear why. This

passage gives a vivid sense of the uncanny feeling caused by something that seems partially or ambiguously human.

Missing Persons: Autism and Exclusion from the Human

It seems that the experience of encountering autistic people can be uncanny, and it is followed by an attempt to justify or rationalise this feeling. Ever since autism was first described in the 1940s, autistic people have been depicted as nonhuman. In 2006, the neurologist Vilayanur Ramachandran wrote an article in *New Scientist* reporting on his research into ‘mirror neuron dysfunction’ in autistic children.⁴⁸ It has recently been discovered in experiments on monkeys that these mirror neurons (also known as ‘monkey-see, monkey-do’ neurons) fire not only when a monkey performs an action itself, but also when it sees another monkey perform the same action. In this way, Ramachandran writes, it enables ‘the monkey to put itself in another monkey’s shoes’. He suggests that these mirror neurons are central to the development of the human:

It may even be that the emergence and subsequent sophistication of mirror neurons in hominids played a crucial role in the development of *such essentially human abilities* as empathy, language, learning through imitation rather than trial and error, and perhaps even the rapid transmission of what we call ‘culture’. We were struck by the fact that *it is precisely these properties of mirror neurons that are not functioning in autism.* (emphasis added)

This structure is one that recurs repeatedly in discussions of autism. An attribute, such as the functions of the mirror neurons listed here (empathy, language, culture, and so on), is identified as ‘essentially human’, and it is then stated that autistic people lack this attribute. Logically, this excludes autistic people from the category of the human.⁴⁹ It also demonstrates why it is ethically problematic to try to define exactly ‘what makes us human’.

The way that this structure categorises autistic people as nonhuman is even more overt in Ramachandran's discussion of Steven, a six-year-old autistic boy:

But talk to him and you soon realise that there's a sense in which Steven, the person, simply isn't there. He is incapable of anything remotely resembling the two-way exchange of normal conversation. He refuses to make eye contact, and keeps fidgeting and rocking his body to and fro. All attempts at meaningful communication with him have been, and will be, in vain. [...] [He has] an absence of emotional empathy, and a profound inability to engage in normal conversation. Even more surprising in a species known for its playfulness, he has no sense of play, no 'pretend' games.

Once again, it is Steven's lack of participation in 'two-way exchange' with other people which means that Ramachandran can assert that as a person, he 'simply isn't there'. A sense of frustration is evident from Ramachandran's description here, for example his indecision about whether Steven is *unable* or *unwilling* to interact: he is 'incapable' of conversation, but 'refuses' to make eye contact. In the final sentence, Ramachandran's description of the human species as 'known for its playfulness', followed immediately by the assertion that Steven has 'no sense of play', again has the effect of excluding him from the human species.

This article provoked a letter from Michelle Dawson, head of 'No Autistics Allowed', a Canadian organisation which investigates discrimination against autistic people.

Dawson wrote:

Vilayanur Ramachandran and Lindsay Oberman [...] are not the only researchers who are sure that autistics have no personhood. We are simply not there. They are frantically searching for our missing persons. Other researchers and parent-advocates have gone beyond removing our personhood to declaring us more or less dead. The respected epidemiologist Walter Spitzer has described autistic people as being dead souls in live bodies, and autism as a terminal disease – we just don't know we are dead yet. [...] Does it take electro and magnetoencephalography to discover that interacting or conversing with people who see you as not there, or not having personhood, or in fact being dead, can be difficult, if not impossible?⁵⁰

As Dawson puts it, it is impossible to interact with people who are already treating you as effectively absent or even dead. The mutually reinforcing process of becoming human, in which children learn to behave a certain way and are then accepted as human by others, seems to have failed catastrophically in the medical treatment of autistic people. Because they do not participate in ‘normal conversation’, as Ramachandran phrases it, they are then treated as if they are not human. This treatment further exacerbates the behaviour that initially caused the exclusion. The medical profession has repeatedly portrayed autistic people as nonhuman. The specific form of this nonhuman has varied; autistic people have been represented as inanimate objects, animals, extraterrestrials, and as lacking a theory of mind or participation in culture or other feature that is described as a ‘crucial’ or ‘quintessential’ part of being human. I will now look more closely at the various ways in which autistic people are depicted as nonhuman.

Texts about autism are full of comparisons between autistic people and animals. For example, in his 1997 book *Mindblindness: An Essay on Autism and Theory of Mind*, Simon Baron-Cohen writes:

It is probably impossible to imagine what it is like to be mindblind, in the same way as it impossible to imagine what it is to be a bat. [...] Conversely, it is probably impossible for a mindblind person to imagine what it is like to be a mindreader. In the words of Sperber, ‘attribution of mental states is to humans as echolocation is to the bat’. It is our natural way of understanding the social environment.⁵¹

This suggests that the ‘gulf between mindreaders and the mindblind’,⁵² between non-autistic and autistic people, is as great as the gulf between humans and bats. The first-person plural (‘our natural way’) reinforces the unity of all of ‘us’ (humans) against these ‘mindblind’ alien others. Baron-Cohen then admiringly quotes Nicholas Humphrey’s statement that ‘the best way to characterize humans is as *Homo*

psychologicus'.⁵³ This suggestion again excludes autistic people from the category of the human; by Baron-Cohen's own argument, they may be *sapiens*, but they are not *psychologicus*, so effectively, they are not part of 'our' species.

Autistic people are also identified with animals in the 1983 book '*Autistic*' *Children: New Hope for a Cure*, by Nikolaas and Elisabeth Tinbergen. Nikolaas Tinbergen is best known as a biologist and one of the founders of modern ethology, which is a specific method of studying animal behaviour by focusing on four aspects: function, causation, development and evolution. Towards the end of his career, Tinbergen's interest shifted from animals to children, and he and his wife began to apply his ethological methods to the study of autistic children:

In our studies, started in 1970, we pooled our experiences as a lifelong student of animal behaviour (N.T.) and as a lifelong childwatcher and childminder (E.A.T.) and found that this dual expertise helped us to understand a great deal about autism that the experts in the field have so far been unable to explain.⁵⁴

The comparison of autistic people to animals is quite overt in this text, as Tinbergen is explicitly drawing on his experience of studying animals in order to understand autistic children. For example, in a discussion of his methods he writes:

One of the valuable skills that ethologists have developed – have *had* to develop in their studies of often extremely wary wild animals – is just the one we need when studying autistic children: that of observing without the animal or the child (the 'subject') being aware of the observer's presence. (p. 20)

'The animal' and 'the [autistic] child' are clearly interchangeable here. In addition to methods of observation, the Tinbergens also seek to understand autism by reference to ideas from ethology such as 'adaptedness' and 'motivational conflicts' (p. 35). The book contains many pages of discussion and illustrations of animal behaviour, such as an illustration of an oystercatcher bird hammering open a mussel with its beak (p. 36).

This way of representing and studying autistic children, while it may be effective, also increases the distance between the human observer and ‘the “subject”’.

One of the most significant ways in which autistic children are categorised as nonhuman is the commonly-encountered idea that they do not ‘really’ use language to express themselves, but just mimic as a result of training:

One cannot help getting the impression that the speech-sounds of autists are inadequately rooted in a human inwardness. They appear to us as mere imitation, a mimicry of what careful training by others has added to their corporality.⁵⁵

This definition of autistic people as ‘not really speaking’ excludes them from the category of the human, since spoken language is central to humanist definitions of what it means to be human. The connection of ‘speech-sounds’ with ‘a human inwardness’, for example, is central to Descartes’ account of the difference between humans and animals or machines. The suggestion that autistic people’s speech is merely ‘mimicry’ without ‘a human inwardness’ categorises them with parrots and machines rather than ‘true humans’. This idea that human speech has a true ‘inwardness’, while the speech of parrots and machines is ‘mere imitation [...] added to [...] corporality’, is examined at length in Chapter 3 of this thesis. For the moment, I want to note that this passage categorises autistic people as nonhuman by suggesting that they are ‘not really speaking’.

The quotation in the previous paragraph is taken from the 1971 book *Infantile Autistic Behaviour and Experience: A New Clinical Picture*. This text is a particularly disturbing example of the professional tendency to depict people with autism as nonhuman. It is primarily a case-study of one girl, Mariet, whom the author J. J. G. Prick characterises as an ‘infantile autistic’. Almost every sentence contains a

reference to the ‘fully-human’ or ‘generally-human’ mode of being, which is explicitly opposed to ‘autistic’. For example: ‘In their development autistic children do not attain the level of the fully-human act of seeing, which is the optic encounter, and a fully human mode of existence, realized by means of man’s eyes’ (p. 14). Throughout the book, Mariet is represented as an inanimate object rather than a human subject.

There is no attempt to understand or even speculate about her experience of the world.

In fact, Prick suggests that she does not *have* a subjective experience of the world:

The infantile autistic mode of life is hardly a human existence at all; in fact, it is an undifferentiated, primitive, prepersonal (pathic) mode of life of a human being, in which all the revelations of a personal mode of existence, such as consciousness, mental insight, objective knowledge of persons and objects, creativity, affective and value experience, morality, freedom of choice, a fully-human encounter, voluntary speech, and other manifestations of human language are absent. (p. 18)

In this passage, Prick calls the humanness of Mariet and other ‘infantile autistics’ into question (‘hardly a human existence’) and denies that she is a person (she is ‘prepersonal’). The depiction of Mariet in this text is perhaps more shocking when it becomes evident that the author has known her throughout her life. The book includes several pages of photographs, starting in Mariet’s infancy and progressing to her teenage years, most of which show disconnected parts of her body. The last few photographs concentrate disproportionately on her breasts and genital area, and are accompanied by prurient text commenting on her ‘outsize asymmetrical and very flabby breasts’, her ‘excessive’ pubic hair, and her ‘primitive hetero-erotic behavioural patterns’ (p. 32). There are also similar photographs of Mariet’s mother naked, included on the tenuous basis that some aspects of the condition may be inherited. In sharp contrast to accounts like Oliver Sacks’ *An Anthropologist on Mars*, which try to describe the lived experience of autistic people, this demeaning description presents Mariet (or ‘our patient’) as a series of unconnected body parts and ‘primitive’

behaviours. The text explicitly places her outside the category of the human, describing her as ‘hardly human’, and reduces her to a ‘corporality’ without subjectivity.

Other Minds: Border Figures and the Limits of the Human

This is an extreme example and the overt opposition of ‘human’ to ‘autistic’ seems outdated. However, the idea that people with autism are not fully human is still current, albeit expressed in more subtle ways. This can be seen in *Understanding Other Minds: Perspectives from Developmental Cognitive Neuroscience*, a collection of essays on autism and theory of mind which is a key text in the field. The second edition, published in 2000, reinscribes the attitude of Prick’s 1971 text in constructing autistic people as nonhuman. As well as referring to the general philosophical question of the ‘other minds problem’ (how and whether you can know for certain that other people have internal experiences of their own), the title also refers to understanding minds that work differently from the unmarked norm. Thus, even the title designates autistic people as ‘other’. In the Preface, the editors note the interdisciplinary nature of the subject:

The topic of theory of mind brings together scholars from a range of disciplines, including developmental psychopathology, child psychiatry, cognitive science, neuroscience, primatology, special education, developmental psycholinguistics, and philosophy. (p. vi)

What all of these disciplines have in common is that they all work to establish the borders of the human. Primatology is concerned with the human/animal boundary, developmental psychopathology and child psychiatry with the boundary between normal and pathological human behaviour, cognitive science with the artificial/organic intelligence boundary, and paleoanthropology with the chronological border between

human and pre-human. As discussed in the Introduction to this thesis, these nearly-human border figures are necessary in order to define what the human is: 'I know I am human because I am not *that*'.⁵⁶ But this collection of disciplines also indicates an uncertainty over whose job it is to deal with those who fall in the marginal border areas of the human.

One of the central themes of the collection is the so-called 'theory theory': that is, the hypothesis that autistic people lack theory of mind. This hypothesis is presented in conjunction with the equally insistent claim that theory of mind is an 'essentially human competence'.⁵⁷ For example, in the first essay the editor Simon Baron-Cohen writes: 'a theory of mind remains one of the quintessential abilities that makes us human'.⁵⁸ Similar views are expressed throughout the collection; for instance, Henry Wellman and Kristin Lagattuta begin their essay by stating that 'humans are social creatures',⁵⁹ while Hiram Brownell et. al. claim that 'theory of mind [...] represents a crucial human ability'.⁶⁰ This double-stranded argument, that theory of mind is an essential part of being human, and that autistic people lack theory of mind, effectively excludes autistic people from the category of the human. For example, in 'Do Chimpanzees Use their Gestures to Instruct Each Other?' Daniel J. Povinelli and Daniela O'Neill argue that chimpanzees do not have a theory of mind:

The findings that we have reported here add to a growing body of evidence suggesting that humans may have evolved a psychological specialization in representing other minds. [...] This difference may simply be symptomatic of a much more profound difference between humans and other primates, one connected to an ability to represent *theoretical* causes of both social and psychological events. [...] [This] may be part of a much more fundamental psychological difference between their species and our own.⁶¹

This argument that theory of mind is 'one of the most fundamental cognitive specializations of the human species',⁶² in conjunction with the claim that autistic

people lack theory of mind, situates them on the nonhuman side of the species divide.

A similar argument is made in the essay which appears next in the volume, Steven Mithen's 'Paleoanthropological Perspectives on the Theory of Mind', which argues that theory of mind is 'an essential feature of the modern mind' which distinguishes humans from prehumans.⁶³ Again, the overall effect of this is to exclude autistic people from the human species: this time by suggesting that they are not fully or correctly evolved.

The final essay in the volume is 'Culture and Understanding Other Minds', in which Penelope G. Vinden and Janet Wilde Astington argue that autistic people lack the ability to 'make culture' which 'is grounded in establishing connections among human beings'.⁶⁴ They write:

Making that connection seems to be hard-wired in normal individuals. The Genesis account of creation says it well, as it tells of an instant recognition between two of the species: surely this is flesh of my flesh, and bone of my bone, or, to put it in more modern terms, 'Now here is something I can relate to'. (p. 514)

They go on to argue that because of this lack of mutual recognition, 'the [autistic] child will never truly be a part of the culture' (p. 515). Since they state that 'human beings are first and foremost culture-makers' (p. 514) and then that 'people with autism are in some sense individuals without a culture' (p. 516), they are effectively claiming that autistic people are not fully human. Vinden and Astington then argue that 'autistic individuals are a culture unto themselves' and that they experience a permanent form of 'culture shock', which they compare to a person from the Western world suddenly finding themselves in 'a small village in a Papua New Guinean or Brazilian rainforest' (p. 516). But they then slip from using this as a metaphor or analogy, to actually

suggesting that autistic children might do better in ‘a culture where there is less diversity’:

An environment where everyone dresses in grass skirts and bark breech clothes, where every day the main meal consists of taro and squash and greens cooked in a bamboo tube, where daily activities are limited to hunting or gardening – in such an environment the autistic child might find less conflict and more security. (p. 516)

In this essay, the non-Westerner functions as a liminal figure which marks the border of the human. The ‘lack of diversity’ of rainforest cultures (itself a problematic claim) is likened to autistic people’s preference for repetitive behaviours and fear of change. Vinden and Astington’s essay differs from others in the volume in that they see ‘culture-making’ rather than theory of mind as the *sine qua non* of being human. However, structurally it has the same effect of placing autistic people outside the category of the human.

The Violence of Species Norms: Punishment of Autistic People

I have shown how autistic people are represented as nonhuman; I now want to look at what happens as a result of this representation. What happens to those who do not act human correctly? What are the real effects of being excluded from the category of the human? In the 1999 Preface to *Gender Trouble*, Judith Butler refers to ‘the violence of gender norms’ (p. xix). She makes it clear that this is not only metaphysical violence, but often a very physical one. She cites examples from her own experience:

An uncle incarcerated for his anatomically anomalous body, deprived of family and friends, living out his days in an ‘institute’ in the Kansas prairies; gay cousins forced to leave their homes because of their sexuality, real and imagined; my own tempestuous coming out at the age of 16; and a subsequent adult landscape of lost jobs, lovers, and homes. (p. xix)

As I will argue, these forms of punishment, such as institutionalisation and alienation, are also common experiences for people with autism. Butler argues that ‘we regularly

punish those who fail to do their gender right' (p. 178). Similarly, autistic people are regularly punished for failing to do their humanness right, but unlike homophobic attacks, this is still generally seen as acceptable. Following Butler, I describe this treatment as the violence of human or species norms.

The enforcement of species norms is evident in the story of Temple Grandin's squeeze machine. Grandin is a well-known person with autism, who has articulated her experiences in a number of books, articles, and interviews. She loves the sensation of being hugged, but finds it too frightening to have another person in such close proximity. So she designed and built a 'squeeze machine': a large mechanical wooden box with padded cushions on the inside, which gives her the physical sensation of a hug without feeling threatened. She describes it as making her feel 'relaxed and calm', and also giving her 'feelings of kindness and gentleness toward other people'.⁶⁵

Grandin used her creativity, intelligence and technical skill to invent a novel solution for her emotional difficulties. It enables her to function as a self-supporting adult, not as a patient or victim. But humans are supposed to seek comfort from other human beings, not from machines. Furthermore, she 'failed' to be either ashamed or boastful about it: 'she neither exhibited nor concealed [it] but kept [it] openly in her room at college'.⁶⁶ Oliver Sacks recounts that Grandin's machine 'excited derision and suspicion and was seen by psychiatrists as a "regression" or "fixation" – something that needed to be psychoanalysed and resolved'.⁶⁷ Grandin was not unhappy, but she was not acting human correctly, and because of this, she was subjected to 'derision and suspicion' while her squeeze machine was considered to be something pathological that needed to be 'resolved'.

As Grandin's story demonstrates, psychiatrists are key figures in policing the boundaries of the human and enforcing human norms, even at the expense of the 'calmness and security' of their patients. Psychology books and articles about autism often contain long lists and discussions of test results, but rarely make reference to the effect of undergoing what they themselves describe as 'batteries' of tests. Some autistic people, such as those who have an older sibling who is autistic, are 'in the system' from just a few months old and spend much of their lives subject to tests, experiments, enforced psychiatric treatment, and institutionalisation. In recent years, there has been growing resistance among autistic people in response to these exercises of power. This resistance has been described as the autistic liberation movement: an umbrella term for a growing number of autistic people who object to the kind of treatments or punishments outlined above.⁶⁸ The people involved in the autistic liberation movement connect their own struggle to other campaigns such as civil rights, gay rights, and feminism, which sought 'to broaden the category of the human to include previously abjected and excluded others'.⁶⁹ Just as institutionalised mistreatment by families and professionals (described by Butler, above) produced the gay rights movement, the autistic liberation movement has a similar impetus, in that all or most of the autistic people involved have had personal experience of abuse or incarceration as a result of their autism.⁷⁰ They oppose the idea of 'curing' autism, and argue that they are punished not for their own well-being, but because non-autistic people find their behaviour disturbing.

One result of the autistic liberation movement is a growing body of texts in which autistic people tell their own stories, such as Donna Williams' autobiography *Nobody Nowhere*, discussed above, in which Williams recounts many incidents of violence

inflicted on her by her parents, boyfriends, and others around her.⁷¹ Many essays by autistic people have been assembled online in the *Autism Information Library* on *Autistics.org: The Real Voice of Autism*. This website, an important resource for the autistic liberation movement, is run ‘by and for autistics’ and one of its key aims is to allow autistic people to speak for and represent themselves. For example, here they describe the reasoning behind their slogan:

The Autism Society of America, an organization composed almost entirely of non-autistic people and controlled entirely by non-autistic people, which performs few if any useful functions for autistic people, and which on numerous occasions has advocated against the best interests of autistic people, has started to call itself ‘The Voice of Autism’. In our judgment, such hubris demands a response. So we’ve changed our tagline to ‘The Real Voice of Autism’.⁷²

The *Autism Information Library* is a growing collection of writings by autistic people (currently comprising around fifty articles), such as Amanda Baggs’ essay ‘This Is What your “Treatments” Do to Us’. Describing the effect of enforced psychiatric treatment, Baggs writes about her feelings of ‘trappedness’ and the sense that there is

no way out of hearing these scary people saying they want to cure us or drug us or kill us or lock us up whatever else they want to do with us, no way of changing anything because I’m stuck here until I die.⁷³

Texts such as this confirm that encounters with the psychiatric profession are frequently experienced as punitive by autistic people. The punishment of autistic people for failing to conform to species norms often spills into real physical violence. The widespread acceptance of violence towards autistic people is indicated in this passage:

My parents always presupposed that I was ‘broken’ and needed to be ‘fixed’ – I think it simply never occurred to them that being different was not the same thing as being bad. [...] [The counsellors] didn’t even bat an eyelash when I described, in session, how my parents treated me. Even when I told them about my father picking me up bodily off the floor, flinging me across the room, slamming me into a wall, and screaming profanity at me – all for the horrid, horrid, crime of stimming – the counsel[l]ors didn’t even blink.⁷⁴

This anonymous essay indicates that not only families but even professionals may accept extreme violence towards autistic people to punish them for not acting human in the right way: another instance of ‘the forcible citation of a norm’.⁷⁵

These punishments are often intended to force the autistic person to conform to species norms: to ‘learn to ape human behaviour’, as one autistic family put it.⁷⁶ The possibility of deliberately and consciously learning to act human is explored in an anonymous 2003 essay entitled ‘Faking NT vs. Being Yourself’, which argues that this performance is both ‘exhausting and depressing’ and bound to fail, since ‘no act is ever perfect, especially not when you’re exhausted from having to do it for most of your waking life’.⁷⁷ The author argues that it is not worth the immense effort of consciously acting human ‘just so the NTs [‘neurologically typical’ or non-autistic people] don’t have to be uncomfortable with seeing me talk to myself, or drum my fingers on the back of my head, or perseverate on topics that they find boring or weird’. In fact, the author writes that s/he has been driven to the brink of suicide by attempting to ‘pass’ as neurologically typical. In *Gender Trouble*, Butler asks: ‘How must we rethink the ideal morphological constraints upon the human such that those who fail to approximate the norm are not condemned to a death within life?’ (p. xx). Many of the autistic people quoted here feel that they have been ‘condemned to a death within life’ because their body does not conform to the correct patterns of human behaviour; because they drum their fingers on their head, or ‘stim’, they ‘fail to approximate the norm’. The bodies of autistic people are regarded as incoherent, and their physical movements as frightening and ‘unintelligible’ (p. xxiii). There is clearly a pressing ethical need to rethink the ‘constraints upon the human’ in order to improve the way that autistic people are treated.

Autism, Ethics and Power: Re-evaluating the Human

Autistic liberation activists demand that the category of the human be enlarged or altered to include autistic people; for example, on *Neurodiversity.org* Kathleen Seidel argues that ‘autism is as much a part of humanity as is the capacity to dream’.⁷⁸ However, while this is no doubt politically and pragmatically necessary, it is also problematic because it retains the term ‘human’ and means that power still rests with those who decide who is allowed into this privileged category, since the goal is to have autism accepted as ‘part of humanity’. This has also been noted by Cary Wolfe in relation to Disability Studies. He writes:

But a fundamental problem with the liberal humanist model [is] [...] that in its very attempt to recognize the unique difference and specific ethical value of the other, it reinstates the very normative model of subjectivity that it insists is the problem in the first place.⁷⁹

If the autistic liberation movement thus inadvertently ‘reinstates’ the ‘normative model of subjectivity’, an alternative or supplementary strategy is to reconfigure the relationship between autism and the human, so that the human is not automatically considered superior.

An example of this ‘new and more inclusive form of ethical pluralism’, as Wolfe phrases it,⁸⁰ is the way that Temple Grandin has reappropriated the identification of autistic people with animals. Instead of protesting about this association and thereby implying that both animals and autistic people are inferior to neurologically typical humans, she uses it to argue that her autism gives her a privileged insight into animal behaviour. In her 2005 book *Animals in Translation: Using the Mysteries of Autism to Decode Animal Behaviour* (co-authored with Catherine Johnson), Grandin writes:

Autistic people can think the way animals think. Of course, we also think the way people think – we aren't *that* different from normal humans. Autism is a kind of way station on the road from animals to humans, which puts autistic people like me in a perfect position to translate 'animal talk' into English. I can tell people why their animals are doing the things they do. (pp. 6-7)

Grandin re-evaluates the relationships between animals, 'normal humans', and autistic people, such that the 'normal human' is no longer the privileged site of power and knowledge. Rather than being disabled by her autism, she has used her abilities to pursue a very successful career. In addition to her academic work, she is employed by many major companies to design and audit slaughterhouses and other equipment for meat-packing plants. Grandin specialises in solving problems which arise when animals panic or refuse to move in certain locations. In *Animals in Translation*, she argues that her autism enables her to do this job better than a non-autistic person:

It took me fifteen years to figure out that other people actually *couldn't* see what the problem was, at least not without a lot of training and practice. They couldn't see it because they weren't visually oriented the way animals and autistic people are. I always find it kind of funny that normal people are always saying autistic children 'live in their own little world'. [...] There's a great big, beautiful world out there that a lot of normal folks are just barely taking in. It's like dogs hearing a whole register of sound we can't. Autistic people and animals are *seeing* a whole register of the visual world normal people can't, or don't. (p. 24)

Here, Grandin's autism enables her to examine and critique the 'normal' human from the outside. This means that 'human' is no longer the privileged, unmarked centre.

Another way in which autistic people can reappropriate their exclusion from the category of the human is to use this perspective to comment on 'normal' human culture from the outside. For example, several autistic people compare themselves to extraterrestrials (one of the most extreme ways in which autistic people are depicted as nonhuman). This can be negative, for example the autistic family described by Oliver Sacks who identify with the character Data from *Star Trek*: an android who, in Sacks'

words, 'longs, above all, to *be* human'.⁸¹ This longing is understandable, since to be human is to be part of the dominant, powerful group. However, this identification with extraterrestrials can also be used to empower the autistic person. Sacks' book title *An Anthropologist on Mars* derives from a comment made by Temple Grandin: '[she] was stumped by more complex emotions and the games people play. "Much of the time," she said, "I feel like an anthropologist on Mars"'.⁸² Although this partly represents Grandin as lacking, since she is 'stumped' by some human behaviour, being an anthropologist is also a position with unique insight and power. The anthropologist is traditionally an outsider who does not understand all of the customs and rituals of the tribe, but who is nevertheless in a position of power precisely because s/he can bring comparative knowledge from another place and can view the tribe from an external position. And the anthropologist is the person who has the ultimate privilege of writing an account of the tribe from his or her own viewpoint. Indeed, in the case of being 'an anthropologist on Mars', Grandin represents herself as the intrepid space traveller, and 'normal' humans are the Martians. Jim Sinclair, an autistic man, describes his experience in a similar way:

Each of us [autistic people] who does learn to talk to you, each of us who manages to function at all in your society, each of us who manages to reach out and make a connection with you, is operating in alien territory, making contact with alien beings. We spend our entire lives doing this. And then you tell us that we can't relate.⁸³

Sinclair here represents autistic people as the travellers who have the ability and determination to communicate with an alien culture and learn alien customs: for example, how to recognise emotions from facial expressions.⁸⁴

This ability to view 'normal' human culture from the outside can also be expressed through satire. For example, The Institute for the Study of the Neurologically Typical,

on the *Autistics.org* website, satirises the way that autistic people are exploited and categorised as inferior. The autistic creator of the site writes:

Neurotypical syndrome is a neurobiological disorder characterized by preoccupation with social concerns, delusions of superiority, and obsession with conformity. [...] When in groups NTs are socially and behaviorally rigid, and frequently insist upon the performance of dysfunctional, destructive, and even impossible rituals as a way of maintaining group identity.⁸⁵

This passage describes the group behaviour of ‘neurologically typical’ humans as a ‘performance’ of ‘rituals’. Writing from a position of exclusion, the author views ‘normal’ human interaction as an artificial act. This again challenges the traditional power relations between non-autistic and autistic people by placing the autistic person in the position of observing subject, and the ‘NTs’ as the object of their scrutiny: a direct reversal of the traditional relationship. These texts are examples of ways in which the category of the human can be revalued, and they demonstrate that exclusion from that category can be used to challenge the dominant assumptions of humanism. The fact that it is possible to ‘fake NT’ or to ‘make contact with alien beings’ shows that acting human is something that can be learned. Like gender performance, while it is for most people a primarily unconscious performance, it can also be performed consciously and purposefully, as in cross-dressing or drag.

Human Drag

In *Gender Trouble*, Butler argues that while drag can reinforce stereotyped gender roles, it also has the potential to subvert the idea of natural genders: ‘In imitating gender, drag implicitly reveals the imitative structure of gender itself’ (p. 175). This is because ‘gender parody reveals that the original identity after which gender fashions itself is an imitation without an origin’ (p. 175). If a man can perform femininity, the act does not require a female essence, so there is no reason to believe that a woman’s

femininity is a manifestation of core gender identity. If external acts are not necessarily the effect of an internal essence, this essence does not need to exist at all.

As Joan Riviere writes:

The reader may now ask how I define womanliness or where I draw the line between genuine womanliness and the 'masquerade'. My suggestion is not, however, that there is any such difference; whether radical or superficial, they are the same thing.⁸⁶

Riviere breaks down the binary opposition between 'genuine' and 'fake' womanliness, between 'radical' and 'superficial' gendered acts. What could constitute an equivalent practice in the constitution of the human? What would it mean to do 'human drag'?

I have already discussed the practice of autistic people consciously learning and performing 'normal' human behaviour. But it is not only people who can act human. In contemporary culture and media, there are many examples of animals literally dressed up as humans, such as the chimpanzees from the PG Tips advertisements, William Wegman's photographs of dogs posing as film stars, and the astonishingly popular pet clothing industry, to name but a few. These animals are performing a very literal type of 'human drag'. They are cross-dressing across species rather than gender lines, but as Marjorie Garber has argued, cross-dressing has an 'extraordinary power [...] to disrupt, expose and challenge' binary oppositions in general by producing a 'category crisis':

By 'category crisis' I mean a failure of definitional distinction, a borderline that becomes permeable, that permits of border crossings from one (apparently distinct) category to another: black/white, Jew/Christian, noble/bourgeois, master/servant, master/slave.⁸⁷

I find Garber's analysis very convincing, but it is notable that human/animal or human/nonhuman does not appear in this, or in any of the other lists of binary

oppositions in *Vested Interests*. Indeed, interspecies cross-dressing is one of the few types of transvestism that Garber does not explicitly discuss in her book.⁸⁸

However, the figure of the animal repeatedly appears in the text at odd moments.

Right at the beginning, in the Acknowledgements, Garber thanks the Chair of the Harvard Department of Anthropology for his account of ‘his own transvestic adventures among the baboons, whose preference for female human company led him on at least one occasion to cross-dress in the hopes of fooling them into amiability.

(They were not deceived)’ (p. xi). There are no further details of this intriguing story.

Elsewhere she uses the metaphor of ‘a dog walking on its hind legs’ to represent the idea of cross-dressing as ‘a stunt or a trick’, in opposition to a more institutionalised and meaningful practice of transvestism (pp. 37-38). During a discussion of butch-femme lesbian couples imitating heterosexual norms, she refers to ‘the aping of heterosexual roles’, and in the same paragraph she cites two instances of women who were mocked for wearing men’s clothes by being called ‘it’ rather than ‘he’ or ‘she’:

“‘It’” is the word that stings, the third category, dehumanized and dehumanizing’ (p.

148). In this passage, the uncertainty over gender leads to a ‘dehumanization’. This is tantalisingly close to Butler’s argument that the construction of a coherent human subject depends upon the construction of an unambiguous gender. However, Garber does not take it any further.

Indeed, she seems determined to avoid discussing the human/animal boundary, even when it is overtly present. In Chapter 7, ‘Fear of Flying, or Why Is Peter Pan a Woman?’, Garber analyses the J. M. Barrie story *Little White Bird*, in which the character of Peter Pan appears in print for the first time. In the story, Peter is

diagnosed by ‘the wise old bird, Solomon Caw’ as ‘suffering from a kind of species dysphoria’, as Garber puts it (p. 174). Caw, who is a crow, tells Peter that he will be neither ‘exactly a human’ nor ‘exactly a bird’, but rather, ‘a Betwixt-and-Between’.⁸⁹

For Garber, this ‘species dysphoria’ is simply an allegory for gender dysphoria:

‘A Betwixt-and-Between’. This is the ‘third sex’ in yet another guise, transparently displaced onto the antithesis between bird and human, but representing as well the dichotomies that both consciously and unconsciously obsess Barrie and his works. Man/woman, father/mother, man/boy. (p. 175)

I am not convinced, as Garber is, that the species dichotomy is nothing more than a metaphor for these other oppositions, or a transparent displacement of Barrie’s ‘obsessions’ about gender, age, and sexuality. The ‘dichotomies’ she mentions are indeed present in *Little White Bird*, but so is the human/animal dichotomy, the blurring of which runs through the story. The protagonist’s dog, Porthos, is one of the main characters and is described as being uncannily like a human being: ‘He has even been to the club, where he waddles up the stairs so exactly like some respected member that he makes everybody most uncomfortable’ (p. 38). Porthos repeatedly stands in for the protagonist’s imaginary son Timothy, whom he has invented to explain why he buys children’s toys. When people ask awkward questions about Timothy’s development, he answers with his dog in mind:

It is well that dogs and little boys have so much in common, for it was really of Porthos I told him; how he slept (peacefully), how he woke up (supposed to be subject to dreams), how he fell off again (with one little hand on his nose), but I glided past what we put in his bath (carbolic and a mop). (p. 44)

In fact an entire chapter of the book, ‘David and Porthos Compared’, is devoted to a detailed comparison of boy and dog. The characterisation of Porthos alone is full of fascinating cross-species moments.

There is another, even stranger, human/animal transgression in *Little White Bird*, which is the idea that all children begin their lives as birds: ‘They came out of the eggs daily [...]; then off they soon flew to be humans, and other birds came out of other eggs; and so it went on for ever’ (p. 104). The transformation from bird to human is not instantaneous. It takes time for babies to realise it and to settle into their new species ‘for, having been birds before they were human, they are naturally a little wild during the first few weeks, and very itchy at the shoulders, where their wings used to be’ (p. 100). However, Peter managed to fly out of the nursery window when he was only a week old. This is why he will never grow any older, and why he can fly: ‘The reason is that he escaped from being a human when he was seven days old; he escaped by the window and flew back to the Kensington Gardens’ (p. 99). When Peter flies back to the park, he does not realise that he is human, and is confused by the way that all the birds and fairies in the park run away from him and treat him as an enemy: ‘Peter heard the little people crying everywhere that there was a human in the Gardens after Lock-out Time, but he never thought for a moment that he was the human’ (p. 102). It is in this context that the conversation takes place between Solomon Caw and Peter Pan, as recounted by Garber. Caw forces Peter to look at his own body, to recognise – to his horror – that it is a human body and not a bird’s: “‘Ruffle your feathers,” said that grim old Solomon, and Peter tried most desperately hard to ruffle his feathers, but he had none’ (p. 103). When Garber analyses this scene, she reads ‘through’ the discourse of species (to use Cary Wolfe’s term)⁹⁰ in order to read into it her account of Barrie’s sexual desires. However, as I have argued, the discourse of species in *Little White Bird* is complex and fascinating in itself. It suggests that each child must undergo a process of becoming human: indeed, must learn to realise that it

is human. Peter never becomes fully human, but remains a 'poor little half-and-half' (p. 103).

In the concluding chapter of *Vested Interests*, Garber turns to the figure of the wolf, especially in relation to Freud's case history of the Wolf-Man and the fairy tales *Little Red Riding Hood* and *The Wolf and the Seven Little Goats*. In both of these tales, the wolf cross-dresses, in one case as Little Red Riding Hood's grandmother, and in the other as the mother of the seven little goats. Garber's main argument is that instead of reading the cross-dressing in these stories as representative of something else, such as feminism, female sexuality, becoming an adult, desire versus control, or civilisation versus wilderness, people should consider it on its own account, as cross-dressing. She argues:

I began this book by noting how frequently the phenomenon of cross-dressing, or transvestism, is looked *through* rather than *at* in critical and cultural analyses – how often, indeed how insistently, cultural observers have tried to make it mean something, anything, other than itself. (p. 389)

Although I agree with Garber, what she says here about transvestism also applies to her own text when it comes to looking at animals, and at cross-species cross-dressing. In her reading of *Little White Bird* she considers the species discourse to be a transparent displacement of obsessions with gender and sexuality.

Similarly, in her analysis of the fairy tales and the figure of the wolf, she looks '*through* rather than *at*' the animal figures and the destabilising of the species boundaries. For example, Freud traces the wolf phobia of his patient to illustrations from the two fairy tales mentioned above. Garber criticises Freud for failing to notice or consider as significant the gender-transgression of the wolves in both the stories: 'what he does not point out is that in both stories the wolf is a (grand)mother as well as

a father-substitute, and that in both he is masquerading as a woman' (p. 385).

However, to turn the argument back on itself, what *Garber* does not point out is that in both the stories the wolf masquerades as a different *species* as well as a different gender. In *Little Red Riding Hood*, the male wolf disguises himself as a female human, and in *The Wolf and the Seven Little Goats*, as a female goat. This is a classic example of the way that performing as human and performing as a particular gender are 'powerfully articulated through one another', to paraphrase Butler.⁹¹ In another aside, Garber notes that Freud 'holds up the possibility that the boy had seen copulation between animals (sheep-dogs standing in for wolves), and then transferred this new understanding onto the puzzle of parents in bed together' (p. 388). Once again, there is cross-species slippage between animal and human, and between dogs and wolves; even the 'sheep-dog' is a hybrid term, like wolf-man. But by claiming that the species transgression must be a 'displacement' of something else, it seems that Garber is making it 'mean something, anything, other than itself' (p. 389). This seems to close down the possibilities, whereas by reading the way that both gender *and* species are represented in these stories, one can gain a more nuanced understanding of their interplay.

Of course, animals are very frequently used in the way that Garber reads the wolf here, as symbols for aspects of human behaviour. This is one type of 'thinking with animals', as described by Lorraine Daston and Gregg Mitman in their introduction to *Thinking with Animals: New Perspectives on Anthropomorphism*: that humans use animals 'to think with' as you might use fingers 'to count with'. Humans 'recruit animals to symbolize, dramatize, and illuminate aspects of their own experience'.⁹²

The other meaning is thinking together with animals, in the sense of sharing 'a

community of thought and feeling'. I want to look *at*, rather than through, cross-species performances: to read them as examples of the discourse of species, not as allegories or symbols. Daston and Mitman identify two axes of anthropomorphism, which they categorise as *anthropos*: 'the performance of being human by animals and being animal by humans' and *morphos*: 'the transformative processes that make thinking with animals possible'.⁹³ I would argue that the very possibility of these performances and transformations disrupts the idea of a human essence. Just as Riviere argues that there is no difference between 'genuine womanliness and the "masquerade"', animals who act human cast doubt on the naturalness of people who do the same thing. The fact that a nonhuman is able to perform 'human' acts means that the behaviour is not necessarily an external indicator of an internal human essence. The certainty of Descartes' test is threatened if behaviour does not have to correspond to core identity. Therefore, from a humanist perspective, cross-species performances are dangerous, and must be categorised as false: as anthropomorphism.

A Brief History of Anti-anthropomorphism

Anthropomorphism has been a pejorative term for a long time, but in recent years this has begun to change. In 1992 John S. Kennedy, an old-fashioned behaviourist, wrote *The New Anthropomorphism*, a scathing attack on what he saw as a dangerous resurgence of anthropomorphism within scientific writing. Kennedy's book provoked responses from diverse subject areas, the range of which can be seen in collections such as *Anthropomorphism, Anecdotes, and Animals*, and Daston and Mitman's *Thinking with Animals*.⁹⁴ There are endless arguments about whether anthropomorphism is an unjustifiable contamination of scientific truth, or can play a valid part in understanding the world. However, the relationship of this debate to

humanism is not straightforward. Anthropomorphism can reinforce humanism by being anthropocentric, if it sees all other animals merely as versions or reflections of the human.⁹⁵ However, it can also challenge humanism by recognising shared characteristics between humans and other animals and challenging the borders that separate them.

The word anthropomorphism did not appear in English until the mid-eighteenth century, and did not originally refer to animals, but to gods.⁹⁶ The *Oxford English Dictionary* defines it as ‘ascription of a human form and attributes to the Deity’, with a more general ‘ascription of a human attribute or personality to anything impersonal or irrational’ as a secondary definition.⁹⁷ But this footnote in Wolfgang Köhler’s *The Mentality of Apes* reveals that it was in common use in reference to animals by the 1920s:

The term ‘measuring’ is no ‘anthropomorphism’. At any time it may be observed that a chimpanzee, before making a wide jump at a considerable height, looks carefully to and fro across the intervening space. As an arboreal animal with immense range of spring and the need to use it, he *must* be able to measure distances. It would be quite unjustifiable to object to the use of the term ‘measuring’ in this connexion.⁹⁸

Since Köhler is here pre-emptively defending himself against accusations of anthropomorphism, it is clear that it was already being used pejoratively. This text was written at a time when the new science of behaviourism, or behavioural psychology, was at its peak. One of the key aspects of behaviourism was a rejection of the animal studies of the nineteenth century, such as Darwin’s, which tended to include anecdotal evidence and anthropomorphic descriptions: for example attributing emotional states to dogs.⁹⁹ The rejection of anthropomorphism can be traced back to 1894 when C. Lloyd Morgan wrote: ‘In no case may we interpret an action as the outcome of an exercise of a high psychological faculty, if it can be interpreted as the outcome of the exercise of one

which stands lower in the psychological scale'.¹⁰⁰ Morgan's Canon, as it is known, marks a change from nineteenth-century anthropomorphism to twentieth-century behaviourism.¹⁰¹

A seminal behaviourist text is John B. Watson's *Behavior: An Introduction to Comparative Psychology*, first published in 1914, in which he argues for a new practice of psychology that would avoid the complex metaphysical arguments entailed by considering factors such as consciousness and intention. The aim of behaviourism was to analyse all animals, including humans, only on the basis of empirically observable actions:

Psychology as the behaviorist views it is a purely objective experimental branch of natural science. [...] The behaviorist attempts to get a unitary scheme of animal response. He recognizes no dividing line between man and brute. The behavior of man, with all of its refinement and complexity, forms only a part of his total field of investigation.¹⁰²

As can be seen from this passage, behaviourism initially discarded assumptions of human superiority. In *Behavior*, Watson exhorts behaviourists to follow the example of post-Darwinian zoologists and reject anthropocentrism: 'The moment zoology undertook the experimental study of evolution and descent, the situation immediately changed. Man ceased to be the center of reference' (p. 5). Thus, as originally conceived, behaviourism treated humans as one animal among many others, whose behaviour should be analysed without referring to internal mental states. As Elizabeth Knoll writes, 'Morgan's Canon is a double-edged sword [...]: if we cannot anthropomorphize the animals, we cannot anthropomorphize ourselves either'.¹⁰³

This line of thought, which considers humans in terms of their behaviour and without reference to a soul or mind, can be traced back to La Mettrie's eighteenth-century text

Man a Machine. Unlike Descartes, La Mettrie does not consider that humans have an intangible quality that makes them absolutely distinct from other animals; rather, as the title indicates, he argues that ‘the human body is a machine which winds its own springs’ (p. 93). Influenced by the clockwork machines and new discoveries in anatomy of the eighteenth century, La Mettrie asks: ‘How can human nature be known, if we may not derive any light from an exact comparison of the structure of man and of animals?’ (p. 98). This view of ‘human nature’ leads La Mettrie to reject the idea of an absolute difference between humans and other animals. He writes:

For it is this, this strong analogy, which forces all scholars and wise judges to confess that these proud and vain beings, more distinguished by their pride than by the name of men however much they may wish to exalt themselves, are at bottom only animals and machines which, though upright, go on all fours. (p. 143)

Whereas for Descartes, acting human invariably follows from being human, La Mettrie shares with the behaviourists an emphasis on the external ‘structure’ and behaviour of humans and animals, rather than intangible aspects such as consciousness and reason.

However, as behaviourism developed, writers became increasingly desperate to avoid the dreaded accusation of anthropomorphism. In *The Singing Gorilla: Understanding Animal Intelligence*, George Page explains the extent to which behaviourists went to avoid ‘anthropomorphic pitfalls’:

They wouldn’t use a phrase like ‘the dog threatened the cat’ because the term ‘threaten’ anthropomorphically implies some kind of mental state (some intention or purpose) on the part of the animal. They might not even have said the dog ‘raised its right leg’, because this innocuous verb implies the intention to do so. It would be safer to put the phrase in the passive voice: ‘the right leg is raised’ or ‘the right leg goes up’.¹⁰⁴

Whereas Watson’s original formulation meant that the animal’s potential internal state was unknowable to the human observer, his followers ended up denying that an animal could have any internal life at all. Like Descartes’ view that there would be no way of

telling the difference between an ‘animal that lacks reason’ and a machine that exactly resembled it in ‘organs and outward shape’, animals are seen as machines who act in a particular way without any internal reason or knowledge. In its extreme form, anti-anthropomorphism extends to claiming that animals have absolutely no internal life whatsoever and that they do not even feel pain.¹⁰⁵

While behaviourism may theoretically also assume this to be true of humans, the fact that all behaviourists are humans who experience their own internal lives tends to create the idea that qualities such as consciousness, intelligence and emotion ‘belong’ exclusively to the human. To suggest that any other animal has them is to be anthropomorphic. For example, here is a critical review by Thomas Sebeok of John C. Lilly’s 1961 book *Man and Dolphin*:

Lilly’s anthropomorphic imagination is given physical force: ‘Man’ is printed in roman type, ‘*and Dolphin*’ contrastively in italics. His work is imbued with what Ruskin called the ‘pathetic fallacy’, the rhetorical device which humanizes animals or which, applied downward, projects man into the nonhuman world. The author himself is well aware of this but his metaphoric intuition proves stronger than his scientific discipline.¹⁰⁶

Sebeok’s description of the pathetic fallacy as being ‘applied *downward*’ suggests that he subscribes to a hierarchical view of the animal world in which humans occupy the highest position, and to argue that any other animal shares certain qualities with ‘us’ is to commit the ‘pathetic fallacy’. In fact, far from being anthropomorphic, Lilly’s point is that dolphins are *not* like humans; he argues that ‘we must strip ourselves, as far as possible, of our preconceptions about the relative place of Homo Sapiens in the scheme of nature’.¹⁰⁷ For Lilly, humans do not have an unmarked, objective view of the world, but rather are situated within that world in a specific way: for example, being bipedal and living on dry land. Explicitly placing his work in the anti-anthropocentric tradition of Copernicus, Darwin and Freud, he argues that ‘man must once more remove himself

from the centre of the universe' (p. 94). He argues repeatedly against anthropomorphism:

We cannot and should not endow this animal with *human* purposes and *human* ideals. We should not attribute to him kinds of knowledge that belong to human experience and tradition but not to dolphin experience and tradition. It would certainly be a mistake to 'put a man' in the dolphin's brain. (pp. 92-93)

It is therefore inaccurate to describe his work as 'anthropomorphic' since he specifically argues against changing dolphins into a human 'shape'. It seems that his work is dismissed as anthropomorphic simply because he considers the possibility that dolphins may have intelligence and traditions that are outside human knowledge. To consider that these properties 'belong' exclusively to the human is itself anthropocentric.¹⁰⁸

Seductive Pollution

A similarly strong condemnation of anthropomorphism runs through Kennedy's *The New Anthropomorphism*. Kennedy depicts anthropomorphism as a kind of virus, against which we can be 'inoculated'.¹⁰⁹ He describes it as a 'disease' and a 'malady' (p. 160), and argues that 'we can be confident that anthropomorphism will be brought under control, even if it cannot be cured completely' (p. 167). His overall argument is that anthropomorphism is almost impossible to resist, because it is 'built in' to the human brain. He writes: 'Since anthropomorphism appears to be in large measure "human nature" our attempts to free ourselves from it are quite literally "against human nature" and must often fail' (p. 155). This view that anthropomorphism is innate is shared by Daston and Mitman, who note that 'humans think with animals and that they do so compulsively'; in their opinion, this is a good reason to ask 'what is it good for,

and how is it done?'.¹¹⁰ But for Kennedy, it is something to be fought, even if that fight is doomed. For example, he writes:

The scientific study of animal behaviour was inevitably marked from birth by its anthropomorphic parentage and to a significant extent it still is. It has had to struggle to free itself from this incubus and the struggle is not over. (pp. 3-4)

Incubus, a medieval term for a male demon who has sexual intercourse with women while they are asleep, is a strange word to use here. This passage creates a bizarre image of behavioural science as a struggling child being raped by a demon – anthropomorphism – who is also its parent. This sexual imagery is not an isolated example. Elsewhere, Kennedy argues that ‘anthropomorphic bias’ is the reason that behavioural ecology is a ‘seductive’ subject (p. 56). And he quotes this warning from the ‘radical behaviourist’ Clark Hull: ‘Even when fully aware of anthropomorphic subjectivism and its dangers, the most careful and experienced thinker is likely to find himself a victim to its seduction’ (p. 32). Anthropomorphism is depicted as an almost irresistible, sexually desirable figure.

According to Kennedy, although anthropomorphism is evil, it is simultaneously essential to being human. He claims that the ability to anthropomorphise (or rather, the inability to resist anthropomorphising) was the catalyst of humans’ evolutionary progress: ‘The neurophysiological capacity for such inversion could well have been the key new feature that enabled *Homo sapiens* to “take off”’ (p. 30). So while anthropomorphism must be resisted, at the same time it is an integral part of being-human: a ‘powerful and pervasive’ force (p. 151). In fact, Kennedy anthropomorphises anthropomorphism, turning it into a cross between a contagious virus, a predatory demon, and an overbearing parent. Anthropomorphism is always already there, always already part of what it means to be human. It must exist in order

for the human subject to come into being, and yet it must also be resisted in order to protect the superiority of the human. Anthropomorphising is an act that signifies that we are human, and yet simultaneously endangers that category by threatening to allow animals into it.

The New Anthropomorphism was written in 1992, at the height of the moral panic about HIV and AIDS, which may have influenced Kennedy's metaphors of transmission, contagion and dangerous sexuality. The image of an incubus, a specifically sexual, penetrating demon, suggests that the borders of the body and of the human are disconcertingly permeable. As Mary Douglas argues, 'the orifices of the body [...] symbolise [the] specially vulnerable points' of any structure of ideas.¹¹¹ Kennedy's representation of anthropomorphism as a contagious disease also appears in other texts: for example, Emanuela Cenami Spada comments that 'if anthropomorphism is a disease, this remedy cures its symptoms without affecting its causes',¹¹² and Hank Davis writes 'this germ proved to be highly contagious and has contributed to the present epidemic of anthropomorphism'.¹¹³ These descriptions suggest that anthropomorphism is dangerous because it is an act of pollution that blurs the borders of the human: as Douglas argues, 'all margins are dangerous. If they are pulled this way or that the shape of fundamental experience is altered' (p. 121). In the case of the margins between one species and another, especially when one of these species is the human, there is particular danger. Anthropomorphism disrupts the humanist attempt to fix and secure the boundaries between human and animal, and is therefore seen as an act of pollution.

But why is this pollution considered so dangerous? In *Purity and Danger*, Douglas emphasises that while the *structure* of pollution is cross-cultural, nevertheless 'each culture has its own special risks and problems' (p. 121). That is, a contamination of the categories 'human' and 'animal' is not intrinsically problematic; the attention given to it is specific to our cultural context. Indeed, as Freud writes, many cultures are founded on the affinities that connect humans and animals, as shown in the concept of a totem or clan animal.¹¹⁴ Similarly, H. Lyn Miles notes that 'in cultures where humans live with or near other primates, the similarities between monkeys, apes, and humans are readily recognized and reflected in world views which stress biological and psychological continuity'.¹¹⁵ Therefore, anthropomorphism need not necessarily be construed in a negative way, and the fear and distaste associated with it are culturally specific. Furthermore, only certain instances of anthropomorphic pollution are considered dangerous. While some examples of anthropomorphism are attacked vehemently, others are permitted within humanist culture. I will now look in more detail at which instances of anthropomorphism are considered acceptable and which are considered dangerous, and discuss the reasons for this difference.

PG, Pathe and Puns: Acceptable Anthropomorphism

Perhaps the best-known type of safe anthropomorphism is the appearance of animals literally in 'human drag' in many television programmes, films and adverts. One of the most famous examples of this is the PG Tips advertising campaign featuring chimpanzees. In 1956, inspired by the popularity of the daily Chimpanzee Tea Party at London Zoo, Brooke Bond began a series of adverts starring chimpanzees dressed in clothes and with human voices overdubbed. This became the longest-running advertising campaign of all time.¹¹⁶ The chimps perform as humans in a variety of

scenarios: cycling in the Tour de France, trying to get a piano downstairs, sailing a boat, and even a James Bond spoof ('The name's Bond. Brooke Bond').¹¹⁷ The adverts were so popular that a large amount of spin-off chimpanzee-themed merchandise was produced, such as egg-cups, cuddly toys, ceramic figurines and tea-towels.¹¹⁸

The PG Tips chimpanzees represent a strand of British popular culture of the mid-twentieth century which features chimpanzees acting like humans.¹¹⁹ There is a wealth of this material in the British Pathe online archive.¹²⁰ Pathe made short films which were shown in cinemas in Britain between the years 1910 and 1970. They include newsreels and various 'cinemagazines' such as the Gazette, the Pathetone Weekly and the Pathe Pictorial. Animals are staple features of these films, with approximately three hundred films of chimpanzees alone. Apart from news stories, such as the chimpanzees who were sent into space, the films fall into a few broad categories. The most common are performances presented purely as entertainment, such as ice-skating, walking a tightrope, or playing the guitar: the kind of acts that a human entertainer might also perform. Similar, but distinct, are those films in which chimps perform everyday human activities such as gardening, taking a bath or painting a wall. Other popular subjects include intelligence tests and psychological tests, films in which human women 'mother' baby chimps or gorillas, and films of apes painting pictures. While different types were more popular at different times (for example, the intelligence tests are mostly from the 1930s, and the 'ape art' films all from the late 1950s and early 1960s), they are all unashamedly full of overt anthropomorphism.

It is noticeable that the vast majority of the Pathe films discussed above feature apes mimicking human behaviour. Indeed, the general cultural interest in apes stems from a fascination with their similarity to humans, as indicated by the word itself, which refers to both a category of animals (humans, chimpanzees, gorillas, orangutans, and gibbons) and to the act of mimicking.¹²¹ However, these two meanings cannot be separated from each other. From the very earliest representations of nonhuman apes in western culture, they have been depicted as satirical copies of humans. The *M. S. Bodley 764*, a thirteenth-century bestiary compiled from sources dating back to the seventh century A.D., states: 'Apes are so called because they ape the behaviour of rational human beings'.¹²² This seems to suggest that the verb, the idea of aping 'rational human beings', preceded the noun. In medieval times, the phrase 'to put an ape in his hood' meant to make a fool of someone, especially by cuckolding him. *The Canterbury Tales* contain several references to 'making an ape out of' someone, such as the remark that a cuckolding monk 'putte in the mannes hood an ape',¹²³ and the description of the Pardoner's habit of swindling money out of peasants: 'And thus, with feyned flaterye and japes / He made the person and the peple his apes'.¹²⁴ This was written in the late fourteenth century, at a time when very few Europeans had ever seen an actual ape; therefore, the mythological and metaphorical associations predate the appearance of real apes in Western culture. In the sixteenth century, the ape was frequently represented as the 'dark' version of the human, for example in Martin Luther's 1566 *Colloquia Mensalia*: 'For, where God build a church there the devil would also build a chapel. [...] Thus is the devil ever God's ape'.¹²⁵ This idea of the ape as the dark reflection of the human appears again in Linnaeus' division of *Homo* into *diurnus* and *nocturnus* in the twelfth edition of *Systema Naturae* in 1766. As well as the dark or evil double, apes have been represented as comic or offensive parodies

of the human; for example, in 1607 Edward Topsell wrote ‘the body of an Ape is Ridiculous, by reason of an indecent likeness and imitation of man, so is his soule or spirit’.¹²⁶ This brief historical overview demonstrates that the representation of apes within Western culture has always been associated with ideas of imitation, substitution, slippage and transformation; apes have always been represented in terms of both their difference from and similarity to the human.

The two meanings of the word ‘ape’ continue to be closely related; for example, a recent headline from *The Independent* read: ‘Fashion-Conscious Chimps Ape Habits of their Friends’.¹²⁷ This article reported on a study, published in the journal *Nature*, which showed that ‘chimpanzees not only copy each other like humans, but are also victims of peer pressure’. The article continues: ‘Man’s closest relative possesses the very human characteristic of wanting to be like everyone else’. There is a double doubling here: the chimpanzees’ imitation of their peers is in turn represented as an imitation of human behaviour. Chimpanzees are ‘like humans’ and bowing to peer pressure is a ‘very human characteristic’. The way that this is phrased claims that chimpanzees are imitating or copying humans, rather than the more accurate statement that peer pressure is a characteristic shared by both species. As H. Lyn Miles argues, ‘it can be questioned whether descriptions of humanlike behavior in apes based on appropriate descriptions of hominoid-hominid continuities are truly anthropomorphic because these behaviors are shared by the two and thus are not unique to humans’.¹²⁸ However, because apes have always been represented as caricatures of the human, their behaviour tends to be interpreted as an imitation of acting human.

The idea that apes are a kind of dark double of the human, and that they are inherently ‘ridiculous’ because of their resemblance to humans, is still current in the twenty-first century. These notions of doubling and mimicry are indicated by the frequency of puns and wordplay in cultural representations of apes. Puns rely on simultaneous sameness and difference, on the existence of two different meanings within one word and the possibility of slippage between the two. Practically every news story or television programme about apes is accompanied by endless puns.¹²⁹ These same puns appear frequently in the films from the British Pathe archive; chimpanzees are repeatedly described as ‘chumps’ or ‘champs’, and the voiceovers or intertitles constantly refer to ‘making a monkey out of him’, ‘monkey business’, and so on. The 1930 Pathe film *Evolution: The Other Side of It* stars a Prof Chim Panzee, while the worst pun must be in the 1940s film *Animal Oddities: Barflies Now Wear Fur Coats*, made in Australia, in which a chimp who chooses ice-cream over beer is described as ‘one of those chimp-pansies’.¹³⁰ Susan Wiseman notes the frequent use of puns in relation to apes during the Renaissance, and comments that: ‘The use of a pun to produce similarity suggests the troubled way in which apes and humans were found comparable in a dynamic of similarity and difference’.¹³¹ The sense in which it is ‘troubled’ is shown in a particularly interesting pun in the Pathe film *Chimpish Intelligence* which was made at the Leningrad Institute of Scientific Medicine in 1937.¹³² One shot shows a chimpanzee stacking various objects on top of each other to make a tower, which he then climbs to reach a bottle of drink suspended from a wire. The narrator says: ‘This chap or, or, rather, chimp, has advanced so far that now he’s building his castles in the air’. The hesitation, the half-deliberate slippage, indicates an uncanny moment of uncertainty. It is not accidental that this particular pun – ‘chap’ for ‘chimp’ – is used to describe a trained chimpanzee who performs the actions in a

way that appears highly intelligent and intentional. This pun touches on the fascinating but frightening possibility of mistaking an animal for a human: taking a chimp for a chap.

This threat of mistaking ape for human is present in almost every representation of chimpanzees. In the Pathe film *Chimp and Infernal Machine* (1967), Daisy the chimp is presented with a 'mechanical puzzle which would floor many intelligent children', as the voiceover puts it.¹³³ Daisy rapidly solves the series of puzzles, such as fitting two halves of a stick together, unlocking a box, and inserting a coin in a slot, in order to obtain her reward of orange juice. It is an impressive performance, no matter how practised, and the narrator ends with the line: 'Daisy can even unscrew the cap.

Fortunately she can't talk, or nobody's job would be safe'. Daisy's ability is threatening to humanism; it is only her inability to speak that keeps human territory safe from usurpation. Another Pathe film which plays on the possibility of chimpanzees supplanting humans is *Chimps Take Over*.¹³⁴ This light-hearted film shows chimpanzees dressed in clothes and performing a variety of human activities such as pushing a wheelbarrow, painting a fence, fishing and even going on a date, complete with goodnight kiss. The voiceover begins: 'Here's a world where human beings aren't wanted. "We're in charge" say the champion chimps of Hints Zoo, Staffordshire'.¹³⁵ Although the film itself is a classic example of unthreatening cross-species transvestism, with chimps giving amusing performances, the suggestion of usurpation reveals an underlying anxiety. While the idea that the 'champion chimps' (yet more wordplay) have taken over the zoo and no longer need human beings is clearly a joke, nevertheless the spectacle of fully-clothed chimps confidently acting human has an uncanny effect. As Jacques Derrida writes: 'such a reversal of power

cannot be an accidental aberration. Usurpation necessarily refers us to a profound possibility of essence'.¹³⁶ If they act human, could they become human? Or is there an essence, something intangible, that would prevent them crossing the border?

Another Pathe film, entitled *Trying out Darwin?*, appears to investigate precisely this 'profound possibility of essence' by testing the limits of ape/human similarity.¹³⁷ This 1951 film tells the story of Mrs Doris Culshaw who is 'making an experiment with her baby chimp Pete'. The stated purpose of the experiment is 'to find out how near to human behaviour her baby chimp will grow'. The film shows the family – mother, father, child, and chimpanzee – sitting around the dinner table. The chimp is wearing baby clothes, a bib and a nappy. In other shots Pete is fed from a bottle, read to (from a recipe book, oddly) and put to bed in a cot. The film's voiceover concludes: 'The secret of the test is that he must be brought up just like a human. [...] This is a serious test, not just a way of making a monkey out of a chimp'. This last sentence refers to the possibility of species transformation: of something becoming something else, 'making a monkey [or even a human] out of a chimp'. This experiment is one of many from the mid-twentieth century, known as 'cross-fostering', in which chimpanzees and gorillas were brought up 'as human' in order to see how human they would become.¹³⁸ These experiments, which reflected the nature/nurture debates of the time, show an interest in the mutability of species and whether it was possible to transgress species barriers. On the one hand, there is a genuine curiosity about the possibilities and limitations of teaching an animal to act human. But at the same time, the 'failure' of these experiments confirms the belief in a human essence. Although the stated aim is to dissolve or transcend the species boundary, the fact that the chimp does *not* grow up to be a human is a reassurance that being human depends on some inner essence, and

cannot be imitated. It is reminiscent of the theory of cross-dressing put forward by Robert Stoller, that the male transvestite is 'always aware even at the height of feminine behavior – when he is fully dressed in women's clothes – that he has the absolute insignia of maleness, a penis'.¹³⁹ In this case, even when 'fully dressed' and socialised as a human, the chimpanzee lacks the 'absolute insignia' of being human – a voice, perhaps? – and thereby confirms that the category of the human is secure.¹⁴⁰

Aping Art: Congo and Dangerous Anthropomorphism

If these Pathe films seem to confirm humanism by reassuring 'us' that a chimpanzee could never, in fact, become human, what happens when humanism is more seriously threatened? The divide between safe and dangerous anthropomorphism can be seen on the Gorilla Foundation's website. This foundation, which raises money to protect gorillas, is centred around the Ape Language Research of Dr Penny Patterson, who claims to have taught over a thousand words to Koko the mountain gorilla. The online shop 'Kokomart' sells a range of products that could be described as anthropomorphic, such as 'cute and cuddly' Koko toys.¹⁴¹ These toys objectify the gorilla, transforming her into 'a human-sculpted object in which the animal's glass eye merely reflects our own projections'.¹⁴² The text describes the toy as 'affectionate'; while this could clearly be described as anthropomorphic, it is acceptable within humanist culture.

In sharp contrast, Kokomart also sells limited-edition prints of paintings by Koko and Michael, accompanied on the website by photographs of the gorillas creating them, and descriptions which include terms such as 'representational', 'from memory', and expressing 'emotion'.¹⁴³ This suddenly transforms them into subjects, not objects. Unlike the toy Koko, these descriptions present the gorillas as subjects with their own

experiences, emotions, and memories. Instead of a glass eye that reflects 'our own projections', Koko's eyes become something that a subject sees *out of*.¹⁴⁴ Creating art is often cited as a key difference between humans and other animals, and within contemporary culture is often claimed to mark the beginning of 'true humanity'.¹⁴⁵ Art is associated with many of the attributes said to be key differences between humans and other animals, such as subjectivity, creativity, dexterity, and vision (which, as Cary Wolfe notes, is ineluctably tied to the specifically human').¹⁴⁶ Therefore, there is great resistance to any suggestion that animals can produce meaningful and intentional art, or indeed, calling it 'art' at all.

The intensity of the anger provoked by 'ape art' was seen recently in the media coverage of the auction and exhibition of paintings by Congo the chimpanzee. Congo produced the paintings in the 1950s under the supervision of Desmond Morris, as part of a 'new and biological approach to art'.¹⁴⁷ Morris was interested in investigating 'the origins of human art', which had been previously 'probed' by looking at 'the prehistoric remnants, the folk art of primitive peoples, the pictures of the mentally unbalanced, and the scribbles of children' (p. 13). This is a familiar list of almost-human border figures being used to define the 'origins' and limits of the human. The phrases 'folk art', 'pictures', and 'scribbles' all suggest that they are not quite worthy of being called 'art'. Morris added chimpanzees to this list, and hoped to extend his research to 'many individuals of different species' as well as 'other specialized groups from a variety of human cultures', in order to establish what, if any, were 'the biological principles of picture-making' (p. 168). He tested, for example, whether there was a tendency to 'balance' the composition of a picture and whether apes and children would complete unfinished figures.

In 1957, the Institute of Contemporary Arts in London held an exhibition of Congo's work, and he became something of a celebrity. Morris writes: 'The serious purpose of the exhibition was almost obliterated by the joyous reaction of the popular press. Everything from Congo cartoons to Congo calypsos appeared and the situation was rapidly getting out of hand' (p. 27). Some paintings were acquired by artists such as Pablo Picasso and Joan Miró, as well as the Duke of Edinburgh and the Natural History Museum. The level of popular interest is reflected by a small spate of British Pathe films of 'ape artists' dating from 1959 to 1967.¹⁴⁸ However, few other apes showed any inclination or talent for making pictures, and interest in the subject died down. Then in June 2005, three of Congo's paintings were auctioned at Bonhams as a lot and sold for £14,400. This attracted considerable media interest and led to another exhibition, *Ape Artists of the 1950s*, which showed paintings by Congo, along with another chimpanzee, Betsy, a gorilla, Sophie, and an orangutan, Alexander.¹⁴⁹

It is notable that many of the representations of this exhibition in the media depict the ape artists as the objects, rather than the subjects, of the gaze: for example, the 'Congo cartoons' that Morris mentions. Similarly, the invitation to the private view of the *Ape Artists of the 1950s* exhibition uses a photograph of Congo on its front cover. The photograph is a large monochrome close-up of Congo's face as he looks off into the distance with what appears to be a serious, thoughtful expression. If paintings by a nonhuman are disturbing because a nonhuman is controlling the gaze, seeing without being seen, representing without being represented, this image reorients the gaze so that the ape is once again the object being looked at. As Wolfe comments about

taxidermy, this reversal of the gaze ‘pretends that the look of the other – in this case the nonhuman other – can be reduced to the *eyes* of the other’.¹⁵⁰

This focus on the artist, rather than his work, led some commentators to condemn the exhibition purely on the basis that the artist was not human: because they have ‘the humanist habit of making even *the possibility* of subjectivity coterminous with the species barrier’.¹⁵¹ A notable example of this is Philip Hensher’s *Independent* article ‘Art that Makes a Monkey out of Us All’.¹⁵² Hensher describes Congo as ‘some semi-trained chimp’, compares him to ‘poor dogs and cats [that] have had brushes tied to their tails’, expresses disbelief that the ICA held an exhibition of his ‘work’ (in quotation marks in the original article) and claims that both Picasso and Miró had ‘their tongues firmly in their cheeks’ when they praised his paintings. Hensher fiercely criticises the idea that Congo’s paintings might be considered ‘art’:

This is a perfectly ludicrous story. There is no evidence at all that any of this could be regarded as ‘art’ in any rational way. Congo founded no school, failed to pass on his skills to others of his kind, did not develop, had no insight into his paintings, and the results are fantastically ugly anyway.

For Hensher, a chimp cannot have ‘insight’ by definition, therefore Congo did not have insight, therefore his paintings are not art.

Despite dismissing it as ‘perfectly ludicrous’, Hensher’s article becomes progressively more vituperative. He argues that to consider Congo’s paintings art is ‘sinister’, ‘very unpleasant’, and shows ‘a high degree of unspoken malice’. According to Hensher, this is because it insults other genres of art: specifically ‘the products of very alien cultures once considered primitive’. In this category, Hensher includes ‘art from urban Africa, graffiti artists, Aboriginal painters, [and] manga’. This is a strange amalgamation with no obvious similarities between the genres; manga, for example, is

characterised by finely detailed, representational cartoon drawings and is about as different from graffiti art or Aboriginal paintings as can be imagined. Hensher's reasoning is that the work of these artists is devalued in comparison to Congo's work:

The art world has seemed to embrace cultural diversity with an exemplary openness. But the degree to which this was just a question of money and saleability is apparent with the sale of Congo's paintings. [...] A great painting by Clifford Possum Tjapaltjarri, say, can't lift itself, in the eyes of the market, above the level of a painting by a trained chimp.

Why does Hensher make the connection between art from 'primitive' cultures and chimpanzee paintings? It is not only artists from non-Western cultures, or Western subcultures, whose art remains unsold while Congo's paintings make money.

Similarly, if Congo's art sells partly because of the publicity value of its creator, this is far from unusual. In comparison with many conceptual or minimalist artworks, Congo's paintings are relatively conventional; they are, after all, paintings.

In my opinion, what Hensher instinctively reacts against is not the appearance of the paintings, despite his reference to them being 'fantastically ugly', but the fact that they were not painted by a human. He concludes:

That's why it's important to say, humourlessly, that Congo's paintings are not art; they don't display the abilities and self awareness of any human art; and their physical resemblance to human artefacts is entirely accidental, and as manipulated as their meaning. It's not just a funny story; behind it are some very unpleasant assumptions.

Hensher does not justify his claim that Congo's paintings do not 'display the abilities and self awareness' of human art with any close reference to the paintings themselves. For him, that is unnecessary; the fact that Congo is not human is enough evidence that he does not have 'self awareness'. However, this view is contradicted by the detailed accounts of Congo's paintings provided by Morris in *The Biology of Art*. Morris writes that Congo always drew or painted on the paper, that he had a strong preference

for ‘marking objects’ (that is, adding to shapes already on the page) and that in many other ways he exercised ‘considerable visual control [...] during picture-making’ (p. 113). In particular, Hensher’s assertion that ‘their physical resemblance to human artefacts is entirely accidental’ is contradicted by the characteristic radiating fan pattern, which is probably the most striking feature of Congo’s paintings. Morris suggests that it may be related to the ‘apparently inborn action of bed-making’ in chimpanzees, and argues that ‘there is a predisposition for this type of rhythmic response’ (p. 96). On seeing the *Ape Artists* exhibition, I was struck by the repeated variations on this fan pattern, in particular the resemblance between two of Congo’s last paintings, both entitled ‘Fan Pattern – Finger Painting on Yellow Card’. In the first ‘Fan Pattern’ (catalogue number 30), the radiating fan shape is in a spectrum of colours, starting with a deep purplish-red on the left, shading through blue, then green, then vibrant yellow. In the other (catalogue number 33), there are two radiating fan shapes: a larger one which shades from yellowy-green through to blue and, overlaid on that, a smaller fan shape in red and purple.¹⁵³ These paintings in particular seem to show planning and aesthetic judgement, and were created during Congo’s final painting session, on 9 November 1958, which seems to contradict Hensher’s claim that Congo ‘did not develop’ as an artist.

Morris has never claimed that Congo had a human level of artistic ability; in fact he is quite anthropocentric in his views, and has always been firm that there is a line, a ‘threshold’, that chimpanzee art has not, and probably cannot, cross. However, there is a whole spectrum between Picasso and the ‘entirely accidental’ status that Hensher ascribes to Congo’s paintings, not just a simple binary opposition between ‘great art’ and ‘completely meaningless’. I certainly would not describe their appearance as

‘accidental’. I suggest that Hensher has an intuitive angry response to the paintings because his humanism is threatened by the possibility of a chimpanzee acting human. As he says in the headline, Congo’s art ‘makes a monkey out of us all’; it destabilises the boundaries between species.¹⁵⁴ Hensher therefore implies some kind of sinister racist agenda in order to persuade his audience (in this case, readers of *The Independent*) to accept his point of view. However, his argument raises questions about why he himself makes that connection.

Similarly, in the two-part documentary *What Makes Us Human?* (discussed in the Introduction to this thesis) the geneticist Armand Leroi argues that Congo’s paintings are not art. Leroi’s main aim is to identify ‘what, ultimately, makes us human’. His answer is the genetic differences between human and chimpanzee, and he argues that all of the various aspects of acting human, such as producing art, arise from these genetic differences. In the second programme, ‘Copycats’, Leroi begins by discussing Congo’s paintings. Standing in an art gallery in Los Angeles, he says:

Among the paintings on display are three abstracts, recently bought at auction for £12,000. The painter of these paintings is rather famous. He’s been compared by some critics to Kandinsky, by others to Pollock. In his day, Picasso was a fan, and so was Miró. Who was he? Well, his name was Congo, and he was a chimpanzee. In the 1950s, Congo was the most famous chimpanzee in the world. Encouraged to paint by the zoologist Desmond Morris, his paintings have been heralded as the pinnacle of simian aesthetics – good enough to fool even the most discerning eye.

Leroi assumes that Congo’s paintings are designed to ‘fool’ people, as if their only possible value is in tricking the viewer into believing that they were painted by a human. For Leroi, this is a kind of drag act, a comic performance of being human, with the punchline being the revelation that the ‘painter’ in question is a chimpanzee.¹⁵⁵ Leroi’s introduction is structured to fool the viewer into believing that

‘the painter of these paintings’, admired by Picasso and Miró, is human. The revelation that he was a chimpanzee is held back and then produced as a dénouement.

Leroi follows this up with a longer version of the same speech, but this time conducted as a kind of prank on the artist and art critic Tulsa Kinney. Leroi and Kinney stand in front of one of Congo’s paintings in the art gallery, having the following conversation:

Tulsa Kinney: I think that it’s really bold, it’s abstract art that someone knows what they’re doing, it’s – and it does appear to have – it appears to be from the modern era. And I like it.

Armand Leroi: It does have a lot of energy, doesn’t it?

TK: Yeah. It has. It’s very strong, it’s a very strong piece of work –

AL: Very basic palette. Limited.

TK: Yes, and it’s like, you know, even if you go in close, it’s all the deliberate, um, painterly, you know, movement of the brushstroke, like, the artist leaving this stuff, and if it was a prominent artist, then it would, you know, could be easily half a million dollars. Easily.

AL: [smiling] Half a million?

TK: Yes.

AL: Mmmm. Well I can tell you that Picasso was an admirer of this chap –

TK: Oh, okay. Well, um, it’s probably – you said it’s from the fifties – it’s probably a Pollock. Is it a Pollock?

AL: Probably a Pollock?

TK: Yes.

AL: No.

TK: It’s not, okay.

AL: No.

TK: [laughs]

AL: The artist, his name, was Congo.

TK: Congo?

AL: Congo. And he was a – chimpanzee.

TK: Oh a chimp – oh chimpanzee. Really?

AL: Absolutely. [laughs]

TK: Well then, it’s not going to be a half a million dollars, okay?

As in his earlier speech to camera, Leroi is mocking both Congo’s paintings and the naivety of believing that they were made by a human artist. This time, however, the television viewer is meant to be in on the joke and mocking Kinney along with Leroi. When Kinney describes it as ‘bold’ and ‘strong’, Leroi appears to agree with her, but his adjectives, ‘basic’ and ‘limited’, have far more negative connotations. Ignoring her

comments about the detailed and ‘deliberate’ brushstrokes, he focuses on her assessment of its monetary value, in order to heighten her embarrassment at the end. Leroi delays this until the last possible moment, and the purpose of the entire conversation appears to be to make Kinney look foolish: as he then says, she has been ‘fooled’. He thus mocks the pretensions of modern art, the gullibility of art critics and modern artists, and also the possibility of a chimpanzee producing a painting genuinely worthy of admiration.

After this protracted joke, Leroi addresses the question of whether Congo’s paintings should be considered art. Unlike Hensher, he finds them aesthetically pleasing, but he comes to the same conclusion. Leroi says:

Congo’s paintings are certainly pleasing to the eye. I wouldn’t mind owning one of them myself. But are they art? The answer to that question is a resounding *no*. Congo’s work isn’t art because it isn’t part of a tradition. He just sat down and did what came naturally to him. But human artists are different. We’re influenced by those around us. Great masters are influenced by the cultural currents of their time, children by the scribbles of their friends. Either way, the principle is the same. We think of culture as being about originality, but it’s not. It’s really about imitation. And we are a relentlessly imitative species.

For Leroi, Congo’s paintings are not art because they are original and produced ‘naturally’, not imitative. This is in contrast to most of the other critical commentary on Congo’s art, and of animals acting human in general, which tends to claim that it is not art *because* it is merely imitative: aping art, not really art. Many of Leroi’s claims are contentious, such as the assertion that art must necessarily be ‘part of a tradition’. In some way, Congo’s paintings are part of ‘the cultural currents of their time’. In the 1950s, there was a lot of interest in the ‘natural’ foundations of art: an interest which was exemplified by Morris’ desire to investigate the biological origins of art. But like Hensher, Leroi makes a definitive statement – ‘The answer to that question is a

resounding *no*. Congo's work isn't art' – on the basis of nothing more than Congo's species. It is the lack of doubt, the absolutist nature of this claim, which shows that this is a political statement, a statement of belief in humanism and in the absolute division between humans and all other beings: only humans make art, Congo is not human, therefore his paintings are not art.

However, this humanism, to borrow Neil Badmington's phrase, 'is there and not quite there. It comes and goes, it flickers, it drifts [...]. Humanism, in fact, is eternally and unwarily becoming alien to itself, becoming posthumanism'.¹⁵⁶ Leroi clearly tries to avoid using the word 'artist', as this would suggest that the paintings are art, referring to Congo instead as 'the painter of these paintings'. But in his conversation with Kinney, he says: 'The artist, his name, was Congo'. This slippage suggests that there is more doubt there than Leroi admits. If a humanist subject allows space for this doubt, rather than suppressing it, he or she can react differently when confronted with evidence of an animal acting human. This is demonstrated by the art critic Waldemar Januszczak's account of his visit to the *Ape Artists of the 1950s* exhibition. Januszczak begins: 'It is, or was, my firmly held view that, in the field of art, monkeys do whatever they do by accident or coercion. Monkeys cannot paint'.¹⁵⁷ This is humanism in a nutshell. Painting (in any meaningful sense) is an expression of an internal human identity, which is acting human and by definition can only be done by humans. However, when Januszczak visits the exhibition, he finds his beliefs challenged. He writes:

I am no longer so certain. [...] Having carefully examined Congo's paintings, all of which might best be described as examples of lyrical abstract expressionism, I find myself assailed by doubts. I like Congo's paintings. A couple of them I love.

Januszczak's confident and 'certain' humanism is shaken by the reality of the paintings and his own reaction to them. This is a classic account of a humanist subject being 'assailed by doubts' and questioning what he has taken for granted. Januszczak wants to resist these doubts, and to rest secure in his 'firmly held view' that 'monkeys cannot paint', but cannot. He is struck by Congo's paintings, which 'shine off the walls like stained glass'. He writes about one painting:

Composition on Buff Paper, painted on October 31, 1957, is perhaps Congo's masterpiece. Built compositionally around a central expanse of Congo's beloved crimson, it features an array of blacks and pale greens soaring around the red like vultures around a mountain. The mood is pure Kandinsky, the achievement profound.

Januszczak also notes the paintings' compositional balance, 'spectacular' use of colour, and 'absence of muddiness, of colours mixed to sludge through mindless scrubbing'. As an eminent art critic and author of books such as *Understanding Art* and *Techniques of the World's Great Painters*, Januszczak is knowledgeable about the process of creating artworks of this type. It is from this position that he finds himself unable to retain his absolute certainty that 'monkeys cannot paint'.

What is especially interesting is that Januszczak finds himself repeatedly *disturbed* by the quality of Congo's paintings. He describes the exhibition as 'fascinating and slightly worrying', refers to the 'disquieting beauty' of the paintings, and states that 'for a monkey to be this minimal [...] is deeply disconcerting'. While discussing the brushwork, he writes: 'What is really spooky is the care Congo always brings to working within the paper'.¹⁵⁸ It is 'worrying,' 'disconcerting,' 'disquieting' and 'spooky' because these paintings provoke uncertainty about the human status of their creator. While it may be easy to tell the difference between a chimpanzee and a human

by looking directly at them, it is not possible when looking at paintings. In the article, Januszczak writes:

There is some small room for doubt here about the role played by [Desmond] Morris himself. [...] Not for a moment do I question the authenticity of the images, or the methods used to produce them, but it would have been interesting to see the extent of Morris's involvement in important aesthetic matters such as the choice of coloured paper for Congo to work on.

The 'room for doubt' indicates an uncertainty about whether the artist was human or animal. Although Januszczak makes the point of saying that he does not 'question the authenticity', several journalists expressed scepticism that Congo had 'really' created the paintings; this is an alternative way of preserving art as the exclusive domain of the human. However, Januszczak describes Morris' own artworks as 'awful surrealist pastiches' which he will 'cross over many roads' to avoid, which suggests that he does not consider Morris capable of producing paintings of 'disquieting beauty' like Congo's. As an art critic, Januszczak is accustomed to judging artists through their work, and the artist he perceives as the creator of these paintings is 'talented', with careful brushwork, 'a purist' when it comes to pigments. He forms an impression of the subject who created it. It is the fact that this subject is not human – the disjunction between essence and performance – that produces the 'disquieting' uncanny feeling.

At the end of the article, Januszczak attempts to retreat back into humanism by suggesting that the real talent is the human ability to enjoy abstract art. He concludes: 'Confronted by a pleasing assortment of abstract shapes, we humans have a wondrous ability to find meaning in them and to gain pleasure from them. Art, after all, is only as important as its audience'. This is an attempt to return to humanism, as it is 'we humans' who have the 'wondrous ability', but it is a return to a different, more nuanced, humanism, whose assumptions have been thoroughly destabilised.

Januszczak no longer has ‘the humanist habit of making even the *possibility* of subjectivity coterminous with the species barrier’.¹⁵⁹ His experience of Congo’s paintings has introduced the possibility that the subject may not always, necessarily, be human.

Parody and Risk

I have discussed different representations of animals acting human, and argued that some are considered acceptable within humanist culture, while others are not. Why do some instances seem to support humanism, while others seem to threaten it in a more serious way? In *Gender Trouble*, Butler makes a distinction between two types of parodic repetition. She writes:

Parody by itself is not subversive, and there must be a way to understand what makes certain kinds of parodic repetitions effectively disruptive, truly troubling, and which repetitions become domesticated and recirculated as instruments of cultural hegemony. (pp. 176-77)

This passage offers a way to conceptualise the different reactions to different instances of anthropomorphism. In Butler’s formulation, the PG Tips chimps fall into the second category of parodic repetitions. They are ‘domesticated and recirculated as instruments of cultural hegemony’, the cultural hegemony in this case being humanism in addition to capitalism; the associated merchandise literally transforms them into domestic objects which can be possessed. On the other hand, Congo’s paintings are ‘effectively disruptive, truly troubling’ and cannot be easily incorporated into a humanist framework. Januszczak attempts to contain this disruption by arguing that the truly ‘wondrous ability’ is the human ability to find meaning in abstract art, but his strategy does not really succeed. His humanism has already been deeply troubled, ‘assailed by doubts’, as he puts it.

The fact that Congo's paintings are 'truly troubling' can be seen from the virulence of those that criticise them: for example, calling them 'fantastically ugly', as Hensher does. This strong language can be found in many accusations of anthropomorphism, such as Sebeok's condemnation of *Man and Dolphin* as 'a strange, irritating, anecdotal, and provoking book',¹⁶⁰ and a review of a book about the famous horse, Clever Hans, which described it as a 'vile blot on our contemporary literature. Born in the poisoned atmosphere of humbug and of trickery, it is a monument raised to the cult of the beast'.¹⁶¹ The ferocity of these attacks suggests that there is something very important at stake: a 'truly troubling' threat to humanism, in Butler's terms, which needs to be denied as vociferously as possible. If there was no danger of people making the mistake of taking Congo's paintings for art, it would not be necessary to protest so strongly.

From the point of view of humanism, it is a question of risk. The less obviously 'humanlike' an animal or object is, the more it can be anthropomorphised without threatening the structure of humanism. For example, Claude Lévi-Strauss notes that:

Birds are given human christian names in accordance with the species to which they belong more easily than are other zoological classes, because *they can be permitted to resemble men for the very reason that they are so different*. They are feathered, winged, oviparous and they are also physically separated from human society by the element in which it is their privilege to move.¹⁶²

The point I wish to emphasise here is that because birds are 'so different' from humans, the boundaries of the human are not threatened by treating them anthropomorphically. Therefore, anthropomorphism is acceptable if there is no real chance of troubling the category of the human. In her article 'Why Anthropomorphism

Is *Not* Metaphor: Crossing Concepts and Cultures in Animal Behavior Studies’,

Pamela J. Asquith notes:

It should come as no surprise that true anthropomorphic metaphors that describe things or processes far removed from the grey areas of human uniqueness, such as in the physical sciences, are considered to be creative heuristic devices [...]. By contrast, where there is any likelihood of attributing ‘humanlike’ intentions to the behavior so described, as in the biological sciences, a much closer scrutiny of terms is called for.¹⁶³

Anthropomorphism is safe when it does not pose a risk to humanism. No one would ever mistake a raindrop or an oxygen molecule for a human being, for example, and so it is acceptable to use it as a metaphor and attribute to it desires, emotions, and so on.¹⁶⁴ However, in the case of a fish or a bee, it is somewhat risky to use anthropomorphic vocabulary, since it is possible that a reader would mistake metaphor for statement of fact. When it comes to chimpanzees, the ‘likelihood of attributing humanlike intentions’ is so great that it is almost impossible to tell whether the intentions are ‘humanlike’ or are in fact shared characteristics. It becomes very difficult, if not impossible, to separate metaphor from fact, difference from sameness, ape from human. In this case, anthropomorphism can only be acceptable if it is clearly marked as fictional.

Quotation Marks: Performance vs. Performativity

By definition, parody needs both sameness (resemblance to the original) and difference (critical distance from the original) in order to function. As Linda Hutcheon writes ‘parody is repetition, but repetition that includes difference’.¹⁶⁵ When the sameness threatens to overwhelm the difference, as for example with Congo’s paintings, the resemblance becomes dangerous. By contrast, in the more literal kinds of ‘human drag’, such as the Pathe films and PG Tips adverts, the difference between ape and

human is clearly marked. The visibility of the difference is reassuring, as it means there is no uncertainty about whether or not the performers are human. However, it is an oversimplification to say that these representations have no subversive effect. As Hutcheon has argued, parody cannot be simply categorised as *either* conservative *or* subversive: 'Parody is fundamentally double and divided; its ambivalence stems from the dual drives of conservative and revolutionary forces that are inherent in its nature as authorized transgression' (p. 26). 'Authorized transgression' is an apt description for the ways in which nonhumans are allowed to act human in certain circumstances.

Chimpanzees acting human in theatrical performances are accepted precisely because they are visibly marked as performances. Their humanlike behaviour is literally contained within bounds: a cage, circus ring, theatre auditorium or cinema screen. It is when the performance does not appear as such, when it appears to be real, that the boundary between human and animal is threatened. This is when the most ferocious accusations of anthropomorphism are made, and it is precisely the question of performance which is at stake. The issue of performance forms the basis of Thomas Sebeok's 1979 article, 'Performing Animals: Secrets of the Trade', in which he denounces the Ape Language research of the 1960s and 1970s, such as the Gardners' work with the chimpanzee Washoe, and the Premacks' with Sarah.¹⁶⁶ Sebeok argues that 'except for the fact that there is no intended deception, the linguistic apes of recent fame are part of the same tradition of animal-human communication as four-legged performers and talking horses' (p. 78). The apparent success of these experiments can in fact be explained as a mixture of 'unconscious bias, self-deception, magic [in the sense of conjuring], and circus performance' (p. 79). As this quote demonstrates, Sebeok's aim is not to accuse the Ape Language researchers of deliberate deception

(although the subtitle of his article does hint at the possibility of trickery), but to resituate their experiments as fictional performances rather than scientific fact. In order to do this, he sets up an opposition: 'Man trains animals in one of two distinct ways: *apprentissage*, or scientific training, and *dressage*, or performance training' (p. 79). He then argues that the Ape Language research has only been investigated by experts in *apprentissage*, whereas 'what is needed is an expert in *dressage*, performance-oriented activities involving subtle deception' (p. 81). Finally, he concludes that 'real breakthroughs in man-ape communication are still the stuff of fiction' (p. 91). Without entering into a debate here about the Ape Language research itself, what I want to note is that the distinction between fact and fiction, reality and performance, is central to Sebeok's critique. As long as the apes' actions are categorised as 'performance-oriented', they are 'not real', and do not threaten the concept of language as exclusively human. This is very similar to the strategy used by Leroi and Hensher to argue that Congo's paintings are 'not really art'.

In *Staging Femininities: Performance and Performativity*, Geraldine Harris argues that there is an important distinction between theatrical performance and social performativity:

In order for a performance to be intelligible as such, it must in the first instance and in some way give the appearance and effect of being mimetic. Butler's notion of sex/gender as performative, on the other hand, refers to something the intelligibility of which depends on it having the appearance and the effect of being 'real', or there would be no point in 'deconstructing' it in the first place.¹⁶⁷

A chimpanzee riding a motorbike or dressed as James Bond gives the 'effect of being mimetic', rather than 'real' or natural. It is obviously *performing*; the performance is 'intelligible as such'. Under these circumstances, the species transgression is authorised. In *Vested Interests*, Marjorie Garber notes a similar structure in the

Elizabethan theatre, as actors were permitted to 'violate the sumptuary laws' while onstage; 'the stage was a privileged site of transgression', a space in which it was permitted to wear the clothes of 'the wrong rank as well as the wrong gender' (p. 35). However, while this cross-dressing could be read as transgressive, in fact it can seem to confirm the 'truth' of gender, rank, or species, precisely because it opposes the overt fictionality of the costume to the apparent truth of the body which lies beneath. This idea is expressed in an English proverb which specifically states that external dress cannot change an ape into a human. It is listed, for example, in George Puttenham's 1589 *Arte of English Poesie*, in which it is described as a 'common Prouerbe': 'An ape vvilbe an ape, by kinde as they say, Though that ye clad him all in purple array'.¹⁶⁸ A very similar proverb appears nearly three hundred years later in the form: 'An Ape's an ape: a varlet's a varlet / Though they be clad in silk or scarlet'.¹⁶⁹ The message here is that you cannot make an ape into a human merely by dressing it in human clothes; the external 'array' cannot alter its internal 'kinde'. In this way, rather than being transgressive, interspecies cross-dressing actually shores up the boundary between ape and human. Like the failure of the cross-fostering experiments, this reassures humanism by suggesting that the species difference is, indeed, stable.

In this way, chimpanzees performing in human drag can paradoxically confirm the stability of the species difference. In *Alien Chic*, Neil Badmington argues that

the Alien Mask Voice Changer effectively affirms the pre-existence of the unquestionably human subject (if I must call upon an external object to make myself look and sound like an alien, I cannot already resemble or even be an extraterrestrial; I must, rather, possess a face and voice which are non-alien, and which can be manipulated by the device in question). (p. 106)

Similarly, overtly fictional parodic performances of human behaviour by animals reaffirm the fact that the chimpanzee is not human, since it 'must call upon an external

object' to appear temporarily human. Because the chimpanzee's human act consists of exterior props, it must lack an interior human essence. Furthermore, it also affirms the authenticity of the human audience, since the overt and excessive theatricality of the chimpanzee's performance can make the humans' behaviour appear more natural in comparison.

Humanism relies on the unbreakable connection between human essence and human behaviour. Derrida writes: 'With regard to this unity [of sound and sense in spoken language], writing would always be derivative, accidental, particular, exterior, doubling the signifier'.¹⁷⁰ Whereas human behaviour seems to have a natural 'unity' with human essence, the chimpanzee's performance appears to be 'derivative' and 'exterior'. It merely 'doubl[es] the signifier' without affecting this 'unity'. Performing animals thus confirm and secure the category of the human by producing a set of linked binary oppositions: human/animal, real/fake, original/imitation, natural/artificial, essence/performance, interior/exterior. As Harris writes:

In order to be intelligible as such, a theatrical performance depends on the legible presence of the quotation marks, which, as described by Butler, the process of performativity as citation operates to conceal in 'everyday life'. [...] The difference between the theatrical and the social may then only be a matter of the legibility or otherwise of quotation marks, but these quotation marks make all the difference.¹⁷¹

Sometimes the quotation marks are literally legible. For example, Hensher's *Independent* article, discussed above, includes the phrase: 'Congo's "art" has risen again to public attention'. This labels his paintings as not-really-art. The quotation marks do not have to be quite so literal; the bars of a cage or the edges of a cinema screen can enclose the performance and separate it from the 'real world'. A chimpanzee which is very evidently *acting* human is clearly signalled as fictional; by contrast, human behaviour appears that much more 'real'. The human does not appear

to be performing, and this lack of legible ‘quotation marks make[s] all the difference’. Marjorie Garber notes that ‘quotation marks [...] can convey both absolute authenticity and veracity, on the one hand, and suspected inauthenticity, irony, or doubt, or the other’.¹⁷² In this case, the chimpanzee’s human drag act appears to be an inauthentic, ironic copy of authentic, original human behaviour. But, as Garber argues, the quotation can also ‘cas[t] doubt on the veracity of the person quoted or underscor[e] the suspicious significance of the utterance’.¹⁷³ To conclude, I want to look at what happens when an animal’s performance of human drag ends up ‘casting doubt on the veracity’ of apparently natural human behaviour.

Conclusion: The Showman and the Marquis

At the beginning of this chapter, I discussed Descartes’ confident humanist claim that it would always be possible to tell the difference between a human and a nonhuman by looking at their behaviour. The intangible human quality of reason would ‘mak[e] us act’ in a way that could not be successfully imitated by a machine or an animal. But, as I have argued, acting human does not follow naturally from, nor does it rely upon, an interior human essence. The hierarchical oppositions between inside and outside, essence and performance, true and false, human and animal, cannot be sustained. Even those performances which appear to be safely enclosed within quotation marks have a habit of leaking out into the real world. As a final example, I will examine a British Pathe film from 1954 entitled *Chimpanzee*, in order to show how these quotation marks fade in and out of legibility and even begin to appear in new and unexpected places.¹⁷⁴

In this short film, a young couple take their chimpanzee out for dinner with them to a restaurant in Soho. The three diners are described by the voiceover as ‘showman Gene

Letroy, Valerie Glenn, and their almost human stage performer, the Marquis'. The Marquis is dressed smartly in a suit and hat. He sits at the table, eats a three-course dinner, including soup and spaghetti, drinks beer, and smokes a cigar. His hand movements are noticeably dextrous, and he uses cutlery adeptly. In general, he behaves impeccably and is treated by Letroy and Glenn as a normal person sharing a dinner table. At no point does the Marquis do anything completely inappropriate, such as defecate or become violent, which would mark his human performance as an unconvincing act. His biggest breach of etiquette (one that the narrator remarks upon) is that he starts eating his soup without waiting for the others to start.

Because this is not taking place within a clearly delimited theatrical space or a zoo, but in a London restaurant, it is not entirely separate from real life. At one point, the narrator says: 'Really though, [eating spaghetti] is as simple as swinging off a tree for this 13-year-old champion of monkeys. In his stage act, he walks a tight wire, rides a motorcycle, and dresses himself'. This comment opposes the fictionality of the theatrical performance to the reality of eating dinner in a restaurant. Of course, in a sense *Chimpanzee* is still within quotation marks, as it is a film, and everything within it, from the taxi driver's bemused head-scratching to the reactions of the diners at other tables, is staged to some extent. But at the same time, the Marquis is actually eating spaghetti, drinking beer, and smoking a cigar. It is both real and fictional, and this ambiguity blurs the boundary between theatrical performance and everyday performativity. This also has the potential to make it uncanny rather than simply amusing; as Freud argues, 'a great deal that is not uncanny in fiction would be so if it happened in real life'.¹⁷⁵ Perhaps for this reason, the narrator expresses disgust and exasperation when he makes this strange remark: 'When a young couple take a

chimpanzee out to dinner, it's enough to make anyone feel like giving up'. It is, as Januszczak writes, 'spooky' when you are 'assailed by doubts' about who is human and who is not, who is performing and who is not, what is real and what is not.

As the film progresses, the Marquis' human act starts to have an even stranger effect. The humans in the film begin to appear more and more theatrical, as if they, too, are performing a human act. Like the Marquis, Gene Letroy is a 'showman', a professional entertainer. Letroy is wearing a dinner suit and bowtie, and Valerie Glenn a very large and dramatic fur coat, both of which are particularly 'unnatural' forms of clothing; they are noticeably 'dressed up'. The rituals of restaurant dining – the waiter, menus, tablecloth, and so on – begin to look like stage props. The after-dinner smoking (cigars for Letroy and the Marquis, cigarette for Valerie Glenn) seems no more 'natural' performed by a human than by a chimpanzee.¹⁷⁶ In this sense, the Marquis' performance of human rituals 'serves a subversive function to the extent that it reflects the mundane impersonations by which [human behaviour is] performed and naturalized and undermines [its] power by virtue of effecting that exposure'.¹⁷⁷ The Marquis is thirteen years old and has evidently had many years of experience of acting human. He looks entirely at ease in his suit and hat, and somehow appears no more or less ridiculous, no more or less natural, than the humans around him. The Marquis' aping of the human is disconcertingly accurate; so accurate that you are reminded that acting human is an *act*, no matter who does it.

The possibility of a nonhuman animal acting human, or a person failing to do so, troubles the opposition between human and animal, because it suggests that there is no necessary link between a core identity and an external performance, and consequently,

that there might not be a core human identity at all. If the human can only be defined as differed-differing animal, as what the animal is not, then it is necessary to be able to identify the behavioural differences between the human and the animal. When these differences are uncertain, the categories themselves are brought into question.

Chapter 3

Talking Human

Speech, the Unconscious, and Differance in Communication

In some deep, unconscious way we ‘know’ that dogs, cats, chimpanzees, and other intelligent animals would be human if they could only talk. Intuitively we know that talking = thinking = being human. The studies discussed below show that this intuition is correct.

Philip Lieberman, *Eve Spoke: Human Language and Human Evolution* (New York and London: W. W. Norton, 1998), p. 4.

But, for that matter, had language arisen prior to the split that produced them and us – had we all spoken the same language – there might not have been a them and an us.

Joel Wallman, *Aping Language* (Cambridge: Cambridge University Press, 1992), p. 153.

In this chapter I analyse the *linguistic/communicatory* boundary of the human. The doubleness of this name is not accidental; at stake is the opposition between human language and animal communication which underpins contemporary humanist discourse. I read biological, psychological and (paleo)anthropological explanations alongside philosophy and critical theory, in order to take issue with what Jacques Derrida describes as ‘the hegemonic permanence of the “Cartesianism” that dominates the discourse and practice of human or humanist modernity with respect to the animal’.¹ Approached in isolation, each of these discourses unproblematically *uses* the idea of human language as fundamentally different from animal communication but does not take responsibility for explaining it; instead, each defers the explanation to other fields of study. It is therefore necessary to read these texts in conjunction with each other, as accomplices to each other’s humanism, in order to show that no single discourse can fully account for this opposition without resorting to ‘free and mythic invention’, as Derrida puts it.² The wide textual range demonstrates the working of the myth of human language across many discourses.

As I have argued, within contemporary humanist discourse, the question ‘what does it mean to be human?’ is identified with ‘what is the difference between a human and an animal?’. This question is answered differently at different historical moments; responses have included the soul, reason, tool use, tool making, awareness of death,

laughter, culture, art, among others.³ At the present moment, the commonly accepted answer is language. Language is what makes us human; you can tell who is human because they talk. This belief means that it is vital for posthumanist theorists to interrogate the binary opposition between human language and animal communication: as Cary Wolfe puts it, 'to rigorously theorize the *disarticulation* between the category of language and the category of species, for only if we do so can the relation between human, animal, and language be theorized in *both* its similarity and its difference'.⁴

The human/animal opposition is identified with the opposition between language and communication. Because language is represented as qualitatively different from any other form of communication, it must have materialized instantaneously; the moment at which 'we' became human is the moment at which 'we' first spoke. Within humanist discourse, there is a constant slippage between 'language' and 'speech', and it is speaking in its specific physical form which is represented as the crucial human attribute. For this reason, in this chapter I focus on the role played by the act of speaking (as opposed to the more abstract concept of 'language') in constructing the human as the animal in difference. The voice is identified with presence, truth and subjectivity, and those who lack it, such as deaf-mute people, are denied full human status. Without a voice, unable to articulate, one cannot be a subject or exercise power.

However, the existence of 'talking' birds, especially parrots, threatens this structure of oppositions: human/animal, speaking/mute, articulate/wordless. I argue that humanism attempts to contain the threat of a speaking nonhuman by representing parrots' speech as 'not really talking': by bracketing it as a fictional performance of 'true' human behaviour. However, the illusion that the parrot is really speaking always threatens to

return and disrupt the idea of human speech. The uncertainty over whether parrots are speaking subjects or mechanical objects is shown by the importance of the uncanny in representations of parrots. I argue that the figure of the parrot functions as a kind of writing in the broader Derridean sense: an imitative representation of true human speech, which, like writing, signifies the possibility of the death of the original speaking subject. However, just as Derrida argues that ‘the violence of writing does not *befall* an innocent language’,⁵ I argue that representations of parrots also show that human speech itself does not guarantee truth or presence. The question of whether parrots can talk has some potential to challenge humanism; however, it is far more troubling to question the values attributed to *human* speech.

Having shown how the linguistic capabilities of animals can trouble the human/nonhuman boundary, I then argue that we must also interrogate the idea of the human ‘having’ language. In ‘And Say the Animal Responded?’, Derrida deconstructs Jacques Lacan’s opposition of human *response* – conscious, free and in control – to animal *reaction* – nonconscious, automatic, and innately determined. In this context, I discuss the way that human speech inevitably signifies in ways that exceed conscious control and intention; slips of the tongue and blushing, for example, show that the human is not ‘master’ of its own speech. Even the voice itself is not a pure expression of internal thoughts, but signifies in extraverbal ways: a concept which Roland Barthes names ‘the grain of the voice’. Indeed, research in nonverbal communication studies argues that the voice is the ‘leakiest’ channel of communication: that is, the one most difficult to control consciously. While humanism tries to deny the signifying potential of nonverbal communication, it cannot be denied in the case of people with receptive aphasia, who cannot understand words but still grasp the meaning of what is said to

them. In order to challenge humanism, it is necessary to recognise the shared aspects of human and nonhuman communication while also respecting the radical otherness of animals' experience.

Finally, I argue that if the human is defined by 'having language' and language is 'what humans have', there is a lacuna at the centre of these signifiers. Whenever a nonhuman animal exhibits a particular linguistic ability previously thought to be exclusively human, this aspect is then excluded from 'language' and relegated to 'communication' or 'vocalisation'. Similarly, those aspects of human communication which are seen as automatic, determined, or involuntary are suppressed, and excluded from language. Therefore, I argue that language and the human are constituted only by referring to each other. In Derrida's terminology, there is an active movement of differance which displaces the meaning; it is both differed and deferred, but never reaches the ultimate signified which provides the true and definitive answer.

Theoretical Approach

In the discussion that follows, my reading is guided by the strategy outlined by Derrida in 'And Say the Animal Responded?'. Derrida criticises the type of scientific writing about animals which 'repeats the most worn-out truisms of metaphysics even as it appears to resist them',⁶ by describing animals' behaviour as 'prewired' or 'programmed' and thereby reinscribing the binary opposition between human response and animal reaction. In a footnote, he describes the type of reading that he sees as necessary to challenge this:

The critical or deconstructive reading I am calling for would seek less to retribute to the animal or to such an insect the powers that it is not certain to possess (even if that sometimes seems possible) than to wonder whether one

could not claim as much relevance for this type of analysis in the case of the human, with respect, for example, to the ‘wiring’ of its sexual and reproductive behaviour. (p. 144, note)

I aim to produce this type of ‘critical or deconstructive reading’ by examining those places where the humanist myth of the individual, as a self-conscious, self-aware being who is always in control of his/her language, becomes unstable. In this key passage from Derrida’s essay, he examines Jacques Lacan’s opposition of human response to animal reaction:

Once again, we are not concerned with erasing every difference between what we are calling *reaction* and what we *commonly* call *response*. [...] We are even less concerned with attributing to what Lacan calls ‘the animal’ what he also calls a ‘subjectivity’ or an ‘unconscious’ such as would, for example, allow us to put the said animal in an analytic situation (even if such analogous scenarios cannot be completely excluded for *certain* animals, in *certain* contexts – and if time permitted we could imagine some hypotheses that would allow us to refine that analogy). My hesitation concerns only the purity, the rigor, and the indivisibility of the frontier that separates – already with respect to ‘us humans’ – reaction from response; and as a consequence, especially, the purity, rigor, and indivisibility of the concept of responsibility that ensues. (p. 127)

In this chapter, I question ‘the purity, the rigor, and the indivisibility’ of the boundary between response and reaction, language and communication, human and nonhuman. I am also interested in Derrida’s parenthetical comment here, that ‘if time permitted we could imagine some hypotheses’ concerning the possibility of ‘the animal’ having a ‘subjectivity’.

I am not asking what language is, trying to define it, or arguing that animals do or do not have language. Nor am I trying to erase the differences between some aspects of human language and the myriad communication systems of other animals. As Derrida argues in ‘And Say the Animal Responded?’:

Far from erasing the difference – a nonoppositional and infinitely differentiated, qualitative, and intensive difference between reaction and response – it is a matter, on the contrary, of taking that difference into account within the whole differentiated field of experience and of a world of life-forms.

And that means refraining from reducing this differentiated and multiple difference, in a similarly massive and homogenizing manner, to one between the human subject, on the one hand, and the nonsubject that is the animal in general, on the other. (p. 128)

Therefore, rather than attempting to argue for a homogeneity between human language and other forms of communication, I seek to demonstrate how the signifiers 'language' and 'the human' interact with each other in an active process of differing the human from the animal. I do this in order to question the following humanist beliefs: that there is an absolute and monolithic opposition between human language and animal communication; that human language is inherently superior to all other species' forms of communication; and that language enables 'us' to master the rest of the world.

For Derrida, there are three main concepts which must be taken into account and which trouble these humanist beliefs:

1. when one is required to take account of an unconscious that should prevent us having any immediate and conscious assurance of the freedom presupposed by any notion of responsibility;
2. especially when – and this is singularly the case for Lacan – the logic of the unconscious is founded on a logic of repetition which, in my opinion, will always inscribe a destiny of iterability, hence some automaticity of the reaction in every response, however originary, free, deciding [*décisoire*] and a-reactional it might seem;
3. when, and this is true of Lacan in particular, one gives credence to the materiality of speech and to the corporality of language. (p. 127)

These concerns – the unconscious, the 'automaticity' of human reactions, and especially 'the materiality of speech and [...] the corporality of language' – guide my readings of various texts from paleoanthropology, animal cognition research, communication studies, linguistics, and neurology, as well as from fiction and popular culture. My aim is to expose the fault lines in the humanist concept of language, and thereby to challenge the overall structure of humanism. As Wolfe notes in *Animal*

Rites:

While the question of signifying behaviors may seem relevant only for some animals in particular – namely those, such as the great apes, in whom linguistic behaviors have been observed – the larger point is that this reopening of the question of language has enormous implications for the *category* of the animal in general – the animal in the ‘singular’, as Derrida puts it – and how it has traditionally been hypostatized over and against the human – again in the singular. (p. 80)

The ‘reopening’ of this ‘question of signifying behaviours’ makes it possible to interrogate the category of the human as a whole.

Language / Communication = Us / Them

The central importance of language in differing the human from the animal can be traced through philosophers such as René Descartes and Jean-Jacques Rousseau as far back as the Bible, in which the first use of language by a human is to name the animals. From the earliest texts, the idea of the human as ‘the speaking ape’ is established through the contrast with other animals. A typical contemporary example is this extract from *Aping Language*, the linguist Joel Wallman’s sceptical review of Ape Language Research:

Language, at least in the European intellectual tradition, is the quintessential human attribute, at once evidence and source of most that is transcendent in us, distinguishing ours from the merely mechanical nature of the beast. Language is regarded as the *sine qua non* of culture, and its presence in our species is the most salient behavioral difference between us and the other hominoids – with the relinquishing of tool use and, more recently, tool making as uniquely human capabilities, the significance of language as a separator has grown.⁷

This passage contains many of humanism’s key beliefs about the role of language in defining the human. Language is *the* ‘quintessential’ attribute of the human. It is both ‘evidence’ and ‘source’ of our ‘transcendent’ nature; it both indicates and constitutes a human essence. By contrast, animals are ‘merely mechanical’. Language is described here as ‘the most salient *behavioural* difference’, which suggests that to be recognised as human, you must *act* human, as I have argued in the previous chapter of this thesis.

The qualifying statement ‘at least in the European intellectual tradition’ and the observation that ‘the significance of language as a separator has grown’ show that this belief in language as ‘the quintessential human attribute’ is culturally and historically specific. As Wallman notes, within the last fifty years other attributes such as tool use have been equally prominent, but these have been ‘relinquished’ as primatologists and other scientists have discovered evidence for these attributes in nonhuman animals.⁸ As indicated by words such as ‘relinquishing’, Wallman chooses to frame this narrative in terms of loss, rather than increased knowledge and scientific discovery: language is represented as a kind of last-ditch barricade between ‘them’ and us’.

This idea that the ‘exclusivity’ of the human is under attack, and that language is the last remaining ‘separator’ between humans and nonhumans, is encountered very frequently. In *Through our Eyes Only? The Search for Animal Consciousness*, Marian Stamp Dawkins (professor of animal behaviour at Oxford University) recounts a narrative that is almost identical to Wallman’s. She writes that since ‘Man the tool-user’ and ‘Man the tool-maker’ were no longer ‘unique’, ‘language had come to be seen as the last great bastion of human uniqueness, the one thing that separated us from all other species’.⁹ Dawkins argues that the results of chimpanzee language experiments ‘struck at the very basis of what many people saw as the essence of humanness’ (p. 72) and that the apes were ‘hammering on the door of humanness’ (p. 74). The violent metaphors used here, the sense of territory being attacked and defended, are echoed in this extract from Richard Passingham’s *The Human Primate*:

It was believed not so long ago that man was unique in making tools and transmitting cultural traditions. We now know that chimpanzees have a crude technology which they learn from each other. We are still the only animal that speaks; but we now find that we can teach chimpanzees to communicate with signs other than spoken language. Our pre-eminent position is clearly under attack, and it is time to take stock.¹⁰

Like Wallman in the passage quoted above, Passingham makes liberal use of the first-person plural. The 'we' in this passage refers to human beings, even as Passingham notes that 'our' uniqueness is being called into question. It functions not only as a description, but also as a reminder of a supposed uniformity among all humans, and a way of unifying all of 'us' against the threatened interlopers, 'them'. It could be compared to what Derrida calls the 'metaphysical familiarity which so naturally relates the *we* of the philosopher to "we-men", to the *we* of the total horizon of humanity'.¹¹ Thus Passingham begins his book by ensuring that 'we' and 'they' are in separate camps (to retain his military metaphor). The battle to preserve 'our pre-eminent position' is the fight to maintain a fixed, impermeable boundary between 'us' and 'them'.

I quote these passages as examples to demonstrate that the importance of language in defining the human, especially in differing the human from the animal,¹² cannot be overestimated. Language has become increasingly central to the definition of the human in recent years, as a result of a series of discoveries in primatology, ethology, zoology, and so on. With the knowledge that nonhuman animals use and make tools, that they teach this tool use to their offspring, and that they engage in complex politics, language has become, as Wallman writes, 'the *sine qua non* of culture'. *Sine qua non*: by saying that there is no culture without language, he can preserve both of these as 'exclusively human' attributes. But it also indicates the vulnerability of this construction, as it depends upon language remaining exclusively human. As Wallman writes in *Aping Language*:

If the capacity for language, too, had arisen prior to that last hominoid divergence, then linguistics might have been a branch of comparative psychology, the ape-language experiments would never have been conceived,

and this book would have been about something else, say patterns of interspecies marriage. But for that matter, had language arisen prior to the split that produced them and us – had we all spoken the same language – there might not have been a them and an us. (p. 153)

Without language as a barrier, the very categories of ‘them and us’, human and animal, would not even exist. Even within humanist discourse, there is a recognition that the split between human and animal is conditional upon language remaining exclusively human. This is why it is necessary to interrogate the concept of language, and to ask exactly what is meant by it, order to question the absolute and monolithic divide between human and animal.

Sudden Emergence of Language

The origin of language is of central importance in the study of human evolution because it marks ‘the split that produced them and us’. As discussed in Chapter 1 of this thesis, paleoanthropological texts generally represent the human as coming into existence in a single moment; often, this is the moment of acquiring language. The idea that language must have appeared instantaneously is widespread. In *The Monkey in the Mirror: Essays on the Science of What Makes Us Human*, Ian Tattersall asks ‘how that innate instinct [...] made such a rapid and unprecedented appearance’. He surmises:

*What must have happened, instead, is that after a long – and poorly understood – period of erratic brain expansion and reorganization in the human lineage, something occurred that set the stage for language acquisition. This innovation would have depended on the phenomenon of emergence, whereby a chance combination of preexisting elements results in something totally unexpected.*¹³

Tattersall’s answer is couched in conditional and speculative terms, and he defers an actual explanation of this ‘innovation’. He suggests that the event which produced language may have been ‘an epigenetic rather than a genetic one’ (that is, dependent on

environmental influences, rather than a change in the genetic code) which was triggered by some unspecified neural event:

Just as the keystone of an arch is a trivial part of the structure yet is essential to the integrity of the whole, this innovation (*whatever it may have been, and we are very far from understanding that*) was the final physical element that needed to be in place to make possible language and symbolic thought – and all that has flowed from them, with such fateful consequences for the world.¹⁴

This idea that language appeared instantly, what Derrida calls the ‘epigenetist thesis’,¹⁵ is also proposed by Claude Lévi-Strauss in a passage quoted in *Of Grammatology*.

Lévi-Strauss writes:

Whatever might have been the moment and the circumstances of its appearance on the scale of animal life, language *could only have been born suddenly*. Things could not have begun to signify progressively. Following a transformation whose study does not belong to the social sciences, but to biology and psychology, a passage was effected from a stage where nothing had sense to another where everything did.¹⁶

Like Tattersall, Lévi-Strauss uses the forms ‘must have happened’ or ‘could only have been’, without fully justifying why this is so. Derrida notes the same type of narrative at work in Rousseau’s discussion of the origin of society:

The passage from one structure to the other – from the state of nature to that of society for example – cannot be explained by any structural analysis: an external, irrational, catastrophic factum must burst in. [...] And when history is incapable of determining this fact or facts of this order, philosophy must, by a sort of free and mythic invention, produce factual hypotheses playing the same role, explaining the coming into being of a new structure.¹⁷

It is not a coincidence that this particular ‘passage from one structure to another’ – namely, from nature to society, from non-language to language, from animal to human – should cause problems for every writer who considers it. The central problem is summarised by Wallman, when he writes ‘the young child’s language, which may not yet be language, will eventually become language. How is this discontinuity in development to be bridged?’¹⁸ This becoming language is an especially difficult transition to account for; indeed, I would argue, impossible to account for within a

humanist framework. Humanism requires that language ‘must have’ emerged suddenly for the same reason that it requires ‘the human’ to have sprung into existence instantly; because humanism posits an essential difference between humans and other living beings, and a similar gulf between language and other forms of communication, it cannot tolerate any overlap between the two categories. But because this ‘instant’ cannot truly have existed in a factual sense, ‘history is [necessarily] incapable of determining’ its actual structure. Indeed, Tattersall seems aware of this, as he comments: ‘The history of the emergence of language is undoubtedly complex – indeed, this emergence only seems even possible from our perspective because we *know* it must have occurred’.¹⁹

I have placed Tattersall’s and Lévi-Strauss’s arguments together to demonstrate that they both defer answering how this transformation could have occurred: defer in the double sense of delaying, and passing responsibility to someone else. Tattersall states: ‘Exactly how this fateful novelty [i.e. language] may have been invented is a separate question, upon which it is beyond my expertise to speculate’.²⁰ In a very similar move, Lévi-Strauss claims that the study of this transformation ‘does not belong to the social sciences, but to biology and psychology’; as Derrida comments parenthetically, ‘that biology and psychology could account for this rupture would seem to us more than problematic’.²¹ I agree, and this is why it is necessary to interrogate biological, psychological and anthropological explanations alongside philosophy and critical theory. Approached in isolation, each of these discourses can unproblematically *use* the idea of the sudden emergence of language and the human without having to explain it, by simply deferring the explanation to other fields of study. However, if one examines these discourses together, it becomes clear that no single one can account for

this transition without resorting to ‘free and mythic invention’. Therefore, it is only by approaching these various discourses together that the myth of the human can be challenged.

The Myth of Language: Freedom and Constraint

As I argue in Chapter 1 of this thesis, creation myths influence contemporary representations of human origins. The Biblical influence is clear in the title of Philip Lieberman’s book *Eve Spoke: Human Language and Human Evolution*.²² Sometimes the mythological aspect is less explicit but emerges in the narrative structure, for example John McCrone’s introduction to his book *The Ape that Spoke*:

It all started with an ape that learned to speak. Man’s apeman ancestors were doing well enough, even though the world had slipped into the cold grip of the ice ages. They had solved a few key problems that had held back the other branches of the ape family [...]. Then man’s ancestors happened on the trick of language. Suddenly, a whole new mental landscape opened up. Man became self-aware and self-possessed. He broke free of the grip of the present – the moment-to-moment life lived by all other animals – and became master of his own memory. Language allowed man to relive his past, plan for the future and step back to consider the fact of his own existence. Through speaking, man rapidly developed a self-conscious mind.²³

This passage reads like a fairy tale or fable: ‘It all started with...’. McCrone suggests that the transformation between ‘apeman ancestors’ and ‘man’ takes place in an instant: ‘Suddenly, a whole new mental landscape opened up’. The terminology of a landscape opening is reminiscent of Derrida’s ‘abyssal rupture’ between ‘those who call themselves men and what so-called men [...] call the animal’.²⁴ McCrone encounters a distinct difficulty with the line he is trying to draw between ‘man’s apeman ancestors’ and ‘man’ himself. It must be the ancestors that ‘happened on the trick of language’ because they have to be pre-human, pre-linguistic, in order to

happen upon this trick. And yet, in the moment that they discover it, they have to become human.

In McCrone's creation myth, language is represented as a 'trick', but a trick that confers great powers on those who perform it. The lists of what language enables 'us' to do are long and often hyperbolic. Steven Pinker, for example, writes: 'What is truly arresting about our kind is better captured in the story of the Tower of Babel, in which humanity, speaking a single language, came so close to reaching heaven that God himself felt threatened'.²⁵ In *The Language Instinct*, Pinker argues that there is a impermeable boundary between human language and the communication systems of other animals.

Language is obviously as different from other animals' communication systems as the elephant's trunk is different from other animal's nostrils. Nonhuman communication systems are based on one of three designs: a finite repertory of calls (one for warnings of predators, one for claims to territory, and so on), a continuous analog signal that registers the magnitude of some state (the livelier the dance of the bee, the richer the food source that it is telling its hivemates about), or a series of random variations on a theme (a birdsong repeated with a new twist each time: Charlie Parker with feathers). (p. 334)

I reiterate at this point that I am not seeking to erase the differences between human language and other animals' communication, but, in Derrida's terms, to question the 'purity, rigor, and indivisibility' of this opposition. For Pinker, the human language / animal communication opposition is indeed pure, rigorous and indivisible. The passage above outlines the binary oppositions: animal communication systems are not language because they are 'finite' (as opposed to the potentially infinite combinations of human words), 'analog' (as opposed to arbitrary), 'repeated' (as opposed to original), and 'random' (as opposed to deliberately or consciously chosen). By contrast, humanist discourse represents language as a magic tool which enables 'man' to become 'self-possessed', to 'break free', to become 'master of his own memory'.

These ideas of freedom and self-possession are central to the humanist myth of language. This is in contrast to nonhuman animals, who can only react passively to their environment:

It is very hard to imagine being inside the head of an animal but the essence of the difference is that animals are chained to the present. Their wordless minds can only react to the events that surround them at a particular moment. Human minds, however, have broken free. We can think about the past, make plans for the future and fantasise about imaginary events.²⁶

In this quotation, language is identified with freedom: without language, animals are 'chained', 'tied' or 'shackled to the present'.²⁷ Derrida uses similar terminology in his summary of the Cartesian idea of the animal: 'It is thought that "the animal" is capable only of a coded message or of a meaning that is narrowly indicative, strictly constrained'.²⁸ By contrast, humans can use language to 'break free'. Miraculous powers are attributed to this behaviour: 'Because speech is a skill under our own control, we can steer our consciousness around our vast memory surface, exploring the past or wondering about the future'.²⁹ 'We' can control 'our' own minds, whereas by contrast: 'Chimps may often look as if they are thinking even when simply sitting in the shade of a tree, yet they are still being driven by the changing world around them rather than responding to chains of internal thoughts'.³⁰ Chimpanzees are passively 'being driven' by their environment, whereas humans can actively 'respond' in ways that are not determined or constrained by anything external. As Derrida comments in a discussion of Rousseau, 'animal language – and animality in general – represents here the still living myth of fixity, of symbolic incapacity, of nonsupplementarity'.³¹ In this way, the myth of language plays a vital role in constructing the 'individual', in the fullest sense of Enlightenment humanism: a self-possessed free agent with mastery of both the external and internal worlds.

From Language to Speech

In these texts, there is a constant slippage between speech and language. Indeed, this slippage is so frequent that the meanings of the two words cannot be fully separated, as in this passage from McCrone's *The Ape that Spoke*:

Human speech is commonly recognised as the dividing line between ourselves and the rest of the animal world. It must also be an important dividing line between us and our apemen ancestors. The reason why the ability to speak is such a sharply defined boundary goes deeper than the mere existence of a method of communication. It is what we have done with language that counts. As we shall see, language paved the way for all the special human abilities that we so value. (pp. 32-33)

While it is 'the ability to speak' which divides 'us' from both 'our apemen ancestors' and 'the rest of the animal world', by the fourth sentence McCrone is referring to 'language' without any acknowledgement of a shift in meaning. The emphasis on speech arises because, as I argue in Chapter 2 of this thesis, abstract concepts such as 'human' and 'language' cannot be directly perceived. Therefore, one must examine *behaviour*, such as talking, in order to know whether the intangible essence is present. When it comes to looking at the past, for example the history of human evolution, even behaviour cannot be seen, as it does not leave direct fossil remains. In these cases, researchers identify the ability to speak with a particular anatomical feature that can be physically examined. Over the centuries, the concrete essence of speech (and therefore of language and of the human) has been located in many different places, including the larynx, the hypoglossal canals (two holes at the base of the skull which are connected to the nerves which control the tongue), the 'flexion of the skull base'³² and, most recently, the hyoid bone.³³ The hyoid plays a crucial role in the extremely heated debate about whether Neanderthals could speak: what Lieberman calls 'the Neanderthal speech storm'.³⁴ For example, the 2005 BBC documentary 'Neanderthal'

(discussed in Chapter 1 of this thesis) identified the hyoid with speech and therefore with the superiority of *Homo sapiens*:

[Speech is] an ability that has been crucial to our progress, ever since our ancestors spread out of Africa. Without the power of speech our Neanderthal, for all his big brain, would have been inferior. So now the question was, could he talk? Even here our skeleton contains a clue. A tiny bone called the hyoid.³⁵

To try to answer this question of whether Neanderthals could talk, some researchers have made ‘endocasts’ (casts of the inside of fossil skulls) from the ‘traces’ left on the inside of the skull by the brain, which has long since disappeared, in order to reconstruct the shape of the original brain. But as Lieberman comments, the results are difficult to interpret because of ‘the faint, uncertain nature of the endocast markings’.³⁶ The tangible essence of speech, and by implication of the human, proves to be very elusive. Lieberman’s research has focused on the flexion of the skull base and on reconstructions of the vocal tract. His theory is that ‘the brain mechanisms that control our tongues, larynx, and lips when we talk are the evolutionary bases for complex human thought’.³⁷ One of his methods is to make comparative studies of the brains and vocal tracts of chimpanzees, monkeys, newborn human babies, and human adults, in order to infer the structure of the Neanderthal vocal tract. What is demonstrated by this kind of research and the way that it is narrativised is that scientific humanism attributes the miraculous powers of language to speech in a very concrete, material, and specific form.

While scientific humanists generally agree that speaking is central to being human, different writers suggest different reasons for its importance. For example, McCrone writes:

Once early man developed the first symbolic words, he had no choice but to speak them one at a time. He could not do as he could with gestures and achieve several things at once [...]. The serial nature of speech would probably,

in fact, have been a serious drawback to early attempts at language. [...] But eventually the two-dimensional limitations of speech turned out to be in fact an advantage. Man was forced to put his words into some sort of sensible order and the beginnings of grammar would have been born.³⁸

According to this argument, because speech is ‘two-dimensional’ (a problematic assertion to which I will return), it forces the development of grammar and therefore logical thought. For Derrida, this ‘linearist concept of speech’ is central to traditional metaphysics. He writes:

A ‘vulgar concept of time’ [...] is intrinsic to the totality of the history of the Occident, of what unites its metaphysics and its technics. And we shall see it later associated with the linearization of writing, and with the linearist concept of speech. This linearism is undoubtedly inseparable from phonologism.³⁹

However, for Lieberman, it is not ‘linearism’ but the *speed* at which humans can comprehend speech which marks it out: ‘human vocal communication is a key element that makes it possible for us to transmit complex thoughts to each other at rates unattainable by other means’.⁴⁰ As these examples demonstrate, it is not merely language in general but the specific form of speech which is represented as the privileged form of ‘truly human’ communication; but the disagreement about *why* spoken language is so special suggests that the privileging of speech, ‘phonologism’, comes before the logical justifications for it.

Logos and Phone

The human is defined as ‘having language’, which is then displaced onto the act of talking. Common metaphors such as ‘Freud says’ or ‘this book really spoke to me’ indicate a very deep connection between speech and truth in contemporary culture. In ‘*Speech and Phenomena*’, Derrida analyses ‘the strange prerogative of the vocal medium’⁴¹ in the metaphysics of presence. He writes:

We will be less astonished before this oblique and laborious, tenacious endeavor of phenomenology to protect the spoken word, to affirm an essential tie between *logos* and *phone*, when we remember that consciousness owes its privileged status [...] to the possibility of a living vocal medium [*la vive voix*]. (p. 15)

The ‘essential tie between *logos* and *phone*’ is still a key part of defining the limits of the human; the voice is identified with subjectivity, consciousness, and truth.

To be human, then, is to speak, and this structure is evident in the historical treatment of mute people. In *The Language Instinct*, Pinker describes language as ‘an ability that is uncontroversially present in every one of us’ (p. 15): an assertion which should immediately provoke questions about who is being excluded from this ‘us’. In *Seeing Voices: A Journey into the World of the Deaf*, Oliver Sacks writes:

To be defective in language, for a human being, is one of the most desperate of calamities, for it is only through language that we enter fully into our human estate and culture. [...] It was for this reason that the congenitally deaf, or ‘deaf and dumb’, were considered ‘dumb’ (stupid) for thousands of years and were regarded by an unenlightened law as ‘incompetent’ – to inherit property, to marry, to receive education, to have adequately challenging work – and were denied fundamental human rights.⁴²

Sacks also notes that ‘some of the deaf children of noble families had been taught to speak and read, through many years of tutoring, so that they could be recognized as persons under the law (mutes were not recognized) and could inherit their families’ titles and fortunes’ (p. 14, note). To be mute was to be ‘practically denied human status’ (p. 11). Deaf people can communicate through sign language, which is a fully developed language with its own syntax and grammar, but historically, there has been ‘an almost insanely fierce, righteous prohibition of sign language’ (p. 12), which Sacks traces back to Aristotle and to ‘the biblical exaltation of the voice and ear as the one and true way in which man and God could speak’ (p. 15).⁴³ Although some progress has been made in recent years, sign language has traditionally been characterised as a

‘rudimentary, primitive, pantomimic’ (p. 20) imitation of speech; even today, deaf children are often forced to learn to speak instead. The general belief that speech is necessary to become fully human is still current:

The lack of functional speech causes both emotional and developmental difficulties. It interferes with language acquisition, and blocks the development of thought processes and of higher intellectual functioning. Without the ability to express consent, dissent, needs, emotions, and ideas, individual autonomy is arrested.⁴⁴

In order to become the autonomous individual of humanism, speech is essential.

Phoné and *logos* are still tied to each other, and this means not only that people with speech problems, but also nonhuman animals who communicate in other ways, are excluded from the possibility of becoming subjects.

One of the earliest references to the possibility of teaching language to a nonhuman ape is found in Julien Offray de La Mettrie’s *Man a Machine*. La Mettrie does believe that the human/nonhuman boundary is coterminous with language, but he does not see this as an immutable difference: rather as a way in which the species barrier could potentially be transgressed. He writes:

Such is the likeness of the structure and functions of the ape to ours that I have very little doubt that if this animal were properly trained he might at last be taught to pronounce, and consequently to know, a language. Then he would no longer be a wild man, nor a defective man, but he would be a perfect man.⁴⁵

For La Mettrie, language is not an outward expression of an inner human essence, but a specific act – the act of speaking or pronouncing – which, if performed correctly, entitles the speaker to be classified as human. The speaking ape ‘would be a perfect man’. In this view, to be human is to act human (as discussed in Chapter 2 of this thesis). La Mettrie was writing in 1748, but his prediction that an ape might ‘be taught to pronounce, and consequently to know, a language’ has not come true, despite many attempts.

It is specifically the ‘pronouncing’ which has not been achieved in Ape Language Research, although apes have been proved beyond doubt to have significant cognitive and linguistic abilities. For example, probably the most successful Ape Language Research project is Sue Savage-Rumbaugh’s work with the bonobos Kanzi and Panbanisha. The bonobos can comprehend spoken language, understand and use abstract symbols, and have a large vocabulary. They can even *write* these symbols.⁴⁶ However, the impact of these abilities is greatly diminished because they do not literally talk. In a 1998 interview in the *New York Times*, headlined ‘She Talks to Apes and, according to Her, They Talk Back’, the first question put to Savage-Rumbaugh was: ‘Do your apes speak?’ She replied:

They don’t speak. They point to printed symbols on a keyboard. Their vocal tract isn’t like ours, and they don’t make human noises. However, they do make all kinds of ape noises. And I believe they use them to communicate with one another. [...] I believe they are communicating very complex things.⁴⁷

Despite Savage-Rumbaugh’s best efforts, the first question will always be ‘Do they speak?’. No matter how many times the bonobos’ communicative abilities are demonstrated, the fact that they cannot literally speak still overshadows this. It is *talking* which absolutely defines the human: humanists claim that ‘‘dogs, cats, chimpanzees, and other intelligent animals would be human if they could only talk’.⁴⁸ Because apes lack *phone*, they must also lack *logos*: the ability to reason, to think, to become a subject.

Voicelessness, Advocacy, and Articulation

If talking is crucial to defining the human, then animals’ lack of a voice is not merely one attribute among many. To have a voice is to be human, and to be ‘mute’, ‘silent’

or 'voiceless' is the condition of 'the animal'. This dichotomy can be read in the texts of animal rights activism, which draw heavily on the terminology of the voice.

Contemporary examples include: the Bristol-based *Viva! Vegetarians* [sic] *International Voice for Animals*; *Animal Voice*, a South African journal published by the Humane Education Trust; IMOM.org, an American charity which raises funds to prevent the euthanasia of pets and whose website is entitled 'Voices for the Voiceless'; an Australian animal welfare fund simply called *Voiceless*; and a British animal rights organisation, *Advocates for Animals*, whose by-line is 'Giving voice, taking action' and whose website headline reads: 'An "advocate" is a person who [...] pleads for or speaks on behalf of others'.⁴⁹ The branch of Animal Studies which is primarily concerned with achieving political change (as opposed to analysing cultural representations) is commonly referred to as 'animal advocacy', thus preserving the centrality of the voice.⁵⁰ For example, Richard Kahn writes that 'animal advocates [are] the representative voices for non-human animals in an institutional structure that both tends to exclude nonhuman animals and considers them voiceless'.⁵¹ 'Animal advocates' thus assert the right to represent nonhuman animals in the political sense ('To take or fill the place of (another) in some respect or for some purpose; to be a substitute in some capacity for (a person or body); to act for (another) by a deputed right')⁵² and they assert this right using the terminology of the voice and of voicelessness. While Kahn critiques the 'institutional structure' for considering nonhuman animals to be voiceless, 'animal advocates' must also consider them to be voiceless, since they arrogate to themselves the right to speak *for* them.⁵³ In this way, the project of 'animal advocacy' reinscribes the humanist binary opposition between speaking human subject and voiceless animal object.

An influential early example of this rhetoric of ‘speaking for’ animals is the poem ‘The Voice of the Voiceless’ by the American poet Ella Wheeler Wilcox, first published around 1900 by the American Humane Association (an animal welfare organisation).

Wilcox’s poem begins:

I am the voice of the voiceless;
Through me the dumb shall speak;
Till the deaf world’s ear be made to hear
The cry of the wordless weak.
From street, from cage, and from kennel,
From jungle and stall, the wail
Of my tortured kin proclaims the sin
Of the mighty against the frail.⁵⁴

The pathos of this poem relies heavily on the inability of animals to speak for themselves. They are ‘dumb’ and ‘wordless’ and need a human advocate to ‘speak the word’ for them. ‘Voiceless’ here is synonymous with ‘powerless’: to speak is to exercise power. Wilcox’s poem demonstrates the paradoxical nature of the claim that animals cannot speak for themselves. While they may be ‘dumb’, they are clearly not silent, as shown by her references to ‘the cry’ and ‘the wail’ of animals. Indeed, she writes that their wails ‘proclaim the sin’, which suggests that the animals are capable of communicating somehow; if they are themselves ‘proclaim[ing]’, then why is it necessary for Wilcox to ventriloquize for them?

The difference between her speech and their cries and wails is articulation. In *Of Grammatology*, discussing Rousseau, Derrida refers to ‘the problem of the cry – of that which one has always excluded, pushing it into the area of animality or of madness, like the myth of the inarticulate cry – and the problem of speech (voice) within the history of life’.⁵⁵ Derrida here identifies ‘animality and madness’ as the areas immediately outside the speaking human subject, and what they lack is articulation.⁵⁶ He goes on to analyse Rousseau’s article on ‘Song’:

Through that example one may analyze the subtle functioning of the notions of nature and imitation. On several levels, nature is the ground, the inferior step: it must be crossed, exceeded, but also rejoined. We must return to it, but without annulling the difference. This difference, separating the imitation from what it imitates, must be *almost nil*. Through the voice one must transgress the nature that is animal, savage, mute, infant or crying; by singing transgress or modify the voice. But the song must imitate cries and laments. This leads to a second polar determination of nature: it becomes the unity – as ideal limit – of the imitation and what is imitated, of voice and song. If that unity were accomplished, imitation would become useless: the unity of unity and difference would be lived in immediacy. (p. 197)

While Rousseau and Derrida are referring to musical song which literally imitates cries and wails, it is also possible to read Wilcox's poem with this structure in mind. Her poem seeks to produce the same emotional effect as the wordless crying and wailing of animals, but cannot be an exact imitation without becoming incoherent and destroying its purpose. Wilcox must, through her poetry, both imitate and exceed 'the wail of [her] tortured kin'; she must re-present the emotional effect, but with the added clarity of words. The key difference here is what Derrida refers to as 'articulation' (p. 229).

According to Rousseau, it is this transformation from wordless cries to articulate words which distinguishes human speech. He describes this transformation as a process whereby words are gradually substituted for the 'natural voice': what Derrida calls the 'language uncontaminated by supplementarity' (p. 247). As Derrida notes, within Rousseau's own structure this 'natural voice' is 'impossible', and yet Rousseau continually 'attempts to define the limit of possibility of the thing whose impossibility he describes' (p. 247). Looking at both phylogenetic and ontogenetic processes, Rousseau tries to identify the moment at which language comes into existence:

No longer the animal cry before the birth of language; but not yet the articulated language, already shaped and undermined by absence and death. Between the prelinguistic and the linguistic, between cry and speech, animal and man, nature and society, Rousseau looks for a limit 'being born', and he gives it several determinations. (p. 247)

In terms of the individual's development, Rousseau writes: 'When children begin to talk they cry less. This progress is quite natural; one language supplants another'.⁵⁷

Rousseau describes this development as a series of substitutions: the thing itself is supplemented by gesture, which in turn is supplemented by the cry, then by somewhat articulate language, which becomes increasingly articulated and 'monotonous', more removed from its natural origin, as it develops.

Darwin presents a similar model in *The Descent of Man* in arguing that 'the faculty of articulate speech [does not] in itself offer any insuperable objection to the belief that man has been developed from some lower form'.⁵⁸ Like Rousseau, he argues that articulate language developed from musical, inarticulate cries:

I cannot doubt that language owes its origin to the imitation and modification, aided by signs and gestures, of various natural sounds, the voices of other animals, and man's own instinctive cries. [...] The imitation by articulate sounds of musical cries might have given rise to words expressive of various complex emotions. (p. 810)

The point I wish to emphasise is that what is attributed specifically to human language is the ability to *articulate*. Animals may use sounds to communicate, but these sounds are 'wordless' and formless. Darwin draws this distinction explicitly in a discussion about whether or not 'language' constitutes 'an immeasurable gulf between [man] and the brutes' (p. 808). Having presented a number of counter-examples to this argument, such as the 'six distinct sounds' produced by the *Cebus azarae* monkey, Darwin writes: 'Articulate language is, however, peculiar to man; but he uses in common with the lower animals inarticulate cries to express his meaning, aided by gestures and the movements of the muscles of the face' (p. 809). Darwin rightly emphasises the role played by non-verbal communication in human language (a point I return to later in this chapter) but here I want to note that the concept of articulation is a vital part of

differing human speech from animal cries, and thus producing the meaning of the human within humanism.

Aping and Parroting

Because of the importance of articulation in differing the human from the animal, talking birds, in particular parrots, threaten the binary opposition between talking human subject and mute animal object. Parrots play a significant role in the animal language debate. Within humanism, they occupy a structurally opposite position to apes, who may possibly think about the world in a similar way to us, but are denied admission to the human category because they cannot speak. Parrots, on the other hand, can produce articulate words, but apparently cannot link this ‘speech’ with ‘thought’: their *phone* has no *logos*. This idea can be traced back to Descartes’

Discourse on the Method, in which he argues:

For it is quite remarkable that there are no men so dull-witted or stupid – and this includes even madmen – that they are incapable of arranging various words together and forming an utterance from them in order to make their thoughts understood; whereas there is no other animal, however perfect and well-endowed it may be, that can do the like. This does not happen because they lack the necessary organs, for we see that magpies and parrots can utter words as we do, and yet they cannot speak as we do: that is, they cannot show that they are thinking what they are saying.⁵⁹

Descartes here makes a distinction between the ability to ‘utter words’, and true speech, in which the human speaker ‘show[s] that they are thinking what they are saying’. Parrots can ‘utter words’, but as these words do not express their thoughts, their speech is not ‘really’ speech. This argument appears in many canonical scientific texts. For example, in *The Descent of Man*, having claimed that ‘articulate language is [...] peculiar to man’, Darwin presents a very similar argument to deal with the exception of parrots:

It is not the mere power of articulation that distinguishes man from other animals, for as every one knows, parrots can talk; but it is his large power of connecting definite sounds with definite ideas; and this obviously depends on the development of the mental faculties. (p. 809)

This viewpoint also appears in John B. Watson's *Behavior*, a founding text of early twentieth-century behavioural psychology that is in most other respects completely opposed to Darwin. Watson writes:

Not all habits formed in the vocal cords are true language habits. The parrot and many other birds learn to speak and sing words; the dog even may possibly form certain vocal habits. [...] Vocal habits do not become language habits until they become associated with appropriate bodily habits, and even substitutable for these acts.⁶⁰

Because parrots' vocal habits are not 'substitutable', because they do not refer to something else, they are not 'true language habits'. This true/false opposition is central to the representation of parrots.

The word 'parrot' is also a verb, meaning to speak without understanding what one is saying, as in this example from Ruth Deich and Patricia Hodges' *Language without Speech*: 'According to this definition [of language] an echolalic person does not command language since he only echoes, or parrots, what he hears'.⁶¹ Just as the verb 'to ape' entered the English language at approximately the same time as the noun, the earliest recorded use of the verb 'to parrot' is in 1596, only seventy years after the word 'parrot' itself was first recorded in English. The secondary meaning of the noun, 'applied contemptuously to a person; esp. in reference to an unintelligent mechanical repetition of speech' is first recorded in 1581.⁶² Thus, the 'literal' and 'metaphorical' uses of the word are not separate; the concept of mindless repetition, of speech without thought, has informed the cultural representation of parrots from the very beginning. Like the word 'aping', discussed in Chapter 2 of this thesis, 'parroting' implies imitation: specifically, imitation of the human. As suggested by the title of the 1929

book *Apes and Parrots: An Anthology of Parodies*,⁶³ apes and parrots are understood as inherently parodic; they are both seen as comic or grotesque imitations of the human. This means that they occupy a privileged position among nonhuman animals, as indicated, for example, by this quotation from Marian Stamp Dawkins:

Perhaps all I will have done is to raise a whole new set of questions such as *which* animals we should be concerned about. Is it just chimpanzees and clever parrots that are candidates for consciousness or must all the rest be considered too?⁶⁴

Because of their resemblance to humans, ‘chimpanzees and clever parrots’ would be the first ‘candidates for consciousness’ if the category were to be expanded.

In Chapter 2, I argue that chimpanzees’ performances of human behaviour have the potential to disturb the boundaries of the human, and that humanism attempts to contain this threatening potential by defining it as fictional, by placing it in quotation marks. In a similar way, parrots’ threatening ability to articulate is suppressed within humanist discourse by representing it as artificial or unreal. For example, in a footnote to an argument that talking is what differentiates the human from all other animals, Lieberman tackles the issue of parrots:

One question that must occur to you is, ‘How do talking birds talk?’. The answer is that they don’t really ‘talk’. Birds produce sound by a very different mechanism. [...] Perceptual experiments [...] show that if you put yourself into the right mental set, the bird mimicry will ‘sound’ like speech. Bird speech mimicry otherwise doesn’t sound like speech.⁶⁵

This passage is a typical example of how humanist discourse deals with the ‘speech’ of parrots and other birds: by claiming ‘that they don’t really “talk”’, but merely ‘mimic speech’.⁶⁶ The sense that they are talking is a ‘perceptual’ illusion: a side-effect of the human tendency to anthropomorphise. Like chimpanzees in human drag, humanism insists that the resemblance of parrots’ speech to human behaviour is superficial and

misleading: it is ‘an exterior reflection of the reality of language’.⁶⁷ Tattersall deals with the question of talking birds in a similar way:

To speak you need a brain that will tell your vocal tract what to do; but you also need a vocal tract that will respond appropriately to the brain’s instructions. And the primitive primate vocal tract cannot respond in this way. In fact, adult human beings are the only creatures, apes included (*though some birds can mimic speech*), that can physically make the sounds that are essential to articulate speech.⁶⁸

Tattersall’s casual parenthetical comment reassures humanism in two ways. It tackles the nagging doubt – surely birds can also physically make articulate sounds? – but by placing it in parentheses he suggests that it is trivial and should not detain the argument. The same applies to Lieberman placing his discussion of parrots in a footnote.

Parrots’ speech, according to humanism, does not communicate thoughts; it is not ‘the expressive channel of an interiority’, to borrow Roland Barthes’ phrase.⁶⁹ But if parrots’ ‘vocal habits’ are not ‘true language habits’, why do they reappear so often in definitions of ‘true language’? A great many writers, including Descartes, Darwin, Watson, Deich and Hodges, Lieberman, and Tattersall, invoke parrots when defining language in order to demarcate the limits of the human. They define what human speech is by establishing what it is *not*. Commenting on Rousseau’s ‘laborious ruse to disqualify the interest in writing’, Derrida writes: ‘Such is the situation of writing within the history of metaphysics: a debased, lateralized, repressed, displaced theme, yet exercising a permanent and obsessive pressure from the place where it remains held in check’.⁷⁰ I suggest that the figure of the parrot, ‘that external phenomenon, that exiled figuration, that outside, that double’,⁷¹ plays a similar role in defining human speech. Humanist texts about language present the speech of parrots as a ‘debased’ and false version of ‘true’ human speech, but its repeated appearance within these texts

shows that it exercises ‘a permanent and obsessive pressure’, a never-entirely-appeased doubt as to whether the parrots are ‘really talking’. As Lieberman writes above: ‘One question that *must occur to you* is, “How do talking birds talk?”’.⁷² Humanist discourse has repeatedly tried to dismiss it as merely an illusion, but it is a remarkably persistent one.

With reference to Saussure’s prolonged argument that writing is exterior to language, Derrida writes:

It is less a question of outlining than of protecting, and even of restoring the internal system of the language in the purity of its concept against the gravest, most perfidious, most permanent contamination which has not ceased to menace, even to corrupt that system.⁷³

Similarly, the various arguments that parrots are ‘not really speaking’ can be viewed as attempts to protect the ‘purity’ of language. As I will argue, the analogy between parrots and writing can be extended much further than this. Like writing, the parrot’s ability to re-present speech in the absence of the original speaking subject disrupts the relationship between speaking and truth: ‘it erases the presence of the self-same [*propre*] within speech’.⁷⁴ Representations of parrots in both fictional and nonfictional texts continually return to themes of imitation, substitution, truth, re-presentation, and death: the same concepts which Derrida identifies with the representation of writing within metaphysics. Derrida writes:

The voice [...] is the unique experience of the signified producing itself spontaneously, from within the self, and nevertheless, as signified concept, in the element of ideality or universality. [...] This illusion is the history of truth [...]. Within the closure of this experience, the word [*mot*] is lived as the elementary and undecomposable unity of the signified and the voice, of the concept and a transparent substance of expression.⁷⁵

Whereas human speech is considered to be ‘the signified producing itself spontaneously, from within the self’, the parrot’s repetition breaks the

‘undecomposable unity’ between ‘the signified and the voice’. Parroting disrupts the unity between concept and speech, and therefore is opposed to ‘truth’. I will now turn to several texts in which parrots figure prominently in order to show how these themes reappear across very different discourses, and how the figure of the parrot suggests ways to destabilise the concept of authentic human speech.

‘An Animal Looks at Me’

Representations of parrots frequently display uncertainty about whether they are speaking subjects or mechanical objects. A recent news story in *The Sun*, headlined ‘Birdbrain Kidnaps Parrot’, played on this uncertainty:

A burglar abducted Monty the talking parrot during a raid – because he feared it would reveal his identity to police. The African Grey was the only witness as dozy David Carlile, 32, stole antiques, jewellery and cash from an isolated country house. When cops arrested him and asked why he took the bird [...] Carlile said: ‘Parrots can talk and I didn’t want it grassing me up.’ A police source revealed: ‘We were in stitches. This guy really thought we could interview the parrot. It’s just as well we nicked him through fingerprints and DNA – I wouldn’t have liked to have introduced the parrot to a judge as our chief prosecution witness’.⁷⁶

The burglar believes that the parrot is a witness who could observe him and could ‘grass him up’; in his opinion, the parrot has the potential power of true speech. The police are ‘in stitches’ at what they see as his mistake in categorising Monty the parrot as a seeing, speaking subject, rather than an object which happens to be able to mimic human speech. Like those who respond to Congo’s paintings without realising they were created by a chimpanzee, Carlile has been tricked by the illusion. The ridicule of both the police and the journalist suggests a slightly excessive reaction which seeks to categorise the anomalous performance as fictional and amusing rather than uncanny and disturbing.⁷⁷ Like the scenario which begins ‘The Animal that Therefore I Am’, in which Derrida finds himself embarrassed at being naked in front of a cat, this scene

calls into question the possibility of being seen by an animal. 'An animal looks at me. What should I think of this sentence?'.⁷⁸ Is the pet in the corner of the room a subject which can observe you, or merely an object, no more able to witness and judge your actions than the other items of furniture?

Another recent and widely reported news story also played on this uncertainty. It told the story of Ziggy, an African Grey parrot, and his role in the break-up of a relationship:

When Chris Taylor's best friend repeatedly mentioned the name Gary, his suspicions were aroused. [...] And, when the best friend made slurpy kissing noises every time he heard the name Gary on television, Chris wondered if Ziggy was trying to tell him something about some other pretty boy. The penny dropped when, one romantic evening as Mr Taylor cuddled his girlfriend Suzy Collins on the sofa, Ziggy blurted out: 'I love you, Gary.' What gave the game away was that Ziggy spoke the fatal phrase in Ms Collins's voice. Even by the standards of African grey parrots, Ziggy is a mimic and a half, and from his cage in the corner he had heard every bill and coo of a secret love affair. [...] [Suzy] was forced to admit to a month-long fling with Gary, some of their intimacies conducted in Mr Taylor's home while he was out at work, but Ziggy wasn't. She could not deny it; every time her mobile phone had rung, Ziggy had piped up in perfect imitation of her: 'Hiya Gary.'⁷⁹

This incident was reported internationally.⁸⁰ Ziggy's 'I love you Gary' was selected by more than one newspaper as a 'Quote of the Week': the first time a nonhuman has had that distinction?⁸¹ This level of interest seems out of proportion to the significance of the events, but this contemporary fable contains classic themes of high drama, such as love, betrayal, and the uncanny. What I want to focus on here is the uncertain status of Ziggy the parrot, who oscillates between subject and object.⁸² While the burglar in the first news story made the apparent error of believing that the parrot could bear witness to his crime, Suzy made the opposite mistake. She seems to hold two contradictory beliefs about Ziggy's status. She speaks about him as a personality in his own right ('I couldn't stand Ziggy, and it looks like the feeling was mutual'), but on the other hand,

she did not think that there was any danger in conducting her affair ‘while [Chris] was out at work, but Ziggy wasn’t’, because she believed that she and Gary were alone.

A very similar structure occurs in Pierre Boulle’s *Monkey Planet*, only in this case it is the human whose presence is disregarded. The human protagonist Ulysse Mérou, trapped on a planet ruled by apes, has won the confidence of the chimpanzee scientist Zira. By learning her language, he convinces her that he is intelligent, and she releases him from captivity and takes him to meet her fiancé, Cornelius. The first encounter is described as follows:

The engaged couple embraced in the manner of the lovers in the park. He had opened his arms wide without a glance in my direction. In spite of what she had told him about me, it was clear that my presence counted no more for him than [that] of a pet animal. Zira herself forgot me for a moment and they exchanged long kisses on the muzzle. Then she stiffened, broke free from him and bashfully lowered her eyes.

‘Darling, we are not alone.’

‘Yes, I am here,’ I said with dignity, in my best simian language.

‘What’s that?’ Cornelius exclaimed with a start.

‘I said, I am here. I am sorry to have to remind you of the fact. Your demonstrations do not embarrass me in the least but you might hold it against me later.’⁸³

Just like Suzy and Gary in the newspaper story, this scene involves a couple engaging in a private embrace in the presence of an animal and failing to realise that they ‘are not alone’. Even Zira ‘forgot [him] for a moment’. The status of animals oscillates back and forth between subject and nonsubject; indeed, in this passage ‘a pet animal’ is the exemplar of a ‘presence’ that does not really count, that can be forgotten. Derrida raises this question, asking ‘is one ever alone with a cat?’⁸⁴ Ulysse must explicitly remind the lovers of his presence: ‘I am here’. It is his ability to speak which makes his presence count.

Smart Alex: Parroting, Uncertainty and the Uncanny

While the first news story ridicules the burglar as a ‘birdbrain’ for believing that the parrot could ‘grass him up’, an adjacent panel on the same page of the newspaper seems to contradict this. Under the headline ‘Smart Alex’, the article reports on the remarkable achievements of Alex, an African Grey parrot (*Psittacus erithacus*) who has a vocabulary of over seven hundred words and a knowledge of at least a hundred different objects, which he can accurately select on the basis of either colour, material, or shape. Alex is one of the most famous animals in the world; he features in almost every discussion of animal language and cognition, and even appears in Margaret Atwood’s novel *Oryx and Crake*.⁸⁵ For twenty years, he has worked at the University of Arizona with Professor Irene Pepperberg, who researches the cognitive and communicative capacities of African Grey parrots. Pepperberg does not see her research as primarily an investigation of animal language, but rather of cognition: ‘Animal language studies are special because of their potential to provide, in a form that can easily be evaluated, data about the relative cognitive capacities of animals’.⁸⁶ She argues that ‘interspecies communication ought to be used as a tool for studying comparative cognitive rather than linguistic processes’.⁸⁷ Unlike some other animal language research, Pepperberg’s is generally accepted by the scientific community, because she uses very strict criteria for measuring success, has rigorous experimental procedures to avoid unintentional cueing by human experimenters, and is extremely cautious about interpreting her results.

However, others who observe Alex are less cautious. As well as his impressive cognitive abilities, he also speaks spontaneously. For example, when he was left at the vet’s to undergo lung surgery, he called out to Pepperberg, ‘Come here. I love you.

I'm sorry. I want to go back'.⁸⁸ Many anecdotes from different sources suggest that Alex's words are not mere empty 'parroting', nor simply answering test questions, but that he may in fact be speaking to communicate:

Alex proceeded to show his grasp of human words by spontaneously using them in entirely appropriate ways. It is disconcerting, to say the least, to watch a videotape of an unsuccessful training session in which a parrot refuses to cooperate with his trainer and then see it terminated by the bird itself moving off-camera muttering the words 'I'm going away!'. His use of the word 'No!', too, had an uncanny aptness. Just as his trainers had said 'No!' if he had given the wrong word to something they had shown him, so he started saying 'No!' back to them if they gave him something he didn't like.⁸⁹

This scene is perceived as 'disconcerting' and 'uncanny' (even by a professor of animal behaviour) because Alex is 'spontaneously using [human words] in entirely appropriate ways': in other words, he is speaking.⁹⁰ In other animal language experiments, for example Sue Savage-Rumbaugh's work with bonobos, animals spontaneously use other arbitrary symbols to communicate. This does have a certain uncanny effect, but it pales into insignificance beside the impact of a nonhuman using spoken words as the arbitrary tokens of communication. At this point, the difference between true human speech and empty echolalic parroting threatens to disappear entirely. What, where, exactly is the difference between Alex saying 'No!' and his trainer saying 'No!'? If Alex's appearance of talking is just an illusion, where does the difference lie between this 'illusion' and human speech?

The uncanny effect of Alex's speech arises specifically from the *uncertainty* over whether 'there is someone in there': as Jean Craighead George writes, 'A parrot is the ultimate possession for those who long to talk to the animals, not only because parrots mimic, but because these birds *just might know* what they are saying'.⁹¹ Similarly Charlotte Uhlenbroek writes, 'Alex certainly *seems to know* what he is talking about, *or does he?*'.⁹² Alex's speech could be categorised with the first type of uncertainty

outlined by Freud in ‘The “Uncanny”’: doubts about whether something that we would assume to be merely an automaton is in fact conscious (‘whether a lifeless object might not be in fact animate’).⁹³ An uncanny effect is produced because there are doubts about whether the parrot, rather than being a clever mimicking machine, ‘might not in fact be animate’.

The Case of the Perjured Parrot: Death and Doubling

As well as uncertainty, parrots’ repetition of speech invokes another aspect of the uncanny, that of the double or *doppelgänger*. Drawing on Otto Rank’s work, Freud argues that, ‘from having been an assurance of immortality, [the double] becomes the uncanny harbinger of death’.⁹⁴ The parrot’s ability to preserve speech after the death of the original speaker is explored in Erle Stanley Gardner’s 1948 detective novel *The Case of the Perjured Parrot*, one of the Perry Mason series.⁹⁵ The story begins with the murder of the millionaire Fremont Sabin. His body is discovered by a neighbour who is alerted by the screeches of his parrot, Casanova. The police take possession of the parrot in the course of their investigation. However, Perry Mason is then approached by the dead man’s son, who tells him that the parrot is not really Casanova. Someone has substituted a different parrot, which appears almost identical, except that Casanova has a missing claw.⁹⁶ Mason tracks down the original Casanova at the home of a local woman named Helen Monteith. Instead of ‘go[ing] to the front door and interview[ing] Helen Monteith’ as his assistant suggests, Mason decides to ‘go to the back door and interview the parrot’ (p. 70). Mason identifies the parrot as Casanova by spotting its missing claw, and says ‘Hello, Polly’. The story continues:

The parrot, *as though mocking him*, burst into high, shrill laughter; then, evidently in high good humor, preened his glossy, green feathers, smoothing them carefully between the upper hooked beak and the surface of his black-

coated tongue. Abruptly, the bird turned its wicked glittering eyes on Perry Mason. It ruffled its feathers *as though showing great excitement* and suddenly squawked, 'Put down that gun, Helen! Don't shoot! *Squawk. Squawk.* My God, you've shot me.'

The parrot paused and cocked its head on one side *as though seeking* by a survey of the three startled faces lined up in front of the screen to estimate the sensation its words had produced. (pp. 71-72, emphasis added)

In this uncanny scene, the voice of the dead man seems to be speaking through the parrot. There are complex layers of appearance and reality: it is 'as though' Sabin is speaking, whereas it is actually the parrot; in another sense, it is 'as though' the parrot is speaking, whereas in fact it is 'really' Sabin. Throughout the book, as exemplified in this passage, the parrot's actions are continually described using terms like 'as if', 'as though', and 'apparently'. This textual feature suggests that we should not be 'taken in' by the surface appearance of the parrot's behaviour. It might appear to be mocking Perry Mason, or to be enjoying the sensation of shocking its audience, but the qualifying words warn us to resist this interpretation, and to recognise that this is merely an illusion. It is not a talking animal, it is an animal that only *appears* to talk. And yet there is slippage within the text itself. While the passage quoted above refers to 'his' feathers and 'his' tongue, it then changes to 'its' eyes and 'its' words, which indicates uncertainty about the parrot's status: is Casanova a 'he', a subject, or an 'it', an object? Similarly, although the parrot only appears to be mocking Mason, the same sentence describes it as 'evidently in high good humor', without any hesitation or moderation. Within the text, the boundaries between appearance and truth, representation and reality, are blurred.

The preservation of speech after the death of the original speaker, associated here with parrots, is exactly the function that is conventionally associated with writing within linguistics and philosophy, as Derrida maintains in *Of Grammatology*. He writes:

The immediate and privileged unity which founds significance and the acts of language is the articulated unity of sound and sense within the phonic. With regard to this unity, writing would always be derivative, accidental, particular, exterior, doubling the signifier: phonetic. (p. 29)

In a similar way, the parrot's speech is a 'derivative, accidental' repetition of 'true', expressive, meaningful human speech. When the implied original speaker, the murder victim Fremont Sabin, said 'Don't shoot!', there was a 'unity' between 'sound and sense', between his speech and his thoughts. But when the parrot repeats it, this is a 'doubling [of] the signifier': 'signifier of the first signifier, representation of the self-present voice, of the immediate, natural, and direct signification of the meaning'.⁹⁷ In *The Case of the Perjured Parrot*, the parrot's speech functions as a type of writing, in the broader Derridean sense: 'the durable institution of a sign',⁹⁸ an inscription that literally survives the death of its original 'author'. The parrot can only repeat and represent meaning, it cannot produce it; like writing, it 'must necessarily operate from already constituted units of signification, in the formation of which it has played no part'.⁹⁹

However, just like writing, once a parrot has learned to repeat words, the original speaker can no longer control when and where its speech is reproduced. This is of practical concern to many parrot-owners today. A recent article in the *Daily Telegraph*, 'Who's a Perverted Polly?', told the story of Barney, 'the notorious swearing macaw of Nuneaton', who was previously owned by a lorry driver and now lives in a wildlife sanctuary where he regularly swears at and insults visitors.¹⁰⁰

Although the article was humorous, an online guide entitled 'Teaching your Bird to Talk' warns about the dangers of teaching a parrot to swear:

Keep in mind that many of our larger handfed parrots may live up to 70 years, if given a good diet and proper care. What do you want to hear for seventy years? Obviously, if you don't like opera, don't teach it to your birds. [...] Be

careful of profanity, too. [...] When you consider that your bird may outlive you, ending up in a new home, then choose the words you teach carefully.¹⁰¹

‘Your bird may outlive you’, and continue to repeat and re-present your speech even after your death. Like the unfortunate Fremont Sabin, your words may be preserved in ways that always exceed your control and which do not require your presence.

The Great Taboo: Voice and the Transmigration of Souls

Perhaps the most famous example of parrots preserving words after the death of the original speaker is the nineteenth-century story known as ‘Humboldt’s parrot’.

According to this legend, the explorer Alexander von Humboldt encountered a native tribe in South America. He noticed that their pet parrots spoke a different language to the people of the tribe. When he asked his hosts about this, they explained that they had recently exterminated a rival group, the Maypure, during tribal warfare. The parrots were spoils of war, and were in fact the only living speakers of the Maypure language. Although Humboldt’s journals do contain the phonetic transcriptions of the language, they do not corroborate the rest of the story. But it is nevertheless a popular and durable legend which still appears regularly in various forms; for example, it is mentioned in passing in Darwin’s *Descent of Man*.¹⁰² A recent reworking is Rachel Berwick’s 1997 art installation *may-por-é*, for which Berwick and Sue Farlow, a parrot behaviour expert, taught two parrots to speak the Maypure language, based on the phonetic transcriptions from Humboldt’s journals.¹⁰³ The parrots were trained for several months using methods based on Irene Pepperberg’s training of Alex. For the installation itself, the birds were placed inside an illuminated, translucent aviary where they spoke the Maypure words.¹⁰⁴ Berwick and her team ‘successfully recreated the

experience of hearing an extinct language being spoken by a living bird', as Farlow writes.¹⁰⁵

The legend of Humboldt's parrot is also explored in Grant Allen's 1890 novel *The Great Taboo*.¹⁰⁶ It tells the story of a young English couple, Felix and Muriel, who are shipwrecked on a remote island in the South Pacific. Their only hope of escape lies with the parrot Methuselah, the last of his species, who is said to know a secret that could help them, but apparently speaks a 'strange jargon' (p. 193) which the island natives cannot understand. However, when Felix and Muriel hear the parrot speak, they realise that he is speaking English. They experience this as highly uncanny:

They couldn't say why themselves; they didn't know wherefore; yet this unexpected echo of their own tongue in the mouth of that strange and mysterious bird thrilled through them instinctively with a strange unearthly tremor. (p. 193)

They are further shocked when the parrot begins to say phrases such as 'God save the king! A fig for all arrant knaves and roundheads!' (p. 198) which suggest that Methuselah is 'speaking to them in the words of seventeenth-century English' (p. 196). They surmise that Methuselah's original owner must have 'beguiled his leisure by imparting to the unconscious ears of a bird the weird secret of his success, for the benefit of any others of his own race who might be similarly treated by fortune in future' (p. 196).

The original speaker's deliberate use of the parrot to preserve his speech after his own death echoes Roland Barthes' description of writing as the "toilette of the dead":

We talk, a tape recording is made, diligent secretaries listen to our words to refine, transcribe, and punctuate them, producing a first draft that we can tidy up afresh before it goes on to publication, the book, eternity. Haven't we just gone through the 'toilette of the dead'? We have embalmed our speech like a mummy, to preserve it forever. Because we really must last a bit longer than

our voices; we must, through the comedy of writing, *inscribe ourselves* somewhere.¹⁰⁷

In *The Great Taboo*, the original speaker has used the parrot to inscribe himself in this way; even more strangely, he has embalmed not only his speech, but his actual *voice*. Methuselah delivers his speech ‘in a thick and very harsh voice, and, what was more remarkable still, with a distinct and extremely peculiar north country accent’ (p. 201). Through the parrot, the original speaker identifies himself as ‘Nathaniel Cross, of the borough of Sunderland’ and explains that he was shipwrecked on the island with two companions, who were both tortured and eaten (p. 201). But Cross was promoted to become the island chief, the incarnation of the god Tu-Kila-Kila. Cross/Methuselah tells them: ‘I, myself, having through God’s grace found favor in their eyes, was promoted to the post which in their speech is called Korong, the nature of which this bird, my mouthpiece, will hereafter, to your ears, more fully discover’ (p. 206).

The uncanniness of the parrot speaking to them in the first person, in the voice of a long-dead man, is made clear in the text:

It was strange how they all hung on the words of that unconscious messenger from a dead-and-gone age, who himself knew nothing of the import of the words he was uttering. Methuselah laughed at their earnestness, shook his head once or twice, and seemed to think to himself. Then he remembered afresh the point he had broken off at. (p. 207)

As in *The Case of the Perjured Parrot*, the parrot here oscillates between subject and object, between the ‘unconscious messenger’ who knows nothing, to a seemingly knowing subject who ‘laugh[s] at their earnestness’ and ‘remember[s]’ where he has stopped speaking. Just as in the Perry Mason book, the phrase ‘seemed to think to himself’ defers the question of whether Methuselah is really thinking or only appearing to. There is a constant uncertainty between appearance and reality which produces an uncanny effect. There is also slippage between the two speakers: Cross, the original

human author of the words, and Methuselah, the parrot repeating them two centuries later. Allen writes:

As he reached these words Methuselah paused, and choked in his throat slightly. The mere mechanical effort of continuing the speech he had learned by heart two hundred years before, and repeated so often since that it had become part of his being, was now almost too much for him. (p. 209)

Once again, there is an uncertainty between the 'mechanical effort' of repeating the speech, and the sense that 'it had become part of his being', which suggests that by repeating Cross's words, Methuselah is somehow partaking of their meaning.

This transference of subjectivity from Cross to Methuselah is echoed in the speech itself. The secret of the islanders' religion is that Tu-Kila-Kila protects himself by keeping his soul not in his own body, but in a sacred tree. The soul of Tu-Kila-Kila is transferred from one human incarnation to the next (pp. 212-13). The current Tu-Kila-Kila gives Felix and Muriel 'a theological lesson' and tells them:

Each god, as he grows old, reincarnates himself visibly. Before he can grow feeble and die he immolates himself willingly on his own altar; and a younger and a stronger than he receives his spirit. [...] Am I not very ancient? Have I not passed through many bodies? (p. 127)

In the same way, it seems that by repeating Cross's words, Methuselah has received the man's spirit; Cross's soul, embodied by his voice, has passed into the parrot. After two centuries, the speech 'had become part of his being' (p. 209). This idea that a transmigration of souls can occur through the transference of the voice echoes beliefs from many cultures: as Anne Karpf notes, 'in ritual, voice and breath often connect a speaker with spirits handed down by their forebears'.¹⁰⁸ If Cross has passed on his spirit to Methuselah, the parrot himself is now 'very ancient' and must pass on the spirit to another before he 'grow[s] feeble and die[s]'. Nearing the end of his speech, the parrot's strength finally wears out, and he falls 'off his perch, stone dead, on the

ground' (p. 215). The reaction of the listeners to Methuselah's death seems to suggest that he has indeed absorbed Nathaniel Cross's spirit:

The parrot's words were so human, its speech was so real to them, that they felt as though the English Tu-Kila-Kila of two hundred years back had really and truly been speaking to them from that perch; it was a human creature indeed that lay dead before them. Felix raised the warm body from the ground with positive reverence. 'We will bury it decently,' he said. (pp. 215-16)

Far from mere parroting, Methuselah's speech is 'so human' and 'so real' that he effectively becomes 'a human creature' deserving a decent burial. The boundaries between original and copy, human and parrot, have become fatally blurred.

Whereas the parrot is associated with false, second-degree representation, and opposed to the truth of human speech, Felix and Muriel feel that Nathaniel Cross has 'really and truly been speaking to them'. With Methuselah's death, Cross's voice finally dies too; but his words have been passed on to Felix and Muriel. Having finally delivered his speech, after two centuries of repetition, to listeners who can understand it, the parrot is able to die, as 'a younger and a stronger than he [has] receive[d] his spirit'.¹⁰⁹

Because the voice is so closely identified with 'the spirit', this preservation of speech can be deeply disturbing, as demonstrated in a recent advice column in *The Times*. An anonymous woman wrote in with a problem. Her husband has recently died, and is survived by his African Grey parrot, who 'continues to deliver snatches of "Tarrah, love" and "By gum, in't it ready yet?" and others [sic] phrases of Jack's in a Yorkshire accent identical to Jack's. His wife finds this morbid and ghoulish'.¹¹⁰ The columnist considered the problem:

If only a smart entrepreneur had had the foresight to persuade Peter Ustinov, Noel Coward or David Niven to play host to a few parrots [...] once the birds had soaked up their master's voice, they could have been sold. Cohabiting with an African Grey that mimics your late husband's everyday chit-chat, and in his accent [...] might distress any grieving widow. [...] Donating him to a new home would certainly move the parrot out of the widow's earshot. But she

might feel it to be a kind of avian adultery to think of her late husband as, albeit only via his undeceased parrot, making marital small talk to another woman. Perhaps a friend [...] might take in the African Grey as a lodger until it has learnt some new dialogue before returning it, reprogrammed, to the widow.

The almost nervous jokes that open this article, and the suggestion that the parrot can simply be 'reprogrammed', are not unexpected; they provide reassurance that the parrot's imitative abilities are trivial, comic and mechanical. But this is contradicted by the strange suggestion that her late husband might be able to commit 'a kind of avian adultery [...] via his undeceased parrot'. 'The strange prerogative of the vocal medium'¹¹¹ is evident here. The connection between the voice and the self is so powerful that the parrot's mimicry of Jack's 'marital small talk' could even constitute 'adultery'. Once again, the status of the speaking parrot is unstable in this text.

Replaceable Subjects

In the novels discussed here, the parrots' speech is only necessary because the original human speaker cannot be present. It is taken for granted that would be preferable to have the original speaker present to guarantee his words, but in the circumstances, the parrot can allow him to continue signifying and communicating even after his death.

In this sense the parrot is a kind of 'dangerous means':

Rousseau considers writing as a dangerous means, a menacing aid, the critical response to a situation of distress. When Nature, as self-proximity, comes to be forbidden or interrupted, when speech fails to protect presence, writing becomes necessary. It must *be added* to the word urgently. [...] It is the addition of a technique, a sort of artificial and artful ruse to make speech present when it is actually absent. It is a violence done to the natural destiny of the language.¹¹²

In a literal way, this describes the function of the parrot in *The Case Of The Perjured Parrot*. The imagined murder scene is 'a situation of distress' which requires the parrot as a 'critical response'. Sabin is present, but his words ('Don't shoot!') fail 'to protect [his] presence'. Their 'natural destiny' is not fulfilled, because Helen does not

obey his command; she shoots him. The parrot's ability to re-present these words then 'becomes necessary'. Casanova the parrot is 'a menacing aid', an 'artificial and artful ruse' which will enable Sabin's words to be preserved in his absence. The murder scene can then be imagined and reconstructed from the 'writing' which is the parrot's speech.

If the parrot's ability to re-present speech makes it possible for the original speaker to communicate important information, such as the identity of a murderer or the secret of Tu-Kila-Kila, after his death, then why should it be seen as 'dangerous' or 'menacing'? To understand this, it is necessary to continue the plot of the story. The police in *The Case of the Perjured Parrot*, as in all classic detective novels, are too easily contented with simple explanations. They believe that Casanova's words are a true imitation of Sabin's dying words ('Put down that gun, Helen!') and so they arrest Helen Monteith, Sabin's mistress, for his murder. What the police do not realise is that there are two parrots: Casanova was not in fact present at the murder scene, so he cannot be repeating Sabin's dying words. But Perry Mason does know this, and therefore concludes that someone has taught Casanova his speech in order to frame Helen for the murder:

The murderer must have been someone who had access to the parrot, someone who had planned the murder for a long time; someone who intended to pin the crime on Helen Watkins Sabin [Sabin's wife], since he probably knew nothing of Helen Monteith. [...] [He] started in educating the parrot to say, 'Drop that gun, Helen ... don't shoot ... My God, you've shot me!'. The whole crime had been carefully planned. (p. 262)

Far from being spontaneous expressions of Sabin's thoughts, the words which the parrot is imitating have been carefully drilled into it. The police were fooled by the binary opposition between false parroting and true speech, but it turns out that the original speech was in no way 'true'. Just as Derrida argues that the possibility of

writing informs speech from the very beginning, the parrot was taught these words in order to re-present an event that never actually took place. The speech does not therefore have an origin in any kind of natural 'self-proximity'. Furthermore, the murderer had to repeat the speech 'many times', had to parrot it himself, in order to ensure the parrot would repeat it: as another character confirms, 'I knew Casanova wouldn't say anything unless someone had been to some trouble to repeat it many times in his presence' (p. 277). Similarly, in *The Great Taboo*, Cross had to repeat his 'original' speech many times in order to impress it upon Methuselah's memory. There is thus no place or time that can be identified as the simple and true origin of the parrots' speech.

Thus, in *The Case of the Perjured Parrot*, there is no such thing as 'the *proper place* of the sentence, the unique time of the sentence pronounced *hic et nunc* by an irreplaceable subject'.¹¹³ The sentence was never in its 'proper place': the implied 'here and now' of Helen shooting Sabin. Even more strangely, it turns out that neither of these characters are 'irreplaceable subject[s]'. As the story proceeds, characters and events continually double; there are two wives, two parrots, characters with two names, and names shared by two characters. At the end of *The Case of the Perjured Parrot*, although the murderer has been caught, the reader does not have the feeling of 'closure' that is usually promised by the modern detective novel, in which 'the events of the story become fully intelligible to the reader'.¹¹⁴ Instead, the narrative becomes increasingly complicated as the characters and events in the story multiply. The murder victim, Sabin, turns out to have a hitherto unsuspected brother, who tells Mason: 'We aren't twins, but, as we got older, there was a striking family resemblance.

People were always getting us mixed up' (p. 275), and the story leaves all of the characters hopelessly 'mixed up'. As Drake, Mason's assistant, says:

We have two suspects in this case, both of them named Helen. Perry, if you introduce that parrot in evidence to show that Helen Watkins Sabin fired the shot, the district attorney will turn your own evidence against you to show that Helen Monteith did it. (p. 201)

This doubling of names suggests that even in 'true' human speech, there is uncertainty and slippage of meaning. A word, specifically a proper name, is supposed to refer to something: in this case, to literally point to the murderer ('Put down that gun, Helen!'). As Lévi-Strauss writes, 'proper names represent the *quanta of signification* below which one no longer does anything but point'.¹¹⁵ But in *The Case of the Perjured Parrot*, even such an apparently transparent word does not refer unproblematically to a single person, and your own speech can be 'turn[ed] against you'. Instead of a narrative that ends in closure, the basic elements in the story continue to divide and double, and the book leaves the reader with unresolved uncertainties about who is the 'true' wife, the 'true' parrot, the 'true' Sabin.

With reference to the relationship between speech and writing within metaphysics, Derrida argues: 'Deconstructing this tradition will therefore not consist of reversing it, of making writing innocent. Rather of showing why the violence of writing does not *befall* an innocent language'.¹¹⁶ Therefore, instead of arguing that parrots can 'really speak', I suggest that these texts problematise the possibility of a true, original, pure human speech. The possibility of parroting is not an 'accidental and therefore effaceable addition'¹¹⁷ to speech, but is intrinsic to it.

Blushing: Betrayal and Self-control

In both of the novels discussed above, once the parrot has learned its speech, it can no longer be controlled. For example, once Perry Mason realises that Casanova was not present at the murder scene, its speech becomes dangerous for the person who taught it to him, since it proves that he intended to frame Helen. As Mason says, ‘That’s the trouble with teaching a parrot something to say: you can never tell how often he’ll say it, or when he’ll say it’ (p. 266). This same sense of uncontrollable repetition can be read in the news story about Chris, Suzy, and Ziggy. The unfaithful girlfriend is exposed by the parrot’s reproduction of her words to her lover: it is her voice, but she can no longer control it.

But this particular story contains another, perhaps more fascinating, loss of control. When Chris turns to his girlfriend questioningly, her ‘cheeks had flushed to beetroot’.¹¹⁸ She ultimately betrays *herself*: ‘The blush announces at once a scandalous confession and yet also a balancing re-assertion of modesty’.¹¹⁹ Her body signifies in ways which are beyond her conscious control; her guilt is ‘written all over her face’.¹²⁰ The illicit love affair itself, described in the article above as ‘bill and coo’, suggests animal desires. But whereas her infidelity represents a deliberately chosen, conscious betrayal, this second betrayal is neither conscious nor voluntary. Like the ‘bill and coo’ of lovemaking, blushing occupies ‘an uneasy borderland between the mental and the bodily, the rational and the physiological, the intellectual and the appetitive’ (p. 26), as Brian Cummings writes. He argues that, on the one hand, blushing signifies the human, since it requires ‘intelligence’, ‘reflectiveness’ and a sense of morality: ‘an animal can be thought neither to experience nor to recognise shame’ (p. 28).¹²¹ Yet

simultaneously, Cummings notes that ‘the comprehensive involuntariness of blushing’ is a reminder of the animality of the human body (p. 28).

In *The Expression of the Emotions in Man and Animals*, first published 1872, Charles Darwin devotes an entire chapter to the subject of blushing.¹²² In general, Darwin analyses emotions in exactly the same way whether he is discussing humans or animals. He states this explicitly in the introduction: ‘No doubt as long as man and all other animals are viewed as independent creations, an effectual stop is put to our natural desire to investigate as far as possible the causes of Expression’ (p. 1266).

Throughout the book, Darwin describes human and animal expressions using the same explanations. But he opens the final chapter in this way:

Blushing is the most peculiar and the most human of all expressions. Monkeys redden from passion, but it would require an overwhelming amount of evidence to make us believe that any animal could blush. The reddening of the face from a blush is due to the relaxation of the muscular coats of the small arteries, by which the capillaries become filled with blood [...]. We can cause laughing by tickling the skin, weeping or frowning by a blow, trembling from the fear of pain, and so forth; but we cannot cause a blush, as Dr. Burgess remarks, by any physical means, – that is by any action on the body. It is the mind which must be affected. Blushing is not only involuntary; but the wish to restrain it, by leading to self-attention, actually increases the tendency.
(p. 1443)

In this passage, blushing blurs the boundaries between those aspects conventionally associated with the human – the mind, morality, shame – and those associated with the animal – the body, instinct, desire. The detailed description of the process leaves no doubt that it is a concrete physiological event, and yet it cannot be caused ‘by any action on the body’ and cannot be consciously controlled or restrained.

The complex relationship of blushing to the human/animal opposition is also demonstrated by Darwin’s interest in whether different categories of people blush:

The young blush much more freely than the old, but not during infancy, which is remarkable, as we know that infants at a very early age redden from passion. [...] Many children, at a somewhat more advanced age blush in a strongly marked manner. It appears that the mental powers of infants are not as yet sufficiently developed to allow of their blushing. Hence, also, it is that idiots rarely blush. [...] Nevertheless some, if not utterly degraded, are capable of blushing. [...] Women blush much more than men. (pp. 1443-44)

This passage sets up an intricate hierarchy of humanness. Children, because they are closer to animals, 'blush much more freely' than adults, but there is a limit which lies between infancy and later childhood. This is because the infants' 'mental powers [...] are not as yet sufficiently developed'; Darwin's note that they do however 'redden from passion' indicates that there is no physiological reason for their lack of blushing, but rather it is because they do not have the concept of shame yet. They are *too* close to animals, with not enough of the human in them to produce the right mixture for blushing.¹²³ Similarly, women are said to blush 'much more than men'; like children 'at a somewhat more advanced age', presumably they have the right combination of human and animal to produce ideal conditions for blushing. Infants and those who are 'utterly degraded' are too animal; adult men are too human; the more ambivalent figures of children and women are most likely to transgress the boundaries between human and animal, mental and physical, reason and passion.

Blushing also disrupts the opposition between conscious, freely chosen human response and automatic, determined animal reaction. Suzy blushes because of her guilt, but she has no control over it. By contrast, Ziggy the parrot seems to use words to deliberately communicate information, at least in his owner's opinion: 'Ziggy was one in a million; he was a loyal friend, and I have no doubt he was looking out for me'.¹²⁴ Darwin links blushing with a series of other involuntary events, writing that blushing causes 'extreme disturbances of mind':

Persons in this condition lose their presence of mind, and utter singularly inappropriate remarks. They are often much distressed, stammer, and make awkward movements or strange grimaces. In certain cases involuntary twitchings of some of the facial muscles may be observed. I have been informed by a young lady, who blushes excessively, that at such times *she does not even know what she is saying*. (p. 1450, emphasis added)

While blushing is ‘the most human of all expressions’, the human represented here is far from the masterful, speaking, controlling individual. Instead, this ‘young lady’ is subject to ‘involuntary twitchings’ and a failure to control, or even to understand, her own speech. She has lost her ‘presence of mind’: that self-presence which underlies the phenomenological concept of speech seems to have dissipated entirely.

The Limbic System and Leakage

Blushing is one example that indicates that the humanist myth of speech is flawed, and that it is necessary to question ‘the purity, the rigor, and the indivisibility’ of the opposition between human response and animal reaction.¹²⁵ The hierarchical binary pairs which define this opposition are neatly set out by Joel Wallman in *Aping*

Language:

Apes and monkeys do not have obvious nascent versions of the language regions of the human brain, *although there are some hints of such developments here and there*. Nor do other primates, *with a few exceptions*, evince language-like principles in their natural system of communication. Ours, *dispensing with qualifications*, is cortical, while theirs is limbic; our symbols are learned, their calls are inborn; our language is referential, their communication affective. (p. 152, emphasis added)

Wallman here attempts to put ‘us’ and ‘them’ very firmly in separate camps, and repeatedly uses ‘our’ and ‘their’ to reinforce the difference. However, this aim is seriously undermined by the insertion of sub-clauses in every sentence which dilute or even directly contradict the main point. These contradictions indicate that the distinction is not really as clear-cut as he tries to argue. On what basis can he simply

‘dispense with qualifications’ in order to preserve the ‘purity, rigor and indivisibility’ of the human/animal opposition? The three oppositions that Wallman names here – learned vs. inborn, cortical vs. limbic, referential vs. affective – are all versions of the same basic opposition between free and not-free. ‘Their calls are inborn’ and therefore unchangeable, while ‘our symbols are learned’, and therefore mutable. The other two oppositions emphasise the emotional aspect of animal communication; it is ‘affective’ and ‘limbic’. John McCrone draws a similar distinction:

Calls and cries are effective but they are not what we would describe as true forms of communication, where an animal deliberately sends a message to another member of its group rather than just gives voice to an emotion – where signalling comes under the control of the conscious cortex rather than the sub-conscious emotional system.¹²⁶

There is insufficient space here to explore the full implications of the cortical/limbic distinction, but it is used by writers such as Wallman and McCrone to set up a binary opposition whereby the evolutionarily more recent cortex is associated with ‘higher’ brain processes, language and conscious thought, while the phylogenetically older limbic system is associated with ‘lower’ brain processes, emotion and automatic reactions.

The scientific humanists quoted here do not claim that humans do not have a limbic system, but they do argue that human language is ‘cortical’ whereas animal communication is ‘limbic’. This structure excludes emotion from ‘true’ human language and ‘higher’ systems. For example, Lieberman writes: ‘the ability to produce vocalizations that are *not* linked to emotion and instinct seems to create the gulf between human language and the vocal communications of apes’.¹²⁷ Is it really possible to produce vocalizations that have no link to emotion? As the neurologist Vilyanur Ramachandran argues, ‘your emotions – mediated by the limbic system and

amygdala – are an essential aspect of self, not just a “bonus”.¹²⁸ It is impossible to exclude the limbic system, and consequently emotion, from playing a part in even the so-called ‘higher’ processes in humans. However, this does not prevent humanist writers from claiming that human language is voluntary and intentional, whereas animal communication is automatically determined. In *The Ape that Spoke*, McCrone explicitly sets out a hierarchy of ‘different levels of communication’:

The simplest is the alarm call – the instinctive or wired-in reaction to danger which *automatically* alerts the whole group. [...] Although often *appearing to be* impressive examples of communication, alarm calls are both *automatically triggered and automatically understood* [...]. While the Vervet monkey may *appear to be intelligent* with its variety of calls, this simply shows it has a strong evolutionary need for different sorts of *reactions* to different threats. [...] As well as alarm calls, birds have mating cries, territorial singing, threat displays and food-begging chirrup. These noises are all *genetically programmed* and require little thought, so they do not qualify as *deliberate* attempts to communicate in the human sense. A higher level of communication than wired-in instinctive calls is the expressive or emotional cry, where an animal gives vent to its inner feelings. [...] Such a noise could be said to be *genetically programmed*. [...] The difference is that an emotional cry does not *trigger a guaranteed response* in the listener.
(pp. 112-13, emphasis added)

Unsurprisingly, human speech occupies the highest level in this communication hierarchy, since it is ‘under conscious muscular control’.¹²⁹ In McCrone’s view, the communication of vervet monkeys is not really ‘intelligent’ or ‘impressive’; it only *appears to be*. There are many ways in which this could be challenged. For example, recent research into bird songs has shown that they are not simply ‘genetically programmed’ but are at least partly learned and subject to cultural and regional variations, known as ‘dialects’.¹³⁰ Once again, though, I follow Derrida in ‘wonder[ing] whether one could not claim as much relevance for this type of analysis in the case of the human, with respect, for example, to the “wiring” of its sexual and reproductive behaviour’.¹³¹

With this question in mind, a very suggestive essay is ‘The Smell Of Love’ by the psychologist F. Bryant Furlow.¹³² Furlow argues that pheromones (‘biochemical bouquets’) play an important part in human ‘mate-selection’, and argues that ‘reports of our olfactory devolution have been greatly exaggerated’ (pp. 118-19). Humanist discourse has tended to de-emphasise the importance of smell to humans, because it is culturally associated with the animal. Psychoanalytic accounts, most famously Freud’s *Civilization and its Discontents*, suggest that as the child develops, there is a ‘shift of privilege in the sensorium from smell to sign, the nose to the eye’.¹³³ Cary Wolfe takes issue with this, and argues that

one way to recast the figure of vision (and therefore the figure of the human with which it is ineluctably associated) is to resituate it as only one sense among many in a more general – and not necessarily human – bodily sensorium.¹³⁴

This is the effect of Furlow’s essay, although he himself tries to resist any anti-humanist implications. He repeatedly reassures those who believe that ‘the notion that animal senses play a role in personal attraction diminishes our humanity’ (p. 121). He concludes his article in this way:

Those who find offensive the notion that animal senses play a role in their attention to a partner need not worry. As the role of smell in human affairs yields to understanding, we see not that we are less human but that our tastes and emotions are far more complex and sophisticated than anyone ever imagined. (p. 125)

While Furlow valiantly tries to defend humanism by reinscribing smell as a ‘complex and sophisticated’ process, I would argue that it is not so much the fact that smell *per se* plays a role in human sexual attraction which strikes a blow at humanism, but the fact that *this effect is not perceived consciously*. As Furlow writes: ‘Curiously, remembering a smell is usually difficult – yet when exposed to certain scents, many people suddenly recall a distant childhood memory in emotionally rich detail’ (p. 119). This evocation of memories and emotions is neither conscious nor under voluntary

control. As Freud argues, this realisation that ‘the ego [...] is not even master in its own house, but must content itself with scanty information of what is going on unconsciously in its mind’ is a ‘major blow’ to ‘the *naïve* self-love of men’.¹³⁵

The human subject is never in full control of its own communication. It often communicates in ways that are not only unconscious but actively sabotage conscious intentions, such as the ‘slips of the tongue’ most famously described by Freud: ‘It is a frequent occurrence for the idea one wants to withhold to be precisely the one which forces its way through in the form of a slip of the tongue’.¹³⁶ Even if the speaker does not betray herself verbally, people who are being deceptive ‘almost always give the game away by producing an unnatural smile, a slightly flawed expression or a false tone of voice’, as Ramachandran writes in *Phantoms in the Brain* (p. 278, note). He offers a neurological explanation:

The reason is that the limbic system (involuntary, prone to truth telling) controls spontaneous expressions, whereas the cortex (responsible for voluntary control, also the location where the lies are concocted) controls the facial expressions displayed when we are fibbing. Consequently, when we lie with a smile, it’s a fake smile, and even if we try to keep a straight face, the limbic system invariably leaks traces of deceit. (p. 278, note)

Although this might seem to preserve the binary opposition between limbic system and cortex, the crucial point is that Ramachandran does not align this opposition with human/animal. Both of these systems are part of the human; having ‘higher’ brain functions does not mean the ‘older’ limbic system is no longer functional or that it is has been superseded. This not a narrative of mastery, but one which suggests a loss of control: ‘the limbic system invariably leaks traces of deceit’.

The terms used here, specifically ‘leaks’ and ‘traces’, are suggestive of the transgression of boundaries and the disruption of categories. The psychologists Paul

Ekman and Wallace V. Friesen have argued that there is a 'leakage hierarchy', according to which

some nonverbal behaviors are harder to control than others during the deception process. These hard-to-control cues leak negative affect and provide clues that a person is deceiving. The leakage hierarchy specifies that the leakiest (and therefore hardest to control) channels are the voice and the lower body. The face and upper body are easier to control.¹³⁷

In this leakage hierarchy, the voice occupies a paradoxical position with regard to the traditional metaphysical concept of the voice. On the one hand, the voice is still identified with access to truth; it is the leakiest channel, that is, the one that is most likely to provide a truthful account to the listener. On the other hand, far from being the instrument of power and mastery, it betrays the speaker. Above, I discussed Wallman's series of oppositions between human language and animal communication, which includes referential vs. affective. Yet here, it is clear that the voice 'leak[s] negative affect' beyond the conscious or voluntary control of the speaker, who is here not represented as an all-powerful locus of truth and agency, but as a mass of conflicting systems which are not all under the control of a unified self.

Body Language and Proper Speech

Humanism, whether expressed in the 'cognitivist problematic of the animal' or in the metaphysical 'truisms' which it 'repeats [...] even as it appears to resist them',¹³⁸ presents speech as a transparent access to thought, as something pure which has transcended the physical and the animal. This passage from McCrone's *The Ape that Spoke* exemplifies the humanist dismissal of the nonverbal aspects of human communication:

Man's ancestors would likely have tried to get round the handicap as much as possible by resorting to the three-dimensional world of gestures – pointing and face-pulling to give extra clues to what they were trying to say. But eventually

the two-dimensional limitations of speech turned out to be in fact an advantage. Man was forced to put his words into some sort of sensible order and the beginnings of grammar would have been born. This meant that he no longer needed gestures to expand the meaning of what he was saying. It is noticeable that we still use a lot of gestures or body language when we speak, although we tend to disregard them and concentrate on what is actually being said. It is as if evolution wired up *Homo erectus* to make gestures but modern speakers no longer need them now that we have proper speech. (p. 131)

McCrone here draws a distinction between 'proper speech', which is exclusively verbal, and the comical picture of a prehistoric hominid clumsily 'pointing and face-pulling to give extra clues to what they were trying to say', as if *Homo erectus* were just making do until 'proper speech' evolved. Proper, from Latin *proprius*, one's own, originally from *pro privo*, for the individual, suggests that language is something that is *possessed* by the individual speaker.¹³⁹ In this view, gestures and body language are 'extra' in every sense; they are external to the true meaning of 'what is actually being said'. Like the limbic system and the sense of smell, these nonverbal aspects of communication are represented as archaic relics of a now superseded animal past. McCrone cannot ignore the 'noticeable' fact that 'we still use a lot of gestures' but apparently 'we tend to disregard them'.

This is not the case. Simply put, nonverbal behaviours matter; they cannot be excluded from 'what is actually being said'. Their importance is demonstrated by the growing field of nonverbal communication studies, which examines body posture and facial expressions, physical appearance and dress, scent, 'proxemics' (the way that people use space), and 'chronemics' (the use of time to communicate, for example being late for an appointment).¹⁴⁰ Even within this field, some researchers are keen to mark out language as a separate category, but their own analyses tend to blur the boundaries, despite their best efforts. For example, in his article 'Nonverbal Vocalizations', Michael Argyle writes: 'It is useful to distinguish between the sounds

which are part of language and those which are independent of it'.¹⁴¹ He then divides vocal sounds into four categories: 'emotional cries'; 'language'; 'vocalizations linked to speech' (including prosodic signals, synchronizing signals, and filled pauses); and 'paralinguistic aspects of vocalization'. Argyle's aim is to distinguish between linguistic and nonlinguistic vocal sounds. He begins confidently, stating that emotional cries 'are of interest since they are the most similar to animal vocalizations. They have nothing to do with language', and then describes language as 'a later system which has been incorporated in the vocal channel, superimposed on more primitive vocal messages'. The first is clearly nonlinguistic, and the second linguistic. But the next two categories – 'vocalizations linked to speech' and 'paralinguistic aspects of vocalization' – are far less straightforward. Argyle states that 'prosodic signals [such as rising pitch and loudness] are *really part of language*', but a moment later he claims that 'although prosodic signals *appear to be part of language*, they also convey emotional information' (emphasis added). He then discusses 'filled pauses, ers and ahs' along with other 'speech disturbances' including 'repetitions, stutters, incoherent sounds, omissions', and claims that these 'are not emotional sounds': a claim that would be problematised by psychoanalysis. Finally even the name of the fourth category, 'paralinguistic aspects of vocalization', indicates the impossibility of clearly separating language from nonlanguage.¹⁴² These paralinguistic aspects 'express emotions and attitudes to other people by the way in which words are spoken; the non-verbal message is given simultaneously with the verbal one'. Argyle then states that 'other aspects of paralinguistics overlap with prosodic signals. "Pitch contour" can be a prosodic signal indicating end of utterance; it can also be a paralinguistic cue for emotion'. Despite Argyle's intention to separate linguistic from nonlinguistic vocal sounds, these categories end up hopelessly muddled. It is not at all clear, for example,

whether prosodic signals are ultimately included in language, or not. Argyle's failure indicates the impossibility of his task, because there is no absolute dividing line between spoken language and nonverbal vocalizations.

Thus even *la vive voix*, far from being 'a transparent substance of expression',¹⁴³ has a material, bodily aspect which exceeds the control of the speaker. One of the few critical theorists to consider this is Roland Barthes, for whom 'the grain of the voice' was a topic of fascination:

Something is there, manifest and stubborn (one hears only *that*), beyond (or before) the meaning of the words, their form (the litany), the melisma, and even the style of execution: something which is directly the cantor's body, brought to your ears in one and the same movement from deep down in the cavities, the muscles, the membranes, the cartilages, and from deep down in the Slavonic language, as though a single skin lined the inner flesh of the performer and the music he sings.¹⁴⁴

Here, rather than revealing conflicting emotions, the grain of the voice is a reminder that the body is always present in speech: 'The "grain" is that: the materiality of the body speaking its mother tongue; perhaps the letter, almost certainly *signifiante*'.¹⁴⁵ The body and the emotions cannot be excluded from speech to produce a pure category of language. Shoshana Felman argues that there is an 'incongruous but indissoluble relation between language and the body':¹⁴⁶ that the act of speaking destroys the opposition between the mind and the body. She writes:

If the problem of the human act thus consists in the relation between language and body, it is because the act is conceived – by performative analysis as well as by psychoanalysis – as that which problematizes at one and the same time the separation and the opposition between the two. The act, an enigmatic and problematic production of the *speaking body*, destroys from its inception the metaphysical dichotomy between the domain of the 'mental' and the domain of the 'physical', breaks down the opposition between body and spirit, between matter and language.¹⁴⁷

'Between animal and human' could be very effectively added to this list. 'The animal' is associated with the body and matter, whereas 'the human' is identified with the

mental and spirit. Thus, the materiality of the body which speaks 'breaks down the opposition' between the human and the animal.

Aphasia and the Symphony of Smells: Communication and Otherness

Humanism denies the significance of nonverbal communication in human interaction.

However, when the verbal component is entirely absent, as in the case of people with aphasia, the extent to which humans communicate nonverbally cannot be denied. In its broadest sense aphasia refers to 'loss of power to understand written or spoken language, as a result of disorder of the cerebral speech centres'¹⁴⁸ but it is generally and more accurately used to refer specifically to a lack of speech. This is confirmed by its etymology: from Greek *a*, no, *phasis*, utterance, from *phanai*, to speak, and related to *pheme*, which means both voice and rumour. If, as humanists claim, talking is what makes 'us' human, what happens to people when they become aphasic? Aphasia differs from the cases of feral children and autism examined in Chapter 2, and the issue of deafness, discussed above, in that it tends to affect people in later life as a result of a neurological illness or injury. This suggests that rather than failing to become human, people with aphasia are at risk of being ejected from the category of the human.

The extent to which human communication exceeds words is described by Oliver Sacks, in a discussion of patients with receptive (Wernicke's) aphasia, who cannot understand words spoken to them:

Their friends, their relatives, the nurses who knew them well, could hardly believe, sometimes, that they *were* aphasic. This was because, when addressed naturally, they grasped some or most of the meaning. And one does speak 'naturally', naturally. Thus to demonstrate their aphasia, one had to go to extraordinary lengths, as a neurologist, to speak and behave un-naturally, to

remove all the extraverbal cues – tone of voice, intonation, suggestive emphasis or inflection, as well as all visual cues (one’s expressions, one’s gestures, one’s entire, largely unconscious, personal repertoire and posture): one had to remove all of this (which might involve total concealment of one’s person, and total depersonalisation of one’s voice, even to using a computerised voice synthesiser) in order to reduce speech to pure words.¹⁴⁹

This narrative contradicts the humanist concept of language as primarily verbal, with gestures, tone of voice, and so on as mere accessories, which are somehow ‘exterior’ or ‘unnecessary’ to the ‘real’ meaning conveyed by words. What becomes clear here is that these ‘extraverbal cues’ are in fact central to human language: so central that people who are entirely unable to understand words ‘none the less understood most of what was said to them’.¹⁵⁰ In order to demonstrate their lack, Sacks is forced to stop being a person. Indeed, the ‘human’ elements of language must be removed, to the extent of having to use a nonhuman computerised voice synthesiser.¹⁵¹ There is no purely verbal human language.

But does becoming aphasic mean becoming inhuman? Sacks hints at something like this when he writes:

The meaning may be fully grasped even when every word is missed. This, in our species *Homo loquens*, seems almost an inversion of the usual order of things: an inversion, and perhaps a reversion too, to something more primitive and elemental. (p. 77)

By identifying ‘our species’ as *Homo loquens*, and describing aphasia as ‘a reversion’,

Sacks does seem to exclude people with aphasia from the category of the human.

However, as discussed in Chapter 2 of this thesis with regard to autism, this does not necessarily mean that he considers aphasia an impairment; it can also be viewed as enhancing other aspects of perception. Sacks writes:

[A person with aphasia] cannot grasp your words, and so cannot be deceived by them; but what he grasps he grasps with infallible precision, namely the *expression* that goes with the words, that total, spontaneous, involuntary expressiveness which can never be simulated or faked, as words alone can, all

too easily... We recognise this with dogs, and often use them for this purpose – to pick up falsehood, or malice, or equivocal intentions, to tell us who can be trusted, who is integral, who makes sense, when we – so susceptible to words – cannot trust our own instincts. And what dogs can do here, aphasiacs do too, and at a human and immeasurably superior level. (p. 78)

Although he preserves the idea that the human level is ‘immeasurably superior’, Sacks also indicates that normal human perception is in some respects inferior to that of dogs and people with aphasia. This challenges the traditional humanist argument that language produces infinite mastery, freedom and superior understanding. In fact, Sacks suggests that by being ‘so susceptible to words’, the normal world-view is in some ways impoverished in comparison to that of a person with aphasia, or a dog. Like Temple Grandin’s argument that ‘autistic people and animals are *seeing* a whole register of the visual world normal people can’t, or don’t’,¹⁵² this re-evaluates the relationship between the human and its others, and ultimately challenges rather than reinscribes humanism.

This view contradicts the humanist assumption that only humans can perceive the world in any meaningful way. This assumption is exemplified by the comments of Terrence Deacon, a professor of biological anthropology and linguistics:

I’m sure that dozens of dogs have walked down this street in the past years and perhaps not one has glanced up in awe or wonder [at this mural] and thought to himself what does this mean? For a dog this is colour on a wall, perhaps even less than that.¹⁵³

Deacon’s confident declaration that a dog cannot appreciate beauty rests on the assumption that the human experience of the world is superior to all other animals’. Other animals’ experiences are impoverished versions of the human, ‘perhaps even less than that’. Vision (which, as Wolfe argues, is ‘ineluctably associated’ with ‘the figure of the human’)¹⁵⁴ is privileged above all other senses. However, while dogs may not experience ‘awe’ and ‘wonder’ when looking at ‘colour on a wall’, their sense

of smell is considerably more sensitive than humans': a dog walking past a wall may ignore the colourful mural but pay attention to the complex smells left by dogs which have previously walked past. As Jean Craighead George writes, dogs can communicate in 'the language of scents'.¹⁵⁵ She writes:

We have such poor noses that we are ignorant of almost all of the information [that] dogs read as easily as we read a newspaper. [...] Unfortunately, that avenue of communication is a one-way street to us, for although we apparently communicate information about ourselves to dogs, scent is the medium we understand the least. (pp. 58-59)

Unlike humanist accounts, which stress the importance of vision above all other senses, this view recognises that there are 'avenue[s] of communication' which humans cannot travel, but which nonhuman animals can. Indeed, 'we' are not even aware that 'we' are communicating information about 'ourselves' in this way: as Wolfe argues, 'the traditional humanist subject finds this prospect of the animal other's knowing us in ways *we* cannot know and master *simply unnerving*'.¹⁵⁶

To return to the example of the mural, if, as Deacon claims, 'for a dog this is colour on a wall, perhaps even less than that', it could equally be said that 'for a human, this is a faint smell of urine, perhaps even less than that'.

If there is a language of scents, could there be an equivalent art? This idea is explored in a playful way by Paul Auster in his novel *Timbuktu*, which is written from the perspective of a dog called Mr Bones.¹⁵⁷ Willy Christmas, his human companion, tries to understand what the dog is experiencing when he smells: 'Was there something more to these frantic sniff-fests than simple military tactics? Could pleasure be involved as well?' (p. 40). Since Mr Bones resists being wrenched away from certain smells, Willy decides that there must be pleasure involved. He ponders:

Did it not stand to reason that a dog of such spiritual inclinations would aspire to loftier things – things not necessarily related to the needs and urgencies of

his body, but spiritual things, artistic things, the immaterial hungers of the soul? [...] If dogs were beyond the pull of oil paintings and string quartets, who was to say they wouldn't respond to an art based on the sense of smell? Why not an olfactory art? Why not an art for dogs that dealt with the world as dogs knew it? (pp. 40-41)

This passage shows an awareness that however 'lofty' the practice of art or music, it still 'relies on the senses to reach [the] soul' (p. 40); humans are physical beings too.

Whereas Terrence Deacon dismisses the possibility of dogs responding to art because they do not appreciate 'colour on a wall', Willy Christmas tries to work out what it would mean to move beyond this humanist perspective. He attempts to construct a 'symphony of smells' for dogs by investigating Mr Bones' response to various smells, while pondering questions such as whether including female scents in the symphony would make it 'pornographic, a kind of smut for dogs' (p. 43). Mr Bones enjoys the process of discovery, but cannot explain to Willy that

for a dog, dear master, the fact is that the whole world is a symphony of smells. Every hour, every minute, every second of his waking life is at once a physical and a spiritual experience. There is no difference between the inner and the outer, nothing to separate the high from the low. (p. 44)

Willy cannot compose the symphony of smells because he cannot 'hear' it; furthermore, his attempts to transform Mr Bones' experience of the world into human terms cannot succeed. In 'The Animal that Therefore I Am', Derrida writes:

It would not be a matter of 'giving speech back' to animals but perhaps of acceding to a thinking, however fabulous and chimerical it might be, that thinks the absence of the name and of the word otherwise, as something other than a privation. (p. 416)

Timbuktu seems to suggest one way in which it might be possible to begin to 'acced[e] to' this 'fabulous and chimerical' thinking. Unlike those texts which suggest that nonhuman animals merely experience a diminished version of being human, if indeed they are allowed to 'experience' anything at all, Auster suggests that while dogs and humans may be companion species (to use Donna Haraway's term), part of that

companionship is recognising that they experience the world in radically different ways.

The argument that animals' communication is an impoverished version of human language is exemplified by *Perspectives in Zoosemiotics*, in which Thomas Sebeok examines the diverse ways that animals communicate, for example by using sonar, changing colours, chemical signals, and electricity. Zoosemiotics, a term invented by Sebeok and Rulon Wells, is 'the discipline, within which the science of signs intersects with ethology, devoted to the scientific study of signalling behavior in and across animal species'.¹⁵⁸ Sebeok discusses the complex communication systems of animals, such as bees and ants, in great detail. This seems like a strong position from which to critique the primacy accorded to human language, but Sebeok devotes several pages to arguing that, instead of using the same criteria to judge humans and other animals, 'we must guard against interpreting man's inventions too simplistically' (p. 85). Other animals' communication systems are primarily of interest because of their relationship to the human:

The task for the immediate future will be [...] using each species, so to say, as a miniature paradigm which throws light upon language observed as a peculiar combination of distinctive features, of which all or almost all components, considered alone, have their separate evolutionary roots, to consolidate and build upon what has been established about the protocultural foundations of human adaptation. (p. 61)

For Sebeok, then, other species are essentially inferior reflections of humans:

'miniature paradigms' whose ultimate value lies in 'consolidating' research about human development.

By contrast, the zoologist Charlotte Uhlenbroek emphasises the radical otherness of nonhuman communication systems:

Although we share the same physical world with other creatures, we often inhabit totally different perceptual worlds. A spider tap-dances on the delicate threads of a web, an elephant listens with its feet to vibrations coming from miles away, a fish sparks up an electrical conversation with a neighbour. All around us are parallel universes rich in smells we cannot smell, sounds we cannot hear, vibrations we cannot feel and electricity we cannot sense.¹⁵⁹

Whereas Sebeok conceives of other species as ‘miniature paradigms’ of the human,

Uhlenbroek notes the limitations of the human, emphasising what we *cannot* perceive.

The human subject here is not an all-powerful figure surveying the world from an

Archimedean vantage point, but an animal who is located in the world and whose

experience is just as limited and specific as any other. For example, she notes that

‘human ears are receptive to frequencies from about 20 Hz to about 20,000 Hz but

many animals can detect sounds far beyond that range’ (p. 31). Like Paul Auster’s

Timbuktu, what is important here is acknowledging the fundamentally different and

inaccessible quality of other animals’ experiences rather than conceiving of them as

limited or inferior versions of the human, while also acknowledging those experiences

which are shared across species. In this way we can ‘theorize the continuities between

human and animal subjectivities in relation to the emergence of linguistic domains,

while respecting the differences’, as Wolfe puts it.¹⁶⁰

‘Electric Vocabulary’: Terminology and Power

Rather than attempting to teach human language to animals, Uhlenbroek uses

technology, play-acting and other techniques to attempt to communicate with animals

on their terms. For example, she employs ‘vibrometers using reflecting laser beams’

(p. 185) to detect the very low frequency vibrations that stink bugs (*Nezara viridula*)

use to communicate with each other: ‘I found myself eavesdropping on a remarkable

conversation’ (p. 182). The use of the word ‘eavesdropping’ indicates an awareness

that the stink bugs' communication is not intended for humans to hear. This contrasts with an unspoken assumption in much zoological writing that other species exist in order for humans to observe them. It is also of note that Uhlenbroek describes the stink bugs' communication as a conversation, without using quotation marks. While her book is entitled *Talking with Animals*, this 'talking' takes many forms besides speech. Not only does she specifically criticise the 'sharp distinction [...] made between animals calls and human language' (p. 68), but she also refers to the 'intimate dialogue' of flashing lights between fireflies (p. 107) and the 'electric vocabulary' of the ghost knifefish (p. 179), to name just two examples. For Uhlenbroek, 'words', 'vocabulary', and 'dialogue' can all be non-verbal. Similarly, Sue Savage-Rumbaugh refers to the bonobo Kanzi's use of the lexigram keyboard as 'talking': a term which some see as deliberate obfuscation of the true nature of his abilities, but which could also be interpreted as a recognition that language can take different forms. As Jean Craighead George writes: "Talk" and "listen" are impoverished words to use to mean communication; perhaps our reliance on speech explains why we spent so long noticing so little animal palaver' (p. 4). In *The Story of Doctor Dolittle*, Polynesia the parrot admonishes the Doctor for failing to understand this:

At tea-time, when the dog, Jip, came in, the parrot said to the Doctor, 'See, *he's* talking to you.'

'Looks to me as though he were scratching his ear,' said the Doctor.

'Animals don't always speak with their mouths,' said the parrot in a high voice, raising her eyebrows. 'They talk with their ears, with their feet, with their tails – with everything. Sometimes they don't *want* to make a noise'.¹⁶¹

Although Polynesia's main message is conveyed in words, the description of her 'high voice' and 'raising her eyebrows' is a reminder that humans routinely communicate using nonverbal language. It is not a question of arguing over whether bared teeth or pointing at lexigrams conform to some definition of language, but of questioning the

‘purity, rigor, and indivisibility’¹⁶² of the distinction between human speech and nonhuman or nonverbal communication.

In *Of Grammatology*, Derrida quotes a passage from Lévi-Strauss’ thesis on the Nambikwara tribe, in which he argues that they are a ‘people without writing’:

Some time later, we saw them very busily drawing wavy lines. In that they imitated the only use that they had seen us make of our notebooks, namely writing, but without understanding its meaning or its end. They called the act of writing iekariukedjutu, namely: ‘drawing lines’. (p. 123)

Derrida takes issue with this final sentence:

It is as if one said that such a language has no word designating writing – and that therefore those who practice it do not know how to write – just because they use a word meaning ‘to scratch’, ‘to engrave’, ‘to scribble’, ‘to scrape’, ‘to incise’, ‘to trace’, ‘to imprint’, etc. As if ‘to write’ in its metaphoric kernel, meant something else. Is not ethnocentrism always betrayed by the haste with which it is satisfied by certain translations or certain domestic equivalents? To say that a people do not know how to write because one can translate the word which they use to designate the act of inscribing as ‘drawing lines’, is that not as if one should refuse them ‘speech’ by translating the equivalent word by ‘to cry’, ‘to sing’, ‘to sigh’? Indeed ‘to stammer’. (p. 123)

In fact, this is exactly what is done to keep human language separate from animal communication. Animals do not speak; they ‘vocalise’ or ‘cry’ or ‘parrot’. For example, a 2005 article in *The Independent* entitled ‘Talking Chimpanzee’ reported on primatological research which showed that chimpanzees’ ‘vocalisations’ are ‘much more complicated and detailed than initially thought’.¹⁶³ Although the article announced that ‘the communication barrier between mankind and our nearest animal relatives may be narrower than we thought’, it simultaneously protected that ‘barrier’ by putting quotation marks around key words, for example: ‘Previous research by scientists indicated that chimps have a “vocabulary” of about 30 “words” or sounds that allow them to communicate with other members of their group’. The quotation

marks around ‘vocabulary’ and ‘words’ suggest that the chimps are not really using language; rather, it is ‘as if’ they have a vocabulary of words, ‘as if’ they are talking.

These questions of terminology are not merely a ‘fruitless and boring debate’, as

Steven Pinker claims. He writes:

That debate is over what qualifies as True Language. One side lists some qualities that human language has but that no animal has yet demonstrated: reference, use of symbols displaced in time and space from their referents, creativity, categorical speech perception, consistent ordering, hierarchical structure, infinity, recursion, and so on. The other side finds some counterexample in the animal kingdom (perhaps budgies can discriminate speech sounds, or dolphins or parrots can attend to word order when carrying out commands, or some songbird can improvise indefinitely without repeating itself) and then gloats that the citadel of human uniqueness has been breached. The Human Uniqueness team relinquishes that criterion but emphasizes others or adds new ones to the list, provoking angry objections that they are moving the goalposts. To see how silly this all is, imagine a debate over whether flatworms have True Vision or houseflies have True Hands. Is an iris critical? Eyelashes? Fingernails? Who cares? This is a debate for dictionary-writers, not scientists. Plato and Diogenes were not doing biology when Plato defined man as a ‘featherless biped’ and Diogenes refuted him with a plucked chicken.¹⁶⁴

I agree with Pinker’s initial assessment of the two sides of the debate, his description of how the debate proceeds (namely, by ‘moving the goalposts’: I return to this point below), and his point that the search for ‘True Language’ can never succeed. But I disagree with his conclusion that it can be dismissed as ‘silly’. What he does not take into account is, first, that the meanings of words are not produced by dictionary-writers, but in all areas of discourse, some of which have more practical influence than others. In the case of ‘language’, I have throughout this chapter identified many of the discourses which play a role in producing its meaning, and some of the consequences of this definition. Second, his examples which are supposed to prove ‘how silly this all is’, namely ‘whether flatworms have True Vision or houseflies have True Hands’, are hardly random or trivial choices. Like True Language, True Vision and True Hands are strongly associated with the idea of human uniqueness.

Similarly, his example of Plato and Diogenes' debate draws attention to the impossibility, even in simple biological terms, of producing an absolute definition of the human which includes all human beings and excludes all nonhumans. In their introduction to *Posthuman Bodies*, Judith Halberstam and Ira Livingston describe the same incident, and write:

To assert, in the spirit of this vaudeville philosophy, that humanity (and the human body) is a catachresis – a term unable either to ground itself adequately in a referent or to assert a common logic to unite its various referents – is a good first step.¹⁶⁵

As they argue, Diogenes' refutation of the attempt to find an unambiguous way of defining the human, even if it has a 'vaudeville' element, nevertheless points to a fundamental problem of humanism: 'that humanity [...] is a catachresis'. Humanism is premised on the existence of an entity that can never be adequately defined or closed. Finally, the process of defining a word, particularly a word such as 'language' or 'human' which plays a central role in culture and philosophy, is not separate from science and the power associated with it. Despite his focus on language, Pinker assumes that the definitions of words have nothing to do with the real work of scientists. However, as I have argued, the meaning of 'the human' depends on the meaning of 'language',¹⁶⁶ and defining who is and is not human makes all the difference in terms of how they are treated, in real terms. As Halberstam and Livingston put it, 'the imaginary closure of the category of the human, even or especially if perpetually deferred, has very real functions'.¹⁶⁷ I would agree that there is no such thing as 'True Language'. But Pinker's rhetorical question 'Who cares?' is a flippant one, and comes from the comfortable position of a subject whose own inclusion within the privileged category has never been threatened.

Conclusion: Endless Deferral

Humanism clings to the signifier ‘language’ as a marker of absolute difference between human and animal, but as I have argued, there are many different ways in which one can ‘rigorously theorize the *disarticulation* between the category of language and the category of species’.¹⁶⁸ In ‘Eating Well’, Derrida writes:

The idea according to which man is the only speaking being [...] seems to me at once undisplaceable and highly problematic. Of course, if one defines language in such a way that it is reserved for what we call man, what is there to say? But if one reinscribes language in a network of possibilities that do not merely encompass it but mark it irreducibly from the inside, everything changes. I am thinking in particular of the mark in general, of the trace, of iterability, of *différance*. These possibilities or necessities, without which there would be no language, *are themselves not only human*.¹⁶⁹

In this chapter, I have explored this ‘network of possibilities’, following some of the traces which challenge the idea of ‘a single linear, indivisible, oppositional limit [...] between the human and the infra-human’ based on spoken language.¹⁷⁰ These possibilities ‘mark [the human] irreducibly from the inside’; there is no such thing as a pure human language which excludes all of the traces of animal communication. The opposition between human language – self-conscious, expressive, deliberate, controlled, responsive, free – and animal communication – reactive, automatic, passive, determined – is not the clear division that is necessary to preserve humanism. It is troubled by bonobos who can comprehend spoken language but cannot speak, by parrots who can speak and perhaps think as well, and by a multitude of animal species that communicate in ways that we cannot comprehend or even perceive. It is also troubled by the fact that, in both verbal and nonverbal communication, the human body always signifies in ways that exceed any conscious intention. The apparent power and mastery that the human has through language is belied by the lack of control shown in blushing, slips of the tongue and pen, and the voice which leaks information uncontrollably. Finally, language itself is not something possessed by a unified human

subject, a tool which s/he can use to manipulate the world, but is a structure that pre-exists 'us' and which shapes 'our' subjectivities. 'We' are never fully in control of what 'we' say.

At the end of Chapter 1, I argued that while paleoanthropologists disagree about which are the essential features of the human, they do not recognise that the human as a category is *constituted* by these arguments; instead, it is represented as existing prior to any discussion of it. I suggested that their disagreements in fact indicate a fundamental uncertainty about the boundaries of the human. These boundaries do not pre-exist the discourse, but are produced within it. A similar process is at work in arguments about the essential features of language. Language is defined differently in different texts; indeed, it seems to be *de rigueur* to include a disclaimer to this effect in every text that approaches the issue of 'animal language'. For example, Wallman writes in *Aping*

Language:

Hockett's [...] famous list of so-called design features of language [...] has provided a useful orientation for those trying to capture the differences between human and nonhuman natural systems of communication. What is wanting, nonetheless, is consensus on what the necessary and sufficient, as distinguished from inessential, property or properties of language are and hence on how we might unequivocally identify language in another species. (p. 6)

Although Wallman claims this 'consensus' is necessary in order to 'unequivocally identify language in another species', it is clear from his use of the phrase 'capture the differences' that in fact the aim is to unequivocally *deny* language in another species.

As Pinker notes above, those who wish to argue that there is only a quantitative and not qualitative difference between human and nonhuman linguistic capabilities define 'language' in terms that at least allow for the possibility of nonhumans demonstrating them. Conversely, those opposed to the concept of animal language define 'language' in such a way that it excludes nonhumans, and then change the definition if new

research makes it necessary. The boundaries are always shifting, but humanism must work to preserve language as exclusively human. In *Through our Eyes Only?*, Marian Stamp Dawkins summarises the results of the ape language research of the 1970s, which demonstrated that apes could use symbols to refer to objects, produce novel and spontaneous combinations of symbols, and understand basic grammar. She writes:

Wasn't this enough? What more defined a human language? (It has to be said that this whole debate was made much more obscure by the lack of a clear definition of 'language'. The definitions kept shifting as people frantically tried to draw distinctions where up to now none had really been needed. Human language had been so vastly and obviously different from anything else that detailed criteria of what these differences might be were relatively new.) (p. 74)

It seems amazing that this comment could be made parenthetically, and the statement that this debate was made 'much more obscure' seems somewhat of an understatement. How can you set out to prove that something has or does not have a particular attribute, if you do not know what that attribute *is*?

Language, in summary, is central to our self-definition as a species, even though we have yet to derive an adequate definition of language itself, one that includes the essential but excludes the merely contingent.¹⁷¹

This quote from Wallman's *Aping Language* makes it very clear (presumably without meaning to) that language and the human are only constituted by each other. What is the essence of being human? Having language. What is language? What makes us human. The meaning is endlessly deferred, doubly deferred, as it is not only displaced and referred on to another signifier, but delayed until a future time: 'we have *yet* to derive an adequate definition of language'. In this play of difference, 'the difference' between human and animal, which is needed to produce the human, never becomes manifest. Language is 'central to our self-definition' so 'we' must cling to it, but in this play of language and the human, 'we' never reach 'the transcendental signified,

which [...] would place a reassuring end to the reference from sign to sign'.¹⁷² The human never becomes present; it is never 'allowed to glow finally in the luminosity of its presence'.¹⁷³

Conclusion: Dismantling the Myth of the Human

In this thesis, I have traced some of the many fractures and limits that divide ‘those who name themselves men’ from ‘what so-called men, those who name themselves men, call the animal’.¹ In the examples discussed, I hope that I have made some progress in ‘determining the number, form, sense, or structure, the foliated consistency of this abyssal limit, these edges, this plural and repeatedly folded frontier’.² The cultural, scientific, and philosophical debates which take place in the course of defining the structure of this ‘frontier’ are of central importance in constructing the category of the human, since, as I have argued, the human can only be defined by differing it from the animal. To reiterate Jacques Derrida’s argument in ‘Differance’, the task of deconstructive reading can be understood as

tak[ing] up all the coupled oppositions on which philosophy is constructed, and from which our language lives, not in order to see opposition vanish but to see the emergence of a necessity such that one of the terms appears as the differance of the other, the other as ‘differed’ within the systematic ordering of the same (e.g., the intelligible as differing from the sensible, as sensible differed; the concept as differed-differing intuition, life as differing-differed matter; mind as differed-differing life; culture as differed-differing nature; and all the terms designating what is other than *physis* – *techne*, *nomos*, society, freedom, history, spirit, etc. – as *physis* differing: *physis in differance*).³

By examining different discourses which focus on the ‘coupled oppositio[n]’ between the human and the animal, it is possible to see the way in which the human necessarily

appears as 'differed-differing' animal, as the animal 'in difference'. What it means to be human, according to contemporary humanist discourse, is not to be animal, and what is animal is what is not human.

As outlined in the Introduction, this project has approached the human as a myth: a fiction with real consequences, a story with 'explanatory power'.⁴ The myth of the human is one of the most potent ideas in contemporary Western culture, and to examine its workings is to take an important step towards dismantling its power.

There is an ongoing need for critical thinkers to assess this powerful discourse and to pay attention to how it defines who 'we' are, and who or what is excluded in order to construct this 'we'. Therefore, in this thesis I have examined how and by whom the various boundaries between the human and the animal are constructed, and what effects this has on those who are marginalised or excluded from the privileged category.

Each of the three chapters in this thesis has taken issue with a particular humanist myth. The creation myths discussed in the first chapter provide humanism with a scientific grounding. In the wake of Darwin's account of evolution and its undermining of the concept of immutable, separate species, paleoanthropologists and other scientists concerned with human evolution have attempted to identify a moment of absolute breakage between prehuman and human. Scientific accounts of human evolution echo the Biblical tale of divine Creation; they are, as Catherine Belsey writes of myths in general, 'stories of the origins of things',⁵ and they have explanatory power because they claim to tell us who 'we' are and where 'we' originate. Through these stories, the human is constructed as the animal in difference; it is defined as what is

new, as what differs from its prehuman ancestors, and conversely they are represented as what is not yet human: as humanity deferred. Within this particular discourse, the crucial difference between the human and the animal is thus difference in time: a chronological distinction and deferral.

The second chapter of this thesis examined another operation of difference. The intangibility of human essence, the impossibility of identifying a visible core of the human, means that humanist discourse must try to delineate how humans act. The myth of the human thus relies upon differentiating human from nonhuman behaviour. However, this attempt to secure the boundary between the human and the animal in terms of behaviour means that those who do not act in the 'correct' way, such as people with autism, are excluded from the category of the human and consequently do not benefit from supposedly universal human rights. This chapter demonstrates the crucial ethical imperative which motivates the project as a whole and the broader project of posthumanism in general: the need to move beyond humanism as a social, institutional and conceptual framework.

In the final chapter, I analysed the way that human language is defined as animal communication in difference. The myth of spoken language as mastery of the internal self and the external world is central to the way that the human is defined within contemporary humanist discourse, and once again this process of definition relies upon exclusion. Characteristics which are common to both humans and nonhumans, such as nonverbal communication, are excluded from definitions of 'true' language, while language-like aspects of animal communication are denied or presented as fictional, only superficially resembling language. In this way the human is defined again as

what differs from the animal. Posthumanism must take issue with this particular myth because it is foundational to contemporary conceptions of the human.

While these three myths are particularly significant in defining the human as the animal in difference, there are further aspects that could be explored. There is great potential for projects looking at the formations of categories such as gender, race, and class, and how these intersect with the process of defining the human. The material itself could also have been arranged in a number of different ways, tracing some of the many lines which run throughout: for example, the Neanderthal speech debate is a single cultural phenomenon which encapsulates questions about evolution, behaviour, and spoken language, and the contested borders of the human. Other directions for future research include further work in the new field of Disability Studies, specifically examining the way that people who are autistic, deaf, mute, aphasic, or mentally ill are discursively excluded from the human, and how these exclusions are founded on ideas about speech and subjectivity. Another possibility would be a closer examination of fictional texts, such as the plethora of books and television programmes for children which feature Neanderthals and other prehistoric people. Taking a more historical view, it would be fascinating to investigate representations of parrots in the late nineteenth century and to explore how these relate to the new voice-related technologies of the time, such as the telephone and phonograph, and to the popularity of séances and spirituality. Other historically specific projects might include a comparison of the overtly fictional performing apes of the mid-twentieth century, such as the Pathe films and PG Tips advertisements discussed in Chapter 2 of this thesis, with the natural history documentaries which have replaced them since the 1970s, in order to examine ideas of nature and performance.

In addition to alternative types of research, such as those suggested above, it is important to recognise that this is not a closed project because the specific configurations of meanings which define the human are constantly shifting. The foliations of the 'abyssal limit' between the human and the animal are not static, but are subject to an ongoing process of reinscription within cultural discourse. Virtually every day, the media reports on new scientific research related to the themes of this project, such as the recent discovery that putty-nosed monkeys employ a communication system (known as 'pyow-hack') which uses syntax,⁶ the controversy over the new hominid species *Homo floresiensis*, unearthed in Indonesia in 2004,⁷ and research which suggests that dogs bark specifically to 'speak' to humans,⁸ to name just three examples. Every discovery of this kind provokes the production of many more texts, such as newspaper articles, television documentaries, popular science books, and novels, all of which play a part in constructing the boundaries of the human by differing it from the animal.

One of the most significant arguments that I have sought to emphasise here is simply that the human has a history: that the definition of what it means to be human, and who is and who is not included within this category, is culturally and historically variable. The human is one of the most resonant concepts in contemporary culture. It is an extremely powerful signifier, but what it signifies is mutable: the behaviours and characteristics that mark out the human from the inhuman are redefined depending upon what is at stake, and who is doing the defining. This mutability is visible within culture and media: for example, the burgeoning autistic liberation movement is an important site of explicit debates about what it means to be human.⁹ It is vital for

posthumanist theorists to track the way that the boundaries of the human are being contested on a daily basis.

Finally, I would like to reaffirm the ethical implications of this project. As discussed in the Introduction to this thesis, some researchers within the field of Animal Studies have created an opposition between ‘animal advocates’ who are motivated by a concern to improve the way animals are treated, and ‘postmodern literary theorists’ who are ‘merely’ concerned with representations and signifying practices. What I hope to have demonstrated in this project is that this is an untenable opposition. Textual representations can and do make all the difference to real living conditions. From the extreme and overt legal dehumanisation of slaves, to the more subtle and insidious exclusions of autistic and deaf people from the category of the human, the effects of being represented as nonhuman are immense. These exclusions are made possible – indeed, are made essential – because of a structure of thought that seeks to divide the world into human and nonhuman, ‘us’ and ‘them’, same and different.¹⁰ Thus, questioning the ‘purity, rigor, and indivisibility’¹¹ of the borders that separate human from animal has the potential to improve the circumstances of many living beings. One way to approach this is to recognise the play of traces that always trouble the limits between human and animal and which differ the human from itself. The human is never, simply, itself; it is the animal in difference.

Notes

Introduction: The Human as the Animal in Differance

¹ 'Episode 1: Big Heads', *What Makes Us Human?*. First broadcast 12 August 2006 on Channel 4.

² Marjorie Garber, *Quotation Marks* (London and New York: Routledge, 2003), p. 247.

³ René Descartes, 'Discourse on the Method of Rightly Conducting One's Reason and Seeking the Truth in the Sciences', in *The Philosophical Writings of Descartes*, trans. by John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1985), Vol. I, pp. 111-51. Further references to this work are given parenthetically in the text.

⁴ In this thesis, I use the phrases 'the human' and 'the animal' to refer to the cultural constructions or myths which I am interrogating. My use of these terms is not meant to imply that such a singular, homogeneous entity as 'the human' or 'the animal' actually exists. I take into account Jacques Derrida's argument that to say "'the Animal" in the singular and without further ado' is to 'utte[r] an asinanity [bêtise]'. 'The Animal that Therefore I Am (More to Follow)', trans. by David Wills, *Critical Inquiry*, 28: 2 (Winter 2002), 369-418 (p. 400).

⁵ Neil Badmington, 'Introduction: Approaching Posthumanism', in *Posthumanism*, ed. by Neil Badmington (Basingstoke and New York: Palgrave, 2000), pp. 1-10 (p. 3).

⁶ Stephen Walker, *Animal Thought* (London: Routledge and Kegan Paul, 1985), p. 3.

⁷ Walker, *Animal Thought*, pp. 4-5.

⁸ Jacques Derrida and Elizabeth Roudinesco, *For What Tomorrow... A Dialogue*, trans. by Jeff Fort (Stanford: Stanford University Press, 2004), p. 65.

⁹ Robin Orwant, 'Chimp Genome Preview: What Makes Us Human', *New Scientist*, 21 February 2004, pp. 36-39 (p. 39).

¹⁰ Cary Wolfe, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (Chicago and London: The University of Chicago Press, 2003), p. 14.

¹¹ *New Scientist*, 21 February 2004, front cover.

¹² 'The' human genome in the singular is a problematic concept. Since each individual organism has its own idiosyncratic genetic sequence, there is no such thing as 'the' human genome. The Human Genome Project used a small number of anonymous DNA samples chosen from a larger number. See 'Whose genome was sequenced in the public (HGP) and private projects?' on the Human Genome Project website <http://www.ornl.gov/sci/techresources/Human_Genome/faq/seqfacts.shtml#whose>, last accessed 6 November 2006.

¹³ US Department of Energy, *To Know Ourselves*, 1996 <http://www.ornl.gov/sci/techresources/Human_Genome/publicat/tko/>, last accessed 6 November 2006.

¹⁴ Richard Horton, *Second Opinion: Doctors, Diseases and Decisions in Modern Medicine* (London: Granta, 2003), p. 385.

¹⁵ Horton, *Second Opinion*, p. 380. On the meaninglessness of the human genome in isolation, see also Barbara Katz Rothman, *Genetic Maps and Human Imaginations: The Limits of Science in Understanding Who We Are* (London and New York: W. W. Norton, 1998), p. 95.

¹⁶ Horton, *Second Opinion*, p. 382.

¹⁷ Orwant, 'What Makes Us Human', p. 36.

¹⁸ Donna Haraway, 'Cyborgs to Companion Species: Reconfiguring Kinship in Technoscience', in *The Haraway Reader* (London and New York: Routledge, 2004), pp. 295-320 (p. 304).

¹⁹ Mark Henderson, 'Neanderthal DNA Will Help to Unlock the Secrets of Humanity', *The Times*, 16 November 2006, p. 29.

²⁰ Jacob Bronowski, *The Ascent Of Man* (London: Book Club Associates / BBC, 1975), p. 31.

²¹ Bronowski, *The Ascent Of Man*, p. 32.

²² Bronowski, *The Ascent Of Man*, p. 36.

²³ I discuss the humanist argument that human behaviour is deliberately chosen, whereas animals' actions are driven by the environment, in Chapter 3 of this thesis.

²⁴ Philip Lieberman, *Eve Spoke: Human Language and Human Evolution* (New York and London: W. W. Norton, 1998), p. 4.

- ²⁵ Diana Fuss, 'Introduction', in *Human, All Too Human*, ed. by Diana Fuss (London: Routledge, 1996), pp. 1-7 (p. 3).
- ²⁶ Leda Cosmides and John Tooby, 'Foreword', in Simon Baron-Cohen, *Mindblindness: An Essay on Autism and Theory of Mind* (Cambridge, Mass., and London: MIT Press, 1997), pp. xi-xviii (pp. xi-xii). Cosmides and Tooby are the directors of the interdisciplinary Centre for Evolutionary Psychology at the University of California, Santa Barbara, which brings together a number of academics from areas such as anthropology, artificial intelligence, and neuroscience. See the Centre's website at <<http://www.psych.ucsb.edu/research/cep/>>, last accessed 24 July 2007.
- ²⁷ Cosmides and Tooby, 'Foreword', pp. xii-xiii.
- ²⁸ Judith Halberstam and Ira Livingston, eds, *Posthuman Bodies* (Bloomington and Indianapolis: Indiana University Press, 1995), p. 1.
- ²⁹ Zakiya Hanafi, *The Monster in the Machine: Magic, Medicine, and the Marvelous in the Time of the Scientific Revolution* (Durham and London: Duke University Press, 2000), p. 2.
- ³⁰ Kate Soper, *Humanism and Anti-Humanism* (London: Hutchinson, 1986), pp. 14-15.
- ³¹ Neil Badmington concisely summarises the four fundamental beliefs of humanism as follows:
 First, there is a belief in an absolute difference between the human and the inhuman. Second, this difference is hierarchical. Third, there is an appeal to a uniquely human essence that cannot be replicated. Fourth, there are clearly identifiable rules according to which a simple versus – humans versus aliens [or in this thesis, animals] – may be maintained.
Alien Chic: Posthumanism and the Other Within (Abingdon and New York: Routledge, 2004), p. 137.
- ³² Garber, *Quotation Marks*, pp. 245-46.
- ³³ Garber, *Quotation Marks*, p. 248.
- ³⁴ Edward O. Wilson, *On Human Nature* (Cambridge, Mass., and London: Harvard University Press, 1978), p. 46.
- ³⁵ Ferdinand de Saussure, *Course in General Linguistics*, trans. by Wade Baskin, ed. by Charles Bally and Albert Sechehaye (New York: McGraw Hill, 1966), p. 120.
- ³⁶ Benjamin Disraeli, speech at Oxford, 1864, quoted in Herbert Wendt, *From Ape to Adam: The Search for the Ancestry of Man*, trans. by Susan Cupitt (London: Thames & Hudson, 1972), p. 65. This is a much-quoted witticism which may be apocryphal, but is probably factual.
- ³⁷ Friedrich Nietzsche, *Thus Spake Zarathustra: A Book for All and None*, trans. by Alexander Tille (London and Leipzig: T. Fisher Unwin, 1908), p. 9.
- ³⁸ Jacob Bronowski, *The Ascent of Man* (London: Book Club Associates/BBC, 1975), p. 31.
- ³⁹ Desmond Morris, *The Human Animal: A Personal View of the Human Species* (London: BBC Books, 1994), p. 6.
- ⁴⁰ Felipe Fernández-Armesto, *So You Think You're Human?: A Brief History of Humankind* (Oxford and New York: Oxford University Press, 2004), p. 8.
- ⁴¹ Hanafi, *The Monster in the Machine*, p. viii.
- ⁴² On this notion of 'hierarchy-thinking', see Steve Baker, *The Postmodern Animal* (London: Reaktion, 2000), pp. 92-95.
- ⁴³ John Gray, *Straw Dogs: Thoughts on Humans and Other Animals* (London: Granta, 2002), p. 31.
- ⁴⁴ Tim Ingold, 'Introduction', in *What Is an Animal?*, ed. by Tim Ingold (London and New York: Routledge, 1994), pp. 1-16 (p. 3).
- ⁴⁵ Jacques Derrida, 'Differance', in *'Speech and Phenomena' and Other Essays on Husserl's Theory of Signs*, trans. by David B. Allison (Evanston: Northwestern University Press, 1973), pp. 129-60 (p. 140).
- ⁴⁶ Throughout this thesis, I treat the word 'differance' as an English word (without italics and diacritical marks) to preserve the homophonic relation between 'differance' and 'difference': so that it remains a difference which cannot be heard. The only exceptions are quotations from other texts, where I have retained the formatting of the original text.
- ⁴⁷ Derrida, 'Differance', p. 129.
- ⁴⁸ 'Differ, v.', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50063746>>, last accessed 6 July 2007.
- ⁴⁹ Derrida, 'Differance', p. 130.
- ⁵⁰ Derrida, 'Differance', p. 130.
- ⁵¹ Sue Savage-Rumbaugh and Roger Lewin, *Kanzi: The Ape at the Brink of the Human Mind* (New York and Chichester: John Wiley & Sons, 1994), p. ix.
- ⁵² Derrida, 'Differance', p. 150.
- ⁵³ Savage-Rumbaugh, *Kanzi*, p. 7.
- ⁵⁴ Derrida, 'Differance', p. 150.

- ⁵⁵ Hanafi, *The Monster in the Machine*, p. viii.
- ⁵⁶ Hanafi, *The Monster in the Machine*, p. viii.
- ⁵⁷ Ingold, *What Is an Animal?*, p. 1, emphasis added.
- ⁵⁸ Although I do make reference to some earlier texts, such as Descartes' *Discourse on the Method* and Rousseau's *Discourse on the Origin of Inequality*, these are employed to demonstrate the historical roots of the debate and to give context to the contemporary situation.
- ⁵⁹ For example, Genesis 1: 25-26. See also Herbert Wendt, *From Ape to Adam: The Search for the Ancestry of Man*, trans. by Susan Cupitt (London: Thames & Hudson, 1972), pp. 17-19, for a discussion of various ancient Greek and Roman thinkers' perspectives on the origin of species. Wendt argues that 'their early tentative advances into the hazy realm between animal and man came to an end when Platonism overran the Western intellectual world' (p. 18).
- ⁶⁰ Gavin de Beer, foreword to Carolus Linnaei, *Systema Naturae: A Photographic Facsimile of the First Volume of the Tenth Edition (1758)* (London: The British Museum (Natural History), 1956), p. iv.
- ⁶¹ Arthur Robinson, 'The Principles of Genetics and Heredity', *Encyclopaedia Britannica*, 15th edn (Chicago and London: Encyclopaedia Britannica Inc., 1994), Vol. XIX, pp. 699-740.
- ⁶² Julien Offray de La Mettrie, *Man a Machine*, trans. by Gertrude C. Bussey and Professor M. W. Calkins (Illinois: Open Court, 1912), p. 117.
- ⁶³ Orwant, 'What Makes Us Human', p. 39.
- ⁶⁴ Derrida, 'Differance', p. 130.
- ⁶⁵ John B. Watson, *Behavior: An Introduction to Comparative Psychology* (New York: Henry Holt & Company, 1929), p. 320.
- ⁶⁶ See G. H. R. von Koenigswald, 'Early Man: Facts and Fantasy', *The Journal of the Royal Anthropological Institute of Great Britain and Ireland*, 94: 2 (June-December 1964), 67-79 (p. 68).
- ⁶⁷ Wendt, *From Ape To Adam*, p. 35.
- ⁶⁸ Goethe, letter of March 1784 to Frau von Stein, quoted in Wendt, *From Ape to Adam*, p. 36.
- ⁶⁹ Watson, *Behavior*, p. 320.
- ⁷⁰ Mary Douglas, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London and New York: Ark/Routledge, 1984), p. 73.
- ⁷¹ 'What Makes Us Human?', *Channel 4.com*, 2006
<http://www.channel4.com/science/microsites/W/what_makes_us_human/vote.html>, last accessed 11 April 2007.
- ⁷² Jacques Derrida, *Of Grammatology*, trans. by Gayatri Chakravorty Spivak, corrected edn (Baltimore: The Johns Hopkins University Press, 1997). 'Speech and Phenomena' and *Other Essays on Husserl's Theory of Signs*, trans. by David B. Allison (Evanston: Northwestern University Press, 1973).
- ⁷³ Jacques Derrida, 'The Animal that Therefore I Am (More to Follow)', trans. by David Wills, *Critical Inquiry*, 28: 2 (Winter 2002), 369-418. 'And Say the Animal Responded?', in *Zoontologies: The Question of the Animal*, ed. by Cary Wolfe (Minneapolis: University of Minnesota Press, 2003), pp. 121-46.
- ⁷⁴ Derrida, 'Differance', pp. 148-49.
- ⁷⁵ Derrida and Roudinesco, *For What Tomorrow...*, p. 21. I have followed the italicisation ('differance') used in the book.
- ⁷⁶ Derrida, 'The Animal that Therefore I Am', p. 398.
- ⁷⁷ Derrida, 'The Animal that Therefore I Am', p. 398.
- ⁷⁸ Derrida, 'The Animal that Therefore I Am', p. 399.
- ⁷⁹ Donna Haraway, 'A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s', in *The Haraway Reader*, pp. 7-45. Donna Haraway, *When Species Meet* (University of Minnesota Press, forthcoming).
- ⁸⁰ Wolfe, *Animal Rites*, p. 2.
- ⁸¹ Donna Haraway, *The Companion Species Manifesto: Dogs, People, and Significant Otherness* (Chicago: Prickly Paradigm Press, 2003).
- ⁸² Fernández-Armesto, *So You Think You're Human?*, p. 10.
- ⁸³ Wolfe, *Animal Rites*, p. 6.
- ⁸⁴ For example, the intelligent, speaking, 'golden maidservants' who assist the blacksmith god Hephaestus in *The Iliad*. Homer, *The Iliad*, trans. by E. V. Rieu (London: Penguin, 1950), p. 348.
- ⁸⁵ See Jared Diamond's *Guns, Germs and Steel: A Short History of Everybody for the Last 13,000 Years* (London: Vintage, 1998) for a comprehensive view of the crucial roles played by nonhuman animals in world history. While animals feature heavily in this book – there are, for example, around 150 page entries in the Index under 'animals, extinctions' and 'animals, domestic', not to mention hundreds of

entries on specific animals, such as dogs, donkeys and horses – Diamond does not deal explicitly with it as a subject in itself. Rather, the book seems to partake of the dominant cultural view which, in a sense, does not really see the animals that are present in culture. On the subject of visibility and invisibility of animals, see Erica Fudge, *Animal* (London: Reaktion Books, 2002), in particular Chapter 1, ‘Visible and Invisible: Questions of Recognition’, pp. 25–65.

⁸⁶ Derrida has also commented on this failure of philosophy to take account of zoological knowledge. He criticises Martin Heidegger for making dogmatic claims about the differences between humans and apes without taking interest in scientific enquiry on the subject. Derrida writes: ‘Like most of those who, as philosophers or persons of good sense, speak of animality, Heidegger takes no account of a certain “zoological knowledge” [...] concerning [...] this so general and confused word animality’. ‘*Geschlecht II: Heidegger’s Hand*’, in *Deconstruction and Philosophy: The Texts of Jacques Derrida*, ed. by John Sallis (Chicago and London: University of Chicago Press, 1987), pp. 161–96 (p. 173).

⁸⁷ This is a broad characterisation rather than a total opposition; he does engage with some scientific texts, and I do read some fictional ones.

⁸⁸ Donna Haraway, in Nicholas Gane, ‘When We Have Never Been Human, What Is to Be Done?: Interview with Donna Haraway’, *Theory Culture & Society*, 23: 7–8 (2006), 135–58 (p. 140).

⁸⁹ Badmington, *Alien Chic*, pp. 145–46.

⁹⁰ Badmington, *Alien Chic*, p. 151.

⁹¹ Badmington, *Alien Chic*, p. 118.

⁹² Sigmund Freud, ‘The “Uncanny”’, *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, trans. by James Strachey, in collaboration with Anna Freud, assisted by Alix Strachey and Alan Tyson (London: The Hogarth Press, 1955), Vol. XVII, pp. 217–52 (p. 227, p. 233).

⁹³ Jentsch, ‘The Psychology of the Uncanny’ (1906), quoted in Freud, ‘The “Uncanny”’, p. 226.

⁹⁴ Richard Kahn, ‘Review of *Representing Animals*, ed. by Nigel Rothfels’, *H-Net, H-Net Reviews*, February 2005 <<http://www.h-net.org/reviews/showrev.cgi?path=321721117053061>>, last accessed 9 May 2007. Subsequent references to Kahn are to this article.

⁹⁵ Erica Fudge, ‘A Left-Handed Blow: Writing the History of Animals’, in *Representing Animals*, ed. by Nigel Rothfels (Bloomington and Indianapolis: Indiana University Press, 2002).

⁹⁶ I discuss Kahn’s essay further, in particular this assertion of the right to represent and speak for animals, in Chapter 3 of this thesis in the section ‘Voicelessness, Advocacy, Articulation and the Cry’.

⁹⁷ Baker, *The Postmodern Animal*, p. 9.

⁹⁸ Baker, *The Postmodern Animal*, p. 9.

⁹⁹ Baker, *The Postmodern Animal*, p. 176 (see also pp. 16–17).

¹⁰⁰ See for example Baker, *The Postmodern Animal*, pp. 160–61, and Wolfe, *Animal Rites*, pp. 33–40.

¹⁰¹ Gray, *Straw Dogs*, p. 61.

¹⁰² Gray, *Straw Dogs*, p. 56. Further examples of this structure can be found on p. 77, p. 116, p. 130, and p. 198 of the same book.

¹⁰³ Fernández-Armesto, *So You Think You’re Human?*, p. 7. Further references to this work are given parenthetically in the text.

¹⁰⁴ Jean-François Lyotard, *The Postmodern Explained to Children: Correspondence 1982–1985*, trans. by Julian Pefanis et. al. (London: Turnaround, 1992), p. 22. Further references are given parenthetically in the text. *The Postmodern Explained to Children* glosses ‘differend’ as ‘an incommensurable difference of opinion’ (p. 22). Elsewhere, Lyotard defines a differend as ‘a case of conflict, between (at least) two parties, that cannot be equitably resolved for lack of a rule of judgement applicable to both arguments’. *The Differend: Phrases in Dispute*, trans. by Georges Van Den Abbeele (Minneapolis: University of Minnesota Press, 1988), p. xi.

¹⁰⁵ This distinction between ‘nostalgia’ and ‘jubilation’ can be compared with Steve Baker’s distinction between ‘a possessive melancholia and a creative mourning’, as two different ways of responding to the destabilising of the relationship between human and animal in postmodernity. A melancholic response means ‘clinging to old certainties’, whereas mourning has ‘to do with finding forms that can be bound together, and will hold together, with some kind of battered integrity and dignity’. *The Postmodern Animal*, pp. 164–65.

¹⁰⁶ Catherine Belsey, *Poststructuralism: A Very Short Introduction* (Oxford: Oxford University Press, 2002), p. 39.

¹⁰⁷ Roland Barthes, *Mythologies*, ed. and trans. by Annette Lavers (London: Granada, 1973), p. 109, p. 129, p. 11. Further references to this work are given parenthetically in the text.

¹⁰⁸ Haraway, ‘A Manifesto for Cyborgs’, p. 7.

¹⁰⁹ See Badmington, *Alien Chic*, pp. 35-38, for an discussion of these texts and Barthes' relationship to humanism.

¹¹⁰ See Matt Cartmill, 'Human Uniqueness and Theoretical Content in Paleoanthropology', *International Journal of Primatology*, 11: 3 (1990), 173-92 (p. 177), for a discussion of the connection between 'the unity of the family of man' and 'the line separating humanity from the beasts'.

¹¹¹ Roland Barthes, 'Change the Object Itself: Mythology Today', *Image Music Text*, trans. by Stephen Heath (London: Fontana, 1977), pp. 165-69 (p. 165).

¹¹² Barthes, 'Change the Object Itself', p. 166.

¹¹³ John Isaacs, quoted in Baker, *The Postmodern Animal*, p. 76.

¹¹⁴ See for example *A First Book of Aesop's Fables*, retold by Marie Stuart (Loughborough: Ladybird Books, 1974); Franz Kafka, *Metamorphosis and Other Stories*, ed. and trans. by Malcolm Pasley (London: Penguin, 2000); George Orwell, *Animal Farm: A Fairy Story* (London: Penguin, 1998).

¹¹⁵ 'Dr Jacob Bronowski: Scientist and Mathematician (Obituary)', *The Times*, 23 August 1974, p. 15. All of the facts and quotations in this paragraph are taken from this article. See also Stephen Moss' website *The Ascent of Dr Bronowski* <<http://www.drbronowski.com>>, last accessed 16 April 2007.

¹¹⁶ Richard Norman, *On Humanism* (London and New York: Routledge, 2004), p. 81. Further references to this work are given parenthetically in the text.

¹¹⁷ Cary Wolfe, 'Learning From Temple Grandin, or, Animal Studies, Disability Studies, and Who Comes after the Subject', *New Formations*, forthcoming.

¹¹⁸ Fuss, *Human, All Too Human*, p. 2.

¹¹⁹ Wolfe, *Animal Rites*, p. 188.

¹²⁰ Fuss, *Human, All Too Human*, pp. 1-2.

¹²¹ Wolfe, *Animal Rites*, p. 132. On carnophallogocentrism, see Jacques Derrida, "'Eating Well", or the Calculation of the Subject: An Interview with Jacques Derrida', trans. by Peter Connor and Avital Ronell, in *Who Comes after the Subject?*, ed. by Eduardo Cadava, Peter Connor, and Jean-Luc Nancy (New York: Routledge, 1991), pp. 96-119 (p. 113).

¹²² Harriet Ritvo, 'Border Trouble: Shifting the Line between People and Other Animals', *Social Research*, 62: 3 (Fall 1995), 481-500. Downloaded from *Expanded Academic ASAP, Thomson Gale*, Cardiff University, 2 May 2007. Thomson Gale document number: A17909876.

¹²³ Donna Haraway, 'Otherworldly Conversations; Terran Topics; Local Terms', in *The Haraway Reader*, pp. 125-50 (p. 126).

¹²⁴ Derrida, "'Eating Well'", p. 114.

¹²⁵ On the construction of women as animals, see the essay 'Taxonomy for Human Beings', in which Londa Schiebinger discusses Linnaeus' choice of the term 'mammal' and points out that 'within Linnaean terminology, a female characteristic (the lactating mamma) ties humans to brutes, while a traditionally male characteristic (reason) marks our separateness'. 'Taxonomy for Human Beings', in *The Gendered Cyborg: A Reader*, ed. by Gill Kirkup et. al. (London and New York: Routledge, 2000), pp. 11-37 (p. 16). See also Donna Haraway's works on women and primates, in particular *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York and London: Routledge, 1989), and *Simians, Cyborgs, and Women: The Reinvention of Nature* (London: Free Association Books, 1991).

¹²⁶ Derrida, *Of Grammatology*, p. 60.

¹²⁷ Jacques Derrida, 'The Ends of Man', *Philosophy and Phenomenological Research*, 30: 1 (September 1969), 31-57 (p. 56).

Chapter 1. Becoming Human: Evolution, the Trace, and Differance in Time

¹ Richard Leakey and Roger Lewin, *Origins Reconsidered: In Search of What Makes Us Human* (London: Little, Brown and Company, 1992), p. 55.

² Noel T. Boaz and Russell L. Ciochon, 'Brute of Dragon Bone Hill', *New Scientist*, 17 April 2004, pp. 32-35 (p. 32).

³ Ian Tattersall, *The Last Neanderthal: The Rise, Success, and Mysterious Extinction of our Closest Human Relatives* (New York: Peter N. Nevraumont / Macmillan, 1995), p. 41.

⁴ John Lynch and Louise Barrett, *Walking with Cavemen: Eye-to-Eye with your Ancestors* (London: Headline / BBC, 2002), p. 14.

⁵ Jacques Derrida, 'The Animal that Therefore I Am (More to Follow)', trans. by David Wills, *Critical Inquiry*, 28:2 (Winter 2002), 369-418 (p. 400).

- ⁶ Derrida, 'The Animal that Therefore I Am', p. 399.
- ⁷ Derrida, 'The Animal that Therefore I Am', p. 398.
- ⁸ Jacques Derrida, *Of Grammatology*, trans. by Gayatri Chakravorty Spivak, corrected edn (Baltimore and London: Johns Hopkins University Press, 1997), pp. 244-45.
- ⁹ See Stephen Jay Gould, *Ontogeny and Phylogeny* (Cambridge, Mass. and London: The Belknap Press of Harvard University Press, 1977).
- ¹⁰ Jacques Derrida and Elizabeth Roudinesco, *For What Tomorrow... A Dialogue*, trans. by Jeff Fort (Stanford: Stanford University Press, 2004), p. 21.
- ¹¹ Jacques Derrida, 'Differance', in *'Speech and Phenomena' and Other Essays on Husserl's Theory of Signs*, trans. by David B. Allison (Evanston, IL: Northwestern University Press, 1973), pp. 129-60 (p. 142).
- ¹² Genesis 1: 25-26.
- ¹³ Colin Tudge, *The Variety of Life: A Survey and a Celebration of All the Creatures that Have Ever Lived* (Oxford: Oxford University Press, 2002), p. 28. Part 1 of Tudge's book, 'The Craft and Science of Classification', pp. 1-90, is an excellent survey of the history and theories of classification and taxonomy.
- ¹⁴ Jean-Jacques Rousseau, 'Discourse on the Origin and the Foundations of Inequality among Men', *The Discourses and Other Early Political Writings*, ed. and trans. by Victor Gourevitch (Cambridge: Cambridge University Press, 1997), pp. 111-231 (p. 134).
- ¹⁵ Sigmund Freud, 'Lecture 18: Fixation To Traumas – The Unconscious', *Introductory Lectures on Psychoanalysis*, trans. by James Strachey, ed. by James Strachey and Angela Richards (London: Penguin, 1991), pp. 313-26 (p. 326).
- ¹⁶ Chris Fleming and Jane Goodall, 'Dangerous Darwinism', *Public Understanding of Science*, 11 (2002), 259-271 (p. 259). Further references to this article are given parenthetically in the text.
- ¹⁷ Tudge, *The Variety of Life*, p. 26.
- ¹⁸ Robin Orwant, 'Chimp Genome Preview: What Makes Us Human', *New Scientist*, 21 February 2004, pp. 36-39 (p. 37).
- ¹⁹ Corey S. Powell and W. Wayt Gibbs, 'Rambling Road to Humanity,' *Scientific American*, 16 June 1997 <<http://www.sciam.com/article.cfm?articleID=000D2A6C-6CCB-1C76-9B81809EC588EF21&sc=I100322>>, last accessed 6 July 2007. The subsequent quotation is from the second page of the same article.
- ²⁰ Charles Darwin, 'On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life' (1859), in *From So Simple a Beginning: The Four Great Books of Charles Darwin*, ed. by Edward O. Wilson (London and New York: W. W. Norton, 2006), pp. 441-760 (p. 452).
- ²¹ Darwin, 'The Origin of Species', p. 477.
- ²² Darwin, 'The Origin of Species', p. 520.
- ²³ Gavin de Beer, foreword to Caroli Linnaei, *Systema Naturae: A Photographic Facsimile of the First Volume of the Tenth Edition (1758)* (London: The British Museum (Natural History), 1956), p. iv.
- ²⁴ Tattersall, *The Last Neanderthal*, p. 20.
- ²⁵ Darwin, 'The Origin of Species', p. 757.
- ²⁶ See de Beer, foreword to Linnaei, *Systema Naturae*, pp. iii-iv. See also Tudge, *The Variety of Life*, pp. 23-26.
- ²⁷ Jacob Bronowski, *The Ascent of Man* (London: Book Club Associates / BBC, 1975), p. 309.
- ²⁸ Richard Dawkins, *The Blind Watchmaker* (Harmondsworth: Penguin, 1988), p. 262.
- ²⁹ Charles Darwin, 'The Descent of Man, and Selection in Relation to Sex' (1871), in *From So Simple a Beginning*, pp. 767-1248 (p. 910).
- ³⁰ Stephen R. L. Clark, 'Is Humanity a Natural Kind?', in *What Is an Animal?*, ed. by Tim Ingold (London and New York: Routledge, 1994), pp. 17-34 (p. 31).
- ³¹ John Gray, *Straw Dogs: Thoughts on Humans and Other Animals* (London: Granta, 2002), p. 3.
- ³² Edward O. Wilson, Introduction to 'The Descent of Man', in *From So Simple a Beginning*, pp. 765-66 (p. 766).
- ³³ In an earlier work, Wilson is less circumspect. He refers to 'the transition from the more primitive *Australopithecus* man-apes to the earliest true men', and to the time 'when true men diverged from the ancestral man-apes'. *On Human Nature* (Cambridge, Mass., and London: Harvard University Press, 1978), pp. 86-87.
- ³⁴ Darwin, 'The Origin of Species', p. 757.
- ³⁵ Darwin, 'The Origin of Species', p. 757.

- ³⁶ 'Human Sciences, Oxford University – Home Page', *Oxford University*, 2004 <<http://www.human-sciences.ox.ac.uk>>, last accessed 7 September 2006.
- ³⁷ 'Department of Human Sciences, part of the Science Faculty of Loughborough University. Ergonomics (also known as Human Factors), Psychology, Human Biology', *Loughborough University* <<http://www.lboro.ac.uk/departments/hu>>, last accessed 7 September 2006.
- ³⁸ Ralph S. Solecki, *Shanidar: The Humanity of Neanderthal Man* (London: Allen Lane The Penguin Press, 1972), pp. 2-3.
- ³⁹ 'Paleoanthropology', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50169471>>, last accessed 7 April 2007.
- ⁴⁰ Matt Cartmill, 'Human Uniqueness and Theoretical Content in Paleoanthropology', *International Journal of Primatology*, 11: 3 (1990), 173-92 (p. 178).
- ⁴¹ Wilson, *On Human Nature*, p. 201.
- ⁴² Christopher Nash, ed., 'Foreword', in *Narrative in Culture: The Uses of Storytelling in the Sciences, Philosophy, and Literature* (London and New York: Routledge, 1994), pp. xi-xiv (p. xi).
- ⁴³ Barbara Katz Rothman, *Genetic Maps and Human Imaginations: The Limits of Science in Understanding Who We Are* (London and New York: W. W. Norton, 1998), p. 40.
- ⁴⁴ *The Epic of Gilgamesh*, ed. by N. K. Sandars (Harmondsworth: Penguin, 1972), p. 62. Further references to *Gilgamesh* are given parenthetically in the text.
- ⁴⁵ Jacques Derrida, 'And Say the Animal Responded?', trans. by David Wills, in *Zoontologies: The Question of the Animal*, ed. by Cary Wolfe (Minneapolis: University of Minnesota Press, 2003), pp. 121-46 (p. 134).
- ⁴⁶ On *Homo ferus*, see Caroli Linnaei, *Systema Naturae: A Photographic Facsimile of the First Volume of the Tenth Edition (1758)* (London: The British Museum (Natural History), 1956), p. 20. I discuss 'feral children' in more detail in Chapter 2 of this thesis.
- ⁴⁷ Derrida, 'The Animal that Therefore I Am', pp. 372-73.
- ⁴⁸ 'Science & Nature – Caveman Challenge', *BBC.co.uk* <<http://www.bbc.co.uk/science/cavemen/challenge/index.html>>, last accessed 6 March 2007.
- ⁴⁹ John Berger, 'Why Look at Animals?', in *About Looking* (London: Writers and Readers Publishing Cooperative, 1980), pp. 1-26 (p. 7). Further references to Berger are to this work, and are given parenthetically in the text.
- ⁵⁰ Bronowski, *The Ascent of Man*, p. 50.
- ⁵¹ Desmond Morris, *The Human Animal: A Personal View of the Human Species* (London: BBC Books, 1994), p. 51. See also Desmond Morris, *The Naked Ape* (London: Corgi, 1968), pp. 20-21. An alternative explanation, to which an increasing number of scientists subscribe, is known as the 'Aquatic Ape' theory. This theory was originally put forward by the marine biologist Sir Alister Hardy in 1930, and received wider attention as a result of Elaine Morgan's *The Descent of Woman* (London: Souvenir Press, 1972). Whereas 'Man the Hunter' focuses on the conventionally male activity of hunting, the Aquatic Ape hypothesis emphasises the female activities of gathering food, such as shellfish, and (literally) holding the baby. The theory is also discussed by Morris in *The Human Animal*, pp. 53-62.
- ⁵² Georges Bataille, *Theory of Religion*, trans. by Robert Hurley (New York: Zone Books, 1989), p. 39.
- ⁵³ Bataille, *Theory of Religion*, p. 39.
- ⁵⁴ Bataille, *Theory of Religion*, p. 18. There are even those who would argue that plants have some autonomy. See for example Peter Tompkins and Christopher Bird, *The Secret Life of Plants* (Harmondsworth: Penguin, 1975).
- ⁵⁵ Bataille, *Theory of Religion*, p. 19.
- ⁵⁶ Derrida, 'The Animal that Therefore I Am', p. 412. In the same text, Derrida discusses another similar story, that of Bellerephon and Pegasus. Bellerephon is the half-brother of Pegasus, whom he hunts and captures, so that he 'ends up following and taming a sort of brother, an other self' (p. 410).
- ⁵⁷ Richard Dawkins, *River out of Eden: A Darwinian View of Life* (London: Weidenfeld and Nicolson, 1995).
- ⁵⁸ Morris, *The Naked Ape*, pp. 17-18.
- ⁵⁹ Rod Caird, *Ape Man: The Story of Human Evolution* (London: Boxtree, 1994), p. 133. These are the hypothetical last common ancestors of all humans alive today. Mitochondrial or African Eve is the most recent mitochondrial ancestor of all living humans (that is, the ancestor of every living human through the maternal line). The idea was proposed by Rebecca Cann in a 1987 paper in *Nature*. See Rebecca Cann, Mark Stoneking, and Allan Wilson, 'Mitochondrial DNA and Human Evolution,' *Nature* 325 (1 January 1987), 31-36. Y-chromosomal Adam is the male equivalent: the most recent common ancestor

of all humans through the male line only. See also Lynch and Barrett, *Walking with Cavemen*, pp. 198-99.

⁶⁰ Sonia Cole, *The Prehistory of East Africa* (Harmondsworth: Penguin, 1954), p. 24.

⁶¹ Lynch and Barrett, *Walking with Cavemen*, p. 10.

⁶² Jean-François Lyotard, *The Inhuman: Reflections on Time*, trans. by Geoffrey Bennington and Rachel Bowlby (Stanford: Stanford University Press, 1991), p. 1.

⁶³ Leakey and Lewin, *Origins Reconsidered*, p. xx-xxi. All further references to Leakey are to this work, and are given parenthetically in the text.

⁶⁴ Nash, 'Foreword', in *Narrative in Culture*, p. xiii.

⁶⁵ Ian Tattersall, *The Monkey In The Mirror: Essays on the Science of What Makes Us Human* (Oxford: Oxford University Press, 2002), p. 56.

⁶⁶ Cartmill, 'Human Uniqueness', p. 177. Further references to Cartmill are to this article and are given parenthetically in the text.

⁶⁷ Roland Barthes, 'The Great Family of Man,' in *Mythologies*, ed. and trans. by Annette Lavers (London: Granada, 1973), pp. 100-102 (p. 100).

⁶⁸ Barthes, 'The Great Family of Man', pp. 100-101.

⁶⁹ John Reader, *Missing Links: The Hunt for Earliest Man* (London: Penguin, 1990), p. 128.

⁷⁰ Donna Haraway, 'Race: Universal Donors in a Vampire Culture. It's All in the Family: Biological Kinship Categories in the Twentieth-Century United States', *The Haraway Reader* (Routledge: London and New York, 2004), pp. 251-93 (p. 259). Subsequent references to Haraway in this paragraph are to this work, and are given parenthetically in the text.

⁷¹ On the Laetoli footprints, see for example: Caird, *Ape Man*, p. 52-53, Leakey and Lewin, *Origins Reconsidered*, p. 103, Lynch and Barrett, *Walking with Cavemen*, p. 29; and Tattersall, *The Last Neanderthal*, p. 39.

⁷² 'Science & Nature – Sex ID', *BBC.co.uk*, 2002

<http://www.bbc.co.uk/science/humanbody/sex/add_user.shtml>, last accessed 7 September 2006.

⁷³ 'Science & Nature - Sex ID - Empathising and systemising', *BBC.co.uk*, 2002

<http://www.bbc.co.uk/science/humanbody/sex/articles/empathising_systemising.shtml>, last accessed 9 July 2007.

⁷⁴ Barthes, 'The Great Family of Man', p. 102.

⁷⁵ Derrida, *Of Grammatology*, p. 52.

⁷⁶ Bronowski, *The Ascent of Man*, p. 41.

⁷⁷ Jared Diamond, *The Rise and Fall of the Third Chimpanzee* (London: Hutchinson Radius, 1991), p. 27.

⁷⁸ See for example the front cover of *New Scientist*, 17 April 2004: 'The Great Leap Forward: When did Ape Become Human?'

⁷⁹ Nancy Makepeace Tanner, 'Becoming Human, our Links with our Past', in *What is an Animal?*, ed. by Tim Ingold (London and New York: Routledge, 1994), pp. 127-40 (p. 129).

⁸⁰ 'The Day We Learned to Think', *Horizon*. First broadcast 20 February 2003 on BBC Two. Transcript available online at <<http://www.bbc.co.uk/science/horizon/2003/learnthinktrans.shtml>>, last accessed 17 April 2007.

⁸¹ Derrida, *Of Grammatology*, p. 120.

⁸² Caird, *Ape Man*, p. 45.

⁸³ Tattersall, *The Last Neanderthal*, p. 41, emphasis added.

⁸⁴ Tattersall, *The Last Neanderthal*, p. 41.

⁸⁵ Leakey and Lewin, *Origins Reconsidered*, p. 51.

⁸⁶ Reader, *Missing Links*, p. 35.

⁸⁷ Reader, *Missing Links*, pp. 41-42.

⁸⁸ The disputed classification of this fossil is indicated by a story recounted by Herbert Wendt:

The participants at the Berlin and Leiden congresses voted in parliamentary fashion on the nature of Pithecanthropus. The Berlin zoologist Wilhelm Dames collected the statements of twenty-five scholars. Three opted for the decisive word 'ape', five for the definition 'man', six for the 'missing link', a further six for a creature 'part ape, part man', and two for 'a link between the missing link and man' (a sagacious verdict commanding our utmost respect).

From Ape to Adam: The Search for the Ancestry of Man, trans. by Susan Cupitt (London: Thames & Hudson, 1972), p.169.

⁸⁹ F. Clark Howell, *Early Man* (New York: TIME-LIFE International, 1966), p. 78. Further references to this work in this section are given parenthetically in the text.

⁹⁰ 'Harbinger', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50102501>>, last accessed 10 July 2007. See also Rev. Walter W. Skeat, *An Etymological Dictionary of the English Language* (Oxford: Clarendon Press, 1910), p. 260.

⁹¹ Boaz and Ciochon, 'Brute of Dragon Bone Hill,' p. 35. Further references to this article are given parenthetically in the text.

⁹² Darwin, 'The Origin of Species', p. 757.

⁹³ On the history of Neanderthal archaeology, see for example Douglas Palmer, *Neanderthal* (London: Channel 4 Books / Macmillan, 2000), p. 13, and Tattersall, *The Last Neanderthal*, p. 74.

⁹⁴ There is currently a very similar controversy over the *Homo floresiensis* fossils discovered in Indonesia in 2004. One group of scientists argues that they represent a separate species of human (known as 'hobbits'), while the other argues that they are the remains of deformed *Homo sapiens* individuals. See the 'Flores Discovery' section on the *Guardian Unlimited* website, which offers a number of articles from both points of view.

<<http://www.guardian.co.uk/life/news/page/0,,1341652,00.html>>, last accessed 23 April 2007.

⁹⁵ Solecki, *Shanidar*, p. 7. On Neanderthal cannibalism, see Tattersall, *The Last Neanderthal*, p. 88.

⁹⁶ See for example Knight's 1920 'Mural Reconstruction of a Neanderthal Group', in Tattersall, *The Last Neanderthal*, p. 89. See also Frederick Blaschke's life-size sculptures of Neanderthals, created in the 1920s. These can be viewed in the online exhibition 'Dissing the Neanderthal', in *Explore: Thought and Discovery at the University of Kansas*, 1: 2, undated

<<http://www.research.ku.edu/explore/v1n2/neander1.html>>, last accessed 9 July 2007.

⁹⁷ H. G. Wells, *The Outline of History: Being a Plain History of Life and Mankind* (London: George Newnes, undated, [1919-20]), Vol. I, p. 55.

⁹⁸ 'Neanderthal', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/00321876>>, last accessed 28 March 2007. The first literal use of the word is recorded in 1861, and the first figurative use in 1928. The word is still used fairly frequently with the derogatory meaning, but not without controversy. For example, in March 2007 Hugh Muir wrote an article entitled 'Neanderthal Thinking', published on the *Guardian's* website, in which he criticised the racist views of Patrick Mercer. Many of the comments left in response to this article criticise Muir's use of the word 'Neanderthal' in this context and several even compare it to the racism that he is condemning.

<http://commentisfree.guardian.co.uk/hugh_muir/2007/03/by_the_time_i_met.html>, last accessed March 28 2007.

⁹⁹ See for example Matternes, 'A Neanderthal Group', in Tattersall, *The Last Neanderthal*, p. 149.

¹⁰⁰ Solecki, *Shanidar*, p. xii.

¹⁰¹ Tattersall, *The Last Neanderthal*, p. 189.

¹⁰² 'Neanderthal', *Horizon*. First broadcast 10 February 2005 on BBC Two. Transcript available online at <http://www.bbc.co.uk/sn/tvradio/programmes/horizon/neanderthal_trans.shtml>, last accessed 9 July 2007.

¹⁰³ Paul Rincon, 'Neanderthals "Not Close Family"', *BBC News*, 27 January 2004 <<http://news.bbc.co.uk/1/hi/sci/tech/3431609.stm>>, last accessed 13 September 2006.

¹⁰⁴ Helen Briggs, 'Neanderthals "Had Hands like Ours"', *BBC News*, 27 March 2003 <<http://news.bbc.co.uk/1/hi/sci/tech/2884801.stm>>, last accessed 13 September 2006.

¹⁰⁵ Paul Rincon, 'Late Neanderthals "More like Us"', *BBC News*, 24 December 2003 <<http://news.bbc.co.uk/1/hi/sci/tech/3346455.stm>>, last accessed 13 September 2006.

¹⁰⁶ Derrida, 'Differance', p. 140.

¹⁰⁷ For more detailed discussion of cultural representations of Neanderthals, see Judith C. Berman, 'Bad Hair Days in the Paleolithic: Modern (Re)Constructions of the Cave Man', *American Anthropologist*, New Series, 101: 2 (June 1999), 288-304.

¹⁰⁸ Barthes, *Mythologies*, pp. 151-52.

¹⁰⁹ *Roland Barthes by Roland Barthes*, trans. by Richard Howard (London: Papermac, 1995), p. 36.

¹¹⁰ See for example Palmer, *Neanderthal*, pp. 178-87.

¹¹¹ See for example Palmer, *Neanderthal*, p. 8; Lynch and Barrett, *Walking with Cavemen*, pp. 204-205.

¹¹² William Golding, *The Inheritors* (London: Faber and Faber, 1955). Further references to the novel are given parenthetically in the text.

¹¹³ Sigmund Freud, 'The "Uncanny"', *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, trans. by James Strachey, in collaboration with Anna Freud, assisted by Alix Strachey and Alan Tyson (London: The Hogarth Press, 1955), Vol. XVII, pp. 217-52 (p. 227).

¹¹⁴ Berger, 'Why Look At Animals?', p. 4.

- ¹¹⁵ Jean M. Auel, *The Clan of the Cave Bear* (London: Coronet / Hodder & Stoughton, 2002). Further references are given parenthetically in the text.
- ¹¹⁶ Barthes, 'The Great Family of Man', p. 102.
- ¹¹⁷ For example, the frontispiece of the book is a map of prehistoric Europe which shows the 'extent of ice and change in coastlines during 10,000-year interstadial, a warming trend during the Wurm glaciation of the late Pleistocene Epoch' (p. 5).
- ¹¹⁸ 'Neanderthal', *Horizon*.
- ¹¹⁹ Diana Fuss, 'Introduction', in *Human, All Too Human*, ed. by Diana Fuss (London: Routledge, 1996), pp. 1-7 (p. 3).
- ¹²⁰ 'Neanderthal', *Horizon*.
- ¹²¹ Palmer, *Neanderthal*, p. 8.
- ¹²² Masahiro Mori, 'The Uncanny Valley', trans. by Karl F. MacDorman and Takashi Minato <<http://www.androidscience.com/theuncannyvalley/proceedings2005/uncannyvalley.html>>, last accessed 10 July 2007. Originally published in *Energy*, 7:4 (1970), 33-35.
- ¹²³ Boaz and Ciochon, 'Brute of Dragon Bone Hill', p. 32.
- ¹²⁴ Leakey and Lewin, *Origins Reconsidered*, p. 39.
- ¹²⁵ Diamond, *The Rise and Fall of the Third Chimpanzee*, p. 35.
- ¹²⁶ Howell, *Early Man*, pp. 123-24.
- ¹²⁷ See for example, Erik Trinkaus, João Zilhão, and Cidália Duarte, 'The Lapedo Child: Lagar Velho 1 and our Perceptions of the Neandertals', *Mediterranean Prehistory Online* 1 (November 17, 1999) <<http://web.archive.org/web/20020214200602/http://www.med.abaco-mac.it/issue001/articles/doc/013.htm>>, last accessed 7 April 2007. See also Palmer, *Neanderthal*, pp. 203-6.
- ¹²⁸ Dan Jones, 'The Neanderthal Within', *New Scientist*, 3 March 2007, pp. 28-32 <<http://www.newscientist.com/article/mg19325931.300-the-neanderthal-within.html>>, last accessed 11 June 2007.
- ¹²⁹ 'Are We Neanderthals?', *The Science Show*. First broadcast 24 July 2004 on ABC (Australian Broadcasting Corporation) Radio. Transcript available online at <<http://www.abc.net.au/rn/science/ss/stories/s1151858.htm>>, last accessed 7 June 2007.
- ¹³⁰ Palmer, *Neanderthal*, p. 206.
- ¹³¹ Freud, 'The "Uncanny"', p. 234.
- ¹³² Tattersall, *The Last Neanderthal*, p. 7.
- ¹³³ Derrida, 'Differance', p. 139.
- ¹³⁴ Tattersall, *The Last Neanderthal*, p. 11.
- ¹³⁵ Derrida, 'Differance', p. 140.
- ¹³⁶ Jeffrey H. Schwartz, *The Red Ape: Orang-utans and Human Origins* (London: Elm Tree Books / Hamish Hamilton, 1987), pp. 102-103.
- ¹³⁷ Phillip Tobias, interview, in Caird, *Ape Man*, p. 73.
- ¹³⁸ Tattersall, *The Last Neanderthal*, pp. 39-40.
- ¹³⁹ 'Threshold, n.', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50251747>>, last accessed 10 July 2007.
- ¹⁴⁰ Leakey and Lewin, *Origins Reconsidered*, p. 82. See also *Walking with Cavemen*, p. 36, in which Lynch and Barrett claim that 'the evolution of bipedal walking is probably the most significant of all the features shown by the hominids', and *Early Man*, p. 48, in which Howell discusses 'the freeing of the hands for using tools and the development of larger, more complex brains' that resulted from bipedalism.
- ¹⁴¹ Rousseau, 'Discourse on the Origin and the Foundations of Inequality', p. 134.
- ¹⁴² Lynch and Barrett, *Walking with Cavemen*, p. 64.
- ¹⁴³ Wilson, *On Human Nature*, p. 85.
- ¹⁴⁴ See for example Darwin, *The Descent of Man*, p. 857, and Morris, *The Human Animal*, pp. 12-17. Symbolically, the hand is associated with making tools, art, writing, and the giving and receiving of gifts, among other 'exclusively human' abilities. Martin Heidegger famously argued that 'apes, for example, have organs that can grasp, but they have no hand': a point which Derrida disputes. See Jacques Derrida, 'Geschlecht II: Heidegger's Hand', trans. by John P. Leavey, Jr., in *Deconstruction and Philosophy: The Texts of Jacques Derrida*, ed. by John Sallis (Chicago and London: University of Chicago Press, 1987), pp. 161-96 (p. 173). Cary Wolfe discusses this issue at length, so I will not repeat it here. See *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (Chicago and London: University of Chicago Press, 2003), pp. 63-66.

¹⁴⁵ Steven Mithen, *The Singing Neanderthals: The Origin of Music, Language, Mind and Body* (London: Phoenix / Orion, 2006), p. 146. See also *Walking with Cavemen*, p. 49.

¹⁴⁶ Mithen adds music to this list. *The Singing Neanderthals*, pp. 150-58.

¹⁴⁷ 'Upright, a. and n.', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50273259>>, last accessed 10 July 2007. Note that 'rectitude' also signifies uprightness, as it derives from Latin *rectus*, straight.

¹⁴⁸ William King Gregory, quoted in Leakey and Lewin, *Origins Reconsidered*, p. 71.

¹⁴⁹ George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago and London: University of Chicago Press, 1980), p.14. Further references to this work are given parenthetically in the text.

¹⁵⁰ Howell, *Early Man*, pp. 41-45. Zallinger's illustration is the most famous, but not the earliest, example: as Jeffrey Perry has noted, it 'is simply the late-twentieth-century scion of a venerable lineage of nineteenth-century march-of-progress illustrations'. 'Music, Evolution and the Ladder of Progress', *Music Theory Online: The Online Journal of the Society for Music Theory*, 6:5 (November 2000) <<http://mto.societymusictheory.org/issues/mto.00.6.5/mto.00.6.5.perry.html>>, last accessed 7 April 2007. However, while Zallinger drew on previous illustrations, the specific execution of this 'march-of-progress' is so memorable and skilful that it is easy to understand why it has become famous.

¹⁵¹ To be precise, it is the penultimate figure which holds the spear, whereas the final one is empty-handed; perhaps this is meant to indicate the freedom of the modern human to do whatever he chooses. In his caption underneath the final figure, Howell comments: 'Physically, modern man differs little from Cro-Magnon man. What sets the two apart is culture'. *Early Man*, p. 45.

¹⁵² Bronowski, *The Ascent of Man*, p. 31. See also Jean-Jacques Rousseau's *Second Discourse* for a discussion of whether 'man' is naturally bipedal, in which he notes that: 'All children begin by walking on all fours and need our example and lessons to learn to stand upright'. *The Discourses and Other Early Political Writings*, trans. by Victor Gourevitch (Cambridge: Cambridge University Press, 1997), p. 190.

¹⁵³ Anne Karpf, *The Human Voice: How This Extraordinary Instrument Reveals Essential Clues about Who we Are*, advance reading copy (London: Bloomsbury, 2006), p. 94.

¹⁵⁴ Tattersall, *The Last Neanderthal*, p. 58.

¹⁵⁵ See also 'The Origin of Species', in which Darwin discusses Agassiz's argument that 'the embryo comes to be left as a sort of picture, preserved by nature, of the ancient and less modified condition of each animal' (p. 664).

¹⁵⁶ Stephen Jay Gould, *Ontogeny and Phylogeny* (Cambridge, Mass. and London: The Belknap Press of Harvard University Press, 1977), p. 13.

¹⁵⁷ Gould, *Ontogeny and Phylogeny*, p. 164. Freud, for example, frequently refers to 'phylogenetic inheritance' to explain various aspects of childhood behaviour. See *Introductory Lectures on Psychoanalysis*, p. 460.

¹⁵⁸ Kathleen Gibson, quoted in Mithen, *The Singing Neanderthals*, p. 332, note.

¹⁵⁹ Leakey and Lewin, *Origins Reconsidered*, p. 262.

¹⁶⁰ See the *Cradle of Humankind* website at <<http://www.cradleofhumankind.co.za>>, last accessed 7 September 2006.

¹⁶¹ Bronowski, *The Ascent of Man*, p. 25.

¹⁶² Tim Ingold, 'Introduction', in *What Is an Animal?*, ed. by Tim Ingold (London and New York: Routledge, 1994), pp. 1-16 (p. 5).

¹⁶³ Lyotard, *The Inhuman*, p. 3. Further references are given parenthetically in the text.

¹⁶⁴ Wolfe, *Animal Rites*, p. 57.

¹⁶⁵ Derrida, 'Difference', p. 142.

¹⁶⁶ Lyotard's argument that a child is 'eminently [...] human' because of what it 'heralds and promises' is reminiscent of the argument about 'potential' within the philosophy of animal rights. This is the position that human infants should be treated with more ethical consideration than nonhumans who have greater intellectual, cognitive, or sensory capacities, because the infant has the potential to become fully human. See Wolfe, *Animal Rites*, p. 34 for a discussion of why this position is problematic.

¹⁶⁷ Darwin, 'The Descent of Man', pp. 837-38. Darwin makes several further references to this. For example, he asks: 'At what age does the new-born infant possess the power of abstraction, or become self-conscious and reflect on its own existence? We cannot answer; not can we answer in regard to the ascending organic scale'. 'The Descent of Man', p. 837.

¹⁶⁸ Reader, *Missing Links*, p. 123. See also Lynch and Barrett, *Walking with Cavemen*, p. 116, and Caird, *Ape Man*, p. 97.

- ¹⁶⁹ Derrida and Roudinesco, *For What Tomorrow...*, p. 21. I have followed the italicisation ('differance') used in the book.
- ¹⁷⁰ Darwin uses the word in a number of different senses, for example 'traces' of vestigial anatomical features (p. 784, p. 793), cultural traces, such as the 'clear traces' of barbarian culture in 'civilised nations' (p. 880), 'traces' of human intellectual faculties in animals (p. 869), and as a verb, the idea of 'tracing' the chronological development of a particular feature (p. 868, p. 870).
- ¹⁷¹ 'The Day We Learned To Think', *Horizon*.
- ¹⁷² Gray, *Straw Dogs*, p. 79.
- ¹⁷³ 'Are We Neanderthals?', *The Science Show*.
- ¹⁷⁴ Donna Haraway, *The Companion Species Manifesto: Dogs, People, and Significant Otherness* (Chicago: Prickly Paradigm Press, 2003), p. 8.
- ¹⁷⁵ 'Are We Neanderthals?', *The Science Show*.
- ¹⁷⁶ Anne Karpf also describes baby talk as 'a kind of living, vocal fossil'. *The Human Voice*, p. 87.
- ¹⁷⁷ Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage, 1973), p. 161.
- ¹⁷⁸ Howell, *Early Man*, p. 172.
- ¹⁷⁹ Bronowski, *The Ascent of Man*, p. 36.
- ¹⁸⁰ Darwin, 'The Origin of Species', p. 520.
- ¹⁸¹ Lynch and Barrett, *Walking with Cavemen*, p. 20. Further references to this work in this section are given parenthetically in the text.
- ¹⁸² Freud, 'The "Uncanny"', p. 227.
- ¹⁸³ Neil Badmington, *Alien Chic: Posthumanism and the Other Within* (Abingdon and New York: Routledge, 2004), p. 118.
- ¹⁸⁴ Badmington, *Alien Chic*, pp. 145-46.
- ¹⁸⁵ Derrida, *Of Grammatology*, p. 47.
- ¹⁸⁶ Leakey and Lewin, *Origins Reconsidered*, p. 172.
- ¹⁸⁷ Derrida and Roudinesco, *For What Tomorrow...*, p. 21.
- ¹⁸⁸ Foucault, *The Order of Things*, p. 330.
- ¹⁸⁹ Darwin, 'The Origin of Species', p. 711.
- ¹⁹⁰ As Tim Ingold notes, 'to take this philosophy of process to its ultimate conclusion is to dissolve the very boundaries of the animate, to recognize that in a certain sense the entire world is an organism, and its unfolding an organic process'. *What Is an Animal?*, p. 2.
- ¹⁹¹ Brian Bates and John Cleese, *The Human Face* (London: BBC Worldwide, 2001), p. 14.
- ¹⁹² Wendt, *From Ape to Adam*, p. 277.
- ¹⁹³ Tattersall, *The Last Neanderthal*, p. 10, note.
- ¹⁹⁴ Tattersall, *The Last Neanderthal*, p. 10, note.
- ¹⁹⁵ Mithen, *The Singing Neanderthals*, p. 163.
- ¹⁹⁶ Jared Diamond, *Guns, Germs and Steel: A Short History of Everybody for the Last 13,000 Years* (London: Vintage, 1998), p. 39.
- ¹⁹⁷ Derrida and Roudinesco, *For What Tomorrow...*, p. 66.
- ¹⁹⁸ Reader, *Missing Links*, p. 123. On the 'cerebral Rubicon', see also Lynch and Barrett, *Walking with Cavemen*, p. 116, and Caird, *Ape Man*, p. 97.
- ¹⁹⁹ Reader, *Missing Links*, p. 123.
- ²⁰⁰ Darwin, 'The Descent of Man', p. 910.
- ²⁰¹ Leakey and Lewin, *Origins Reconsidered*, p. xvi.
- ²⁰² Cole, *The Prehistory of East Africa*, p. 64.
- ²⁰³ Foucault, *The Order of Things*, p. 379. See also Claude Lévi-Strauss, *The Savage Mind* (London: Weidenfeld & Nicolson, 1972), p. 247.

Chapter 2. Acting Human: Autism, Anthropomorphism, and Differance in Behaviour

¹ Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity*, 2nd edn (London and New York: Routledge, 1999), p. 173.

² Butler, *Gender Trouble*, p. 178.

³ Linda Hutcheon, *A Theory of Parody: The Teachings of Twentieth-Century Art Forms* (New York and London: Methuen, 1985), p. 26.

⁴ René Descartes, 'Discourse on the Method of Rightly Conducting One's Reason and Seeking the Truth in the Sciences', in *The Philosophical Writings of Descartes*, trans. by John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1985), Vol. I, pp. 111-51. Further references to this work are given parenthetically in the text.

⁵ Edward O. Wilson, *On Human Nature* (Cambridge, Mass., and London: Harvard University Press, 1978), p. 18.

⁶ Felipe Fernández-Armesto, *So You Think You're Human?: A Brief History of Humankind* (Oxford and New York: Oxford University Press, 2004), p. 92.

⁷ Butler, *Gender Trouble*, p. 178. Further references to this work are given parenthetically in the text.

⁸ Geraldine Harris, *Staging Femininities: Performance and Performativity* (Manchester and New York: Manchester University Press, 1999), p. 119.

⁹ Harriet Ritvo, *The Platypus and the Mermaid and Other Figments of the Classifying Imagination* (Cambridge, Mass. and London: Harvard University Press, 1998), pp. 171-73. Further references to this work are given parenthetically.

¹⁰ This link between the construction of gender, and of the human, can also be seen in the connection between words which refer to the blurring of gender boundaries, such as 'epicine', 'hermaphrodite', and 'androgynous', and those which blur species boundaries, such as 'monster', 'half-breed', 'hybrid', and 'chimera', all of which are listed in *Roget's Thesaurus* under the heading of 'Unconformity'. In the light of Freud's argument that something which may or may not be human produces an uncanny effect, it is also notable that this category includes words such as 'weird', 'eerie', and 'uncanny'. Peter Roget and D. C. Browning (revised edition), *Roget's Thesaurus of English Words and Phrases: The Everyman Edition* (London: Chancellor, 1986), pp. 78-79.

¹¹ Butler also objects to Monique Wittig's 'humanism' and the fact that Wittig 'retains the human subject, the individual, as the metaphysical locus of agency'. *Gender Trouble*, p. 34.

¹² Judith Butler, *Bodies that Matter: On the Discursive Limits of 'Sex'* (London and New York: Routledge, 1993), pp. 7-8.

¹³ Butler, *Bodies that Matter*, p. 8.

¹⁴ For extensive information on these cases and many more, see Andrew Ward's comprehensive *Feral Children* website at <<http://www.feralchildren.com>>.

¹⁵ Douglas Keith Candland, *Feral Children and Clever Animals: Reflections on Human Nature* (Oxford and New York: Oxford University Press, 1993), p. 9.

¹⁶ Michael Newton, 'Bodies without Souls: The Case of Peter the Wild Boy', in *At the Borders of the Human: Beasts, Bodies and Natural Philosophy in the Early Modern Period*, ed. by Erica Fudge, Ruth Gilbert, and Susan Wiseman (Basingstoke and New York: Palgrave, 2002), pp. 196-214 (p. 197).

¹⁷ Daniel Defoe, 'Mere Nature Delineated: or, A Body without a Soul' (1726), quoted in Newton, 'Bodies without Souls', p. 198.

¹⁸ Caroli Linnaei, *Systema Naturae: A Photographic Facsimile of the First Volume of the Tenth Edition (1758)* (London: The British Museum (Natural History), 1956), p. 20. For further discussion of *Homo ferus* in the taxonomies of Linnaeus and his successors, see Julia Douthwaite, 'Rewriting the Savage: The Extraordinary Fictions of the "Wild Girl of Champagne"', *Eighteenth-Century Studies*, 28: 2 (1994-5), 163-192 (pp. 176-81).

¹⁹ Julien Offray de La Mettrie, *Man a Machine* (1748), trans. by Gertrude C. Bussey and Professor M. W. Calkins (La Salle: Open Court, 1912), p. 114.

²⁰ Jean-François Lyotard, *The Inhuman: Reflections on Time*, trans. by Geoffrey Bennington and Rachel Bowlby (Stanford: Stanford University Press, 1991), p. 3.

²¹ This issue is also discussed in Newton, 'Bodies without Souls', p. 203.

²² Butler, *Bodies that Matter*, p. 30.

²³ Myra Shackley, *Still Living? Yeti, Sasquatch and the Neanderthal Enigma* (New York: Thames & Hudson, 1986), p. 29.

²⁴ Rev. J. A. L. Singh, quoted in Candland, *Feral Children and Clever Animals*, p. 61.

²⁵ These narratives share many similarities with those of becoming human discussed in Chapter 1 of this thesis, such as the enculturation of Enkidu the wild man in *The Epic of Gilgamesh*, and accounts of 'normal' child development.

²⁶ Singh, quoted in Candland, *Feral Children and Clever Animals*, p. 65.

²⁷ Candland, *Feral Children and Clever Animals*, pp. 66-67.

²⁸ Jean Itard, *Mémoire sur les premiers développements de Victor de L'Aveyron* (1801), my translation. Available in French on the *Feral Children* website <<http://www.feralchildren.com/en/pager.php?df=itard1801&pg=14>>, last accessed 23 October 2006.

- ²⁹ Butler, *Bodies That Matter*, p. 232. On discipline and punishment in the 'humanization' of another feral child, the 'Wild Girl of Champagne', see Douthwaite, 'Rewriting the Savage', pp. 165-67.
- ³⁰ Jean Itard, *Rapport sur les nouveaux développements de Victor de L'Aveyron* (1806). Available on the *Feral Children* website <<http://www.feralchildren.com/en/pager.php?df=itard1806&pg=18>>, last accessed 18 October 2005.
- ³¹ Newton, 'Bodies without Souls', p. 196.
- ³² According to NHS Direct, approximately 1 child out of 2500 is autistic, while approximately 1-2 out of 1000 has Asperger's Syndrome. 'Autistic Spectrum Disorder', *NHS Direct Health Encyclopaedia*, 6 July 2007 <<http://www.nhsdirect.nhs.uk/he.asp?ArticleID=41>>, last accessed 13 July 2007. The National Autistic Society warns that it is very difficult to give a precise figure, in part because of the difficulty of defining autism, but estimates that approximately 535,000 people in the UK have autistic spectrum disorders. 'How Many People Have Autistic Spectrum Disorders?', May 2007 <<http://www.nas.org.uk/nas/jsp/polopoly.jsp?d=299&a=3527>>, last accessed 13 July 2007.
- ³³ Andrew Ward, 'Autism and Feral Children', *FeralChildren.com* <<http://www.feralchildren.com/en/autism.php>>, last accessed 6 April 2007. The connection between autism and feral children is also mentioned in Temple Grandin and Catherine Johnson, *Animals in Translation: Using the Mysteries of Autism to Decode Animal Behaviour* (London: Bloomsbury, 2005), p. 192.
- ³⁴ Ward, 'Autism and Feral Children'.
- ³⁵ I use the terms 'people with autism' or 'autistic people' in this text, rather than 'autistic' (as a noun) or the archaic 'autist', as this terminology is itself one of the means of presenting autistic people as nonhuman.
- ³⁶ Tony Charman, 'Theory of Mind and the Early Diagnosis of Autism', in *Understanding Other Minds: Perspectives from Developmental Cognitive Neuroscience*, ed. by Simon Baron-Cohen, Helen Tager-Flusberg, and Donald J. Cohen (Oxford: Oxford University Press, 2000), pp. 422-41 (p. 428).
- ³⁷ Ami Klin, Robert Schultz, and Donald J. Cohen, 'Theory of Mind in Action: Developmental Perspectives on Social Neuroscience,' in *Understanding Other Minds*, pp. 357-89 (p. 357).
- ³⁸ Oliver Sacks, *An Anthropologist on Mars: Seven Paradoxical Tales* (London and Basingstoke: Pan/Macmillan, 1995), p. 245.
- ³⁹ The term was coined separately by the child psychiatrist Leo Kanner in 1943 and the paediatrician Hans Asperger in 1944. See Sacks, *An Anthropologist on Mars*, p. 234.
- ⁴⁰ Donna Williams, *Nobody Nowhere: The Remarkable Autobiography of an Autistic Girl* (London and Philadelphia: Jessica Kingsley Publishers, 1999), p. 23.
- ⁴¹ Williams, *Nobody Nowhere*, pp. 9-10.
- ⁴² Leo Kanner, 'Autistic Disturbance of Affective Contact' (1943), quoted in Simon Baron-Cohen, *Mindblindness: An Essay on Autism and Theory of Mind* (Cambridge, Mass. and London: MIT Press, 1997), p. 61.
- ⁴³ Niko Tinbergen FRS and Elisabeth A. Tinbergen, *'Autistic' Children: New Hope for a Cure* (London: George Allen & Unwin, 1983), p. 29. There is an interesting parallel between these descriptions of autism and Daniel Defoe's description of Peter the Wild Boy. Michael Newton writes: 'Lacking the ability to comprehend people as other subjects, Peter is seen as unable to imagine objective consequences for them. [...] In the absence of a reciprocating interest in others, Peter is reduced to the status of a mirror'. Newton, 'Bodies without Souls', p. 205.
- ⁴⁴ Sacks, *An Anthropologist on Mars*, p. 240.
- ⁴⁵ Jentsch, 'The Psychology of the Uncanny' (1906), quoted in Sigmund Freud, 'The "Uncanny"', *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, trans. by James Strachey, in collaboration with Anna Freud, assisted by Alix Strachey and Alan Tyson (London: The Hogarth Press, 1955), Vol. XVII, pp. 217-52 (p. 227). Freud also mentions 'manifestations of insanity, because these excite in the spectator the impression of automatic, mechanical processes at work behind the ordinary appearance of mental activity' (p. 226). This description fits the repetitive behaviours of autistic people which can appear 'mechanical' and inexplicable from the outside, such as the echolalia described by Donna Williams in the passage quoted above: a common symptom of autism. Freud notes that 'whatever reminds us of this inner "compulsion to repeat" is perceived as uncanny' (p. 238).
- ⁴⁶ Singh, quoted in Candland, *Feral Children and Clever Animals*, p. 55.
- ⁴⁷ Singh, quoted in Candland, *Feral Children and Clever Animals*, p. 56.
- ⁴⁸ Vilayanur Ramachandran and Lindsay Oberman, 'Autism: The Search for Steven', *New Scientist*, 17 May 2006, p. 48. All further references to Ramachandran in this chapter are to this article.

⁴⁹ The same structure occurs in the *What Makes Us Human?* documentary discussed in the Introduction to this thesis, in which the geneticist Armand Leroi considers microcephalics, who were described by the German anatomist Carl Vogt in the 1860s as '*affenmenschen*: ape people'. Leroi objects to this, saying: 'Microcephalics are [...] as human as you or me'. However, his own argument is that the two key things which 'make us human' are large brains and a tendency to imitate. The microcephalics are featured in the first programme, entitled 'Big Heads', precisely because they *lack* a particular gene (known as ASPM) which, according to Leroi, 'makes us human'. If the microcephalics lack this specific gene, then by Leroi's own reasoning they are not human. 'Episode 1: Big Heads', *What Makes Us Human?*. First broadcast on Channel 4, 12 August 2006.

⁵⁰ Michelle Dawson, 'Missing Persons', *New Scientist*, 3 June 2006, p. 22.

⁵¹ Baron-Cohen, *Mindblindness*, p. 4.

⁵² Baron-Cohen, *Mindblindness*, p. 4.

⁵³ Baron-Cohen, *Mindblindness*, p. 5.

⁵⁴ Tinbergen, '*Autistic*' *Children*, p. 2. Further references are given parenthetically in the text.

⁵⁵ J. J. G. Prick, *Infantile Autistic Behaviour and Experience: A New Clinical Picture* (Rotterdam: Rotterdam University Press, 1971), p. 22. Further references are given parenthetically in the text.

⁵⁶ Zakiya Hanafi, *The Monster in the Machine: Magic, Medicine, and the Marvelous in the Time of the Scientific Revolution* (Durham and London: Duke University Press, 2000), p. 2.

⁵⁷ Simon Baron-Cohen, Helen Tager-Flusberg, and Donald J. Cohen, eds, 'Preface', in *Understanding Other Minds*, pp. v-vii (p. vii).

⁵⁸ Simon Baron-Cohen, 'Theory of Mind and Autism: A Fifteen Year Review', in *Understanding Other Minds*, pp. 3-20 (p. 3).

⁵⁹ Henry M. Wellman and Kristin H. Lagattuta, 'Developing Understandings of Mind,' in *Understanding Other Minds*, pp. 21-49 (p. 21).

⁶⁰ Hiram Brownell and others, 'Cerebral Lateralization and Theory of Mind,' in *Understanding Other Minds*, pp. 306-33 (p. 306).

⁶¹ Daniel J. Povinelli and Daniela K. O'Neill, 'Do Chimpanzees Use their Gestures to Instruct Each Other?', in *Understanding Other Minds*, pp. 459-87 (p. 482).

⁶² Povinelli and O'Neill, 'Do Chimpanzees Use Their Gestures?', p. 483.

⁶³ Steven Mithen, 'Paleoanthropological Perspectives on the Theory of Mind', in *Understanding Other Minds*, pp. 488-502 (p. 491).

⁶⁴ Penelope G. Vinden and Janet Wilde Astington, 'Culture and Understanding Other Minds', in *Understanding Other Minds*, pp. 503-20 (p. 514). Further references to this essay are given parenthetically in the text.

⁶⁵ Grandin and Johnson, *Animals in Translation*, p. 114.

⁶⁶ Sacks, *An Anthropologist on Mars*, p. 251.

⁶⁷ Sacks, *An Anthropologist on Mars*, pp. 251-52.

⁶⁸ Three important online resources for this movement are *Autism Network International* <<http://ani.autistics.org>>, Kathleen Seidel's *Neurodiversity.com* <<http://www.neurodiversity.com>>, and *Autistic People against Neuroleptic Abuse* <<http://www.dinahm.pwp.blueyonder.co.uk>>, all last accessed 12 July 2007.

⁶⁹ Diana Fuss, 'Introduction', in *Human, All Too Human*, ed. by Diana Fuss (London: Routledge, 1996), pp. 1-7 (p. 2).

⁷⁰ Like previous civil rights campaigns, the autistic movement has been subject to mockery, such as this article from the *Daily Telegraph*, which begins: 'It is the latest freedom movement for an "oppressed" minority: the Autistic Liberation Front'. David Harrison and Tony Freinberg, 'Autistic Liberation Front Fights the "Oppressors Searching for a Cure"', *The Daily Telegraph*, 9 January 2005, p. 3.

⁷¹ See for example Williams, *Nobody Nowhere*, p. 10.

⁷² Autistics.org: The Real Voice of Autism, 2007 <<http://www.autistics.org>>, last accessed 7 March 2008.

⁷³ Amanda Baggs, 'This is What your "Treatments" Do to Us', *Autism Information Library*, 2003 <<http://www.autistics.org/library/dotous.html>>, last accessed 23 October 2006.

⁷⁴ Anonymous autistic adult, 'Faking NT vs. Being Yourself', *Autism Information Library*, 2003 <<http://www.autistics.org/library/fakingnt.html>>, last accessed 23 October 2006. 'Stimming' refers to self-stimulatory behaviour, such as repetitive body movements.

⁷⁵ Butler, *Bodies that Matter*, p. 232.

⁷⁶ Sacks, *An Anthropologist on Mars*, p. 263.

⁷⁷ Anonymous autistic adult, 'Faking NT vs. Being Yourself'.

- ⁷⁸ Kathleen Seidel, 'The Autistic Distinction', *Neurodiversity.com*, 20 August 2004 <http://www.neurodiversity.com/autistic_distinction.html>, last accessed 20 October 2005.
- ⁷⁹ Cary Wolfe, 'Learning From Temple Grandin, or, Animal Studies, Disability Studies, and Who Comes After the Subject', *New Formations*, forthcoming.
- ⁸⁰ Wolfe, 'Learning From Temple Grandin'.
- ⁸¹ Sacks, *An Anthropologist on Mars*, p. 263.
- ⁸² Sacks, *An Anthropologist on Mars*, p. 248.
- ⁸³ Jim Sinclair, 'Don't Mourn for Us', *Autism Information Library* <<http://www.autistics.org/library/dontmourn.html>>, last accessed 19 October 2005.
- ⁸⁴ Christopher, the protagonist of the novel *The Curious Incident of the Dog in the Night-time*, participates in a fictional example of this process. He looks at a piece of paper with drawings of facial expressions to try to understand what people are feeling. Mark Haddon, *The Curious Incident of the Dog in the Night-time* (London: Jonathan Cape, 2003), p. 3.
- ⁸⁵ muskie, 'Institute for the Study of the Neurologically Typical', 1998 <<http://isnt.autistics.org>>, last accessed 13 March 2007.
- ⁸⁶ Joan Riviere, 'Womanliness as a Masquerade,' *International Journal Of Psychoanalysis*, 10 (1929), pp. 303-13 (p. 306).
- ⁸⁷ Marjorie Garber, *Vested Interests: Cross-Dressing and Cultural Anxiety* (New York: Routledge, 1997), p. 16. Further references to this work are given parenthetically in the text.
- ⁸⁸ Garber does, however, examine interspecies relationships in other works, including 'Heavy Petting', in *Human, All Too Human*, ed. by Diana Fuss (London: Routledge, 1996), pp. 11-36, and *Dog Love* (London: Hamish Hamilton, 1997). 'Heavy Petting' includes a brief discussion of the 1990s trend for dressing dogs in 'dogwear that apes human fashion' (p. 12).
- ⁸⁹ James Matthew Barrie, 'Little White Bird' (1902), in *Farewell Miss Julie Logan: A Barrie Omnibus*, ed. by Andrew Nash (Edinburgh: Canongate Classics, 2000), pp. 1-216 (p. 104). Also quoted in Garber, *Vested Interests*, p. 174. Further references to 'Little White Bird' are given parenthetically in the text.
- ⁹⁰ Cary Wolfe, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (Chicago and London: The University of Chicago Press, 2003).
- ⁹¹ Butler, *Gender Trouble*, p. xvi.
- ⁹² Lorraine Daston and Gregg Mitman, eds, 'Introduction: The How and Why of Thinking with Animals', in *Thinking with Animals: New Perspectives on Anthropomorphism* (New York: Columbia University Press, 2005), pp. 1-14 (p. 2).
- ⁹³ Daston and Mitman, *Thinking with Animals*, p. 6.
- ⁹⁴ Robert W. Mitchell, Nicholas S. Thompson, and H. Lyn Miles, eds, *Anthropomorphism, Anecdotes, and Animals*, (Albany: State University of New York Press, 1997).
- ⁹⁵ For example, this argument is put forward by Marjorie Garber in 'Heavy Petting', in which she argues that 'the renewed, even obsessive, popularity of anthropomorphism in science and popular culture is a sign of a desperate nostalgia for humanism' (p. 33).
- ⁹⁶ On the etymology of anthropomorphism, see Tom Tyler, 'If Horses Had Hands...', *Society & Animals*, 11: 3 (2003), 267-281 (p. 268).
- ⁹⁷ 'Anthropomorphism', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50009445>>, last accessed 12 July 2007.
- ⁹⁸ Wolfgang Köhler, *The Mentality of Apes*, trans. by Ella Winter (London: Kegan Paul, Trench, Trubner & Co, 1925), p. 48, note.
- ⁹⁹ A passage from Darwin's *Descent of Man* is often quoted in this context, in which he argues that there is continuity of emotional and intellectual faculties between humans and other animals, and claims that dogs feel jealousy, love, emulation, shame, modesty, and magnanimity. See Charles Darwin, 'The Descent of Man, and Selection in Relation to Sex' (1871), in *From So Simple a Beginning: The Four Great Books of Charles Darwin*, ed. by Edward O. Wilson (London and New York: W. W. Norton, 2006), pp. 767-1248 (p. 802).
- ¹⁰⁰ C. Lloyd Morgan, quoted in Elizabeth Knoll, 'Dogs, Darwinism, and English Sensibilities', in *Anthropomorphism, Anecdotes, and Animals*, pp. 12-21 (p. 20).
- ¹⁰¹ Knoll, 'Dogs, Darwinism, and English Sensibilities', p. 20.
- ¹⁰² John B. Watson, *Behavior: An Introduction to Comparative Psychology* (New York: Henry Holt & Company, 1929), p. 1.
- ¹⁰³ Knoll, 'Dogs, Darwinism, and English Sensibilities', p. 20.
- ¹⁰⁴ George Page, *The Singing Gorilla: Understanding Animal Intelligence* (London: Headline, 1999), p. 25.

- ¹⁰⁵ See John S. Kennedy, *The New Anthropomorphism* (Cambridge: Cambridge University Press, 1992), p. 32.
- ¹⁰⁶ Thomas A. Sebeok, *Perspectives in Zoosemiotics* (The Hague: Mouton, 1972), p. 59.
- ¹⁰⁷ John C. Lilly, *Man and Dolphin* (London: Victor Gollancz, 1962), p. 21. Further references to this work are given parenthetically in the text.
- ¹⁰⁸ On the relationship between anthropocentrism and anthropomorphism, see Tyler, 'If Horses Had Hands...', pp. 276-77.
- ¹⁰⁹ Kennedy, *The New Anthropomorphism*, p. 167. Further references to this work are given parenthetically in the text.
- ¹¹⁰ Daston and Mitman, *Thinking with Animals*, p. 6.
- ¹¹¹ Mary Douglas, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London and New York: Ark/Routledge, 1984), p. 121. Further references to this work are given parenthetically in the text.
- ¹¹² Emanuela Cenami Spada, 'Amorphism, Mechanomorphism, and Anthropomorphism', in *Anthropomorphism, Anecdotes, and Animals*, pp. 37-49 (p. 39).
- ¹¹³ Hank Davis, 'Animal Cognition Versus Animal Thinking: The Anthropomorphic Error', in *Anthropomorphism, Anecdotes, and Animals*, pp. 335-47 (p. 335).
- ¹¹⁴ Sigmund Freud, *The Origins of Religion: Totem and Taboo, Moses and Monotheism, and Other Works*, trans. by Angela Richards, ed. by Albert Dickson, general ed. James Strachey (London: Penguin, 1985). See especially 'The Return of Totemism in Childhood', pp. 159-224.
- ¹¹⁵ H. Lyn Miles, 'Anthropomorphism, Apes, and Language', in *Anthropomorphism, Anecdotes, and Animals*, pp. 383-406 (p. 386).
- ¹¹⁶ Colin Blackstock, 'Tea Party is Over for the PG Chimps', *The Guardian*, 12 January 2002, p. 7. See also 'PG Tips', *Unilever Foodsolutions United Kingdom, 2007* <http://www.unileverfoodsolutions.co.uk/company/brands/show/42.pg_tips.html>, last accessed 13 July 2007.
- ¹¹⁷ See 'PG Tips: A Manchester Brew', *BBC Manchester*, 8 March 2005 <http://www.bbc.co.uk/manchester/content/articles/2005/03/01/pg_tips_75th_anniversary_feature.shtml>, last accessed 13 July 2007.
- ¹¹⁸ See the *Brooke Bond Tea Cards and Collectables* website for more information <<http://www.brookebondcollectables.co.uk>>, last accessed 13 July 2007.
- ¹¹⁹ In recent years, many people have objected to the use of animals in this kind of performance on ethical grounds. This genre of performances has mostly been replaced by nature or wildlife programmes which purport to show the chimpanzees in their 'natural' environment, apparently acting like 'themselves' rather than like humans.
- ¹²⁰ *The British Pathe Archive* <<http://www.britishpathe.com>>, last accessed 12 July 2007. All Pathe films referenced here can be downloaded from this website.
- ¹²¹ From a biological or taxonomic point of view, humans are undoubtedly included within the category 'ape'. However, in everyday usage 'ape' generally refers to nonhuman apes only, and this is the practice I have followed here.
- ¹²² *Bestiary: Being an English Version of the Bodleian Library, Oxford M. S. Bodley 764*, trans. by Richard Barber (Woodbridge: The Boydell Press, 1999), p. 48.
- ¹²³ Geoffrey Chaucer, 'The Shipman's Tale', in *The Riverside Chaucer*, 3rd edn, ed. by Larry D. Benson and F. N. Robinson (Oxford: Oxford University Press, 1988), pp. 203-08 (p. 208). The editors gloss this line as 'the monk made a monkey of the man' (p. 208, note).
- ¹²⁴ Chaucer, 'The General Prologue', in *The Riverside Chaucer*, pp. 23-36 (p. 34).
- ¹²⁵ Martin Luther, *Colloquia Mensalia* (1566) LXVII, trans. by William Hazlitt (Philadelphia: The Lutheran Publication Society) <<http://www.lutherdansk.dk/Table-Talk/index1.htm>>, last accessed 20 October 2005.
- ¹²⁶ Edward Topsell, 'A Historie of Foure Footed Beastes' (1607), quoted in Susan Wiseman, 'Monstrous Perfectibility: Ape-Human Transformations in Hobbes, Bulwer, Tyson', in *At The Borders Of The Human: Beasts, Bodies and Natural Philosophy in the Early Modern Period*, ed. by Erica Fudge, Ruth Gilbert and Susan Wiseman (Basingstoke and New York: Palgrave, 2002), pp. 215-38 (p. 216).
- ¹²⁷ Steve Connor, 'Fashion-Conscious Chimps Ape Habits of their Friends', *The Independent*, 22 August 2005, p. 16. Further references to Connor are to this article.
- ¹²⁸ Miles, 'Anthropomorphism, Apes, and Language', p. 387. See Tyler, 'If Horses Had Hands...', pp. 273-76, for further discussion of this point.

¹²⁹ Some recent examples include: 'Chimp House Hopes to Become Champ', *BBC News*, 5 April 2006 <<http://news.bbc.co.uk/1/hi/england/devon/4879302.stm>>, last accessed 3 May 2007; 'A Chimp off the Old Block', *Aberdeen Evening Express*, 22 March 2007, p. 8; 'In Evolutionary Terms, Chimps Make a Monkey of Us', *Daily Mail*, 17 April 2007, p. 33; and Michael Spearman, 'One Hundred and Ape-ty', *The Sun*, 13 January 2006 <<http://www.thesun.co.uk/article/0,,3-2006020078,00.html>>, last accessed 3 May 2007.

¹³⁰ *Animal Oddities: Barflies Now Wear Fur Coats* (1940-1949) British Pathe Film ID 2242.19.

¹³¹ Wiseman, 'Monstrous Perfectibility', p. 217.

¹³² *Chimpish Intelligence* (1937) British Pathe Film ID 1144.19.

¹³³ *Chimp and Infernal Machine* (1967) British Pathe Film ID 2027.06.

¹³⁴ *Chimps Take Over* (1962) British Pathe Film ID 1719.28.

¹³⁵ Hints Zoological Gardens was the forerunner to Twycross Zoo, both run by Molly Badham.

Information from the '40th Anniversary Slide Show' on the Twycross Zoo website

<<http://www.twycrosszoo.com/flash/40thanniversaryslideshow.swf>>, last accessed 21 October 2005.

¹³⁶ Jacques Derrida, *Of Grammatology*, trans. by Gayatri Chakravorty Spivak, corrected edn (Baltimore and London: The Johns Hopkins University Press, 1997), p. 40.

¹³⁷ *Trying out Darwin?* (1951) British Pathe Film ID 1435.09.

¹³⁸ These were particularly associated with early Ape Language experiments. For example, in the early 1970s the psychotherapist Maurice Temerlin and his wife Jane brought up a chimpanzee named Lucy as if she were a human child. See Maurice K. Temerlin, *Lucy: Growing Up Human: A Chimpanzee Daughter in a Psychotherapist's Family* (London: Souvenir Press, 1976). Similarly, in 1966 Drs. Beatrix and Allen Gardner took the chimpanzee Washoe into their home and raised her 'as if she were a deaf human child', teaching her American Sign Language. See *Teaching Sign Language to Chimpanzees*, ed. by R. Allen Gardner, Beatrix T. Gardner, and Thomas E. Van Cantfort (Albany: State University of New York Press, 1989), and also the website *Friends of Washoe* <<http://www.friendsofwashoe.org>>. A version of this practice continues today, as Sue Savage-Rumbaugh is raising Kanzi the bonobo and other apes in a partly 'humanised' environment. See Sue Savage-Rumbaugh, *Apes, Language, and the Human Mind* (Oxford and New York: Oxford University Press, 1998).

¹³⁹ Robert J. Stoller, *Sex and Gender: On the Development of Masculinity and Femininity* (London: The Hogarth Press and the Institute of Psycho-Analysis, 1968), quoted in Garber, *Vested Interests*, p. 95.

¹⁴⁰ I discuss this idea that the 'absolute insignia' of being human is a voice in more detail in Chapter 3.

¹⁴¹ 'Kokomart: Plush Koko', *Gorilla Foundation*, 2004

<http://www.koko.org/friends/kokomart_plush.koko.html>, last accessed 13 October 2005.

¹⁴² Daston and Mitman, *Thinking with Animals*, p. 5.

¹⁴³ 'Kokomart: Gorilla Art', *Gorilla Foundation*, 2004

<http://www.koko.org/friends/kokomart_art.koko.html>, last accessed 13 October 2005.

¹⁴⁴ See Jacques Derrida, 'The Animal that Therefore I Am (More to Follow)', trans. by David Wills, *Critical Inquiry*, 28: 2 (Winter 2002), 369-418 (pp. 372-83) for a discussion of what it means to be looked at by an animal.

¹⁴⁵ See for example 'The Day We Learned to Think', *Horizon*. First broadcast 20 February 2003 on BBC Two. Transcript available online at <<http://www.bbc.co.uk/science/horizon/2003/learnthinktrans.shtml>>, last accessed 17 April 2007. The programme is discussed in detail in Chapter 1 of this thesis.

¹⁴⁶ Wolfe, *Animal Rites*, p. 3. On the significance of the hand in relation to ape art, see Steve Baker, *The Postmodern Animal* (London: Reaktion, 2000), pp. 94-95.

¹⁴⁷ Desmond Morris, *The Biology of Art: A Study of the Picture-Making Behaviour of the Great Apes and its Relationship to Human Art* (London: Methuen, 1962), p. 13. Further references to Morris in this section are to this work, and are given parenthetically in the text.

¹⁴⁸ See for example *Darwin was Right aka Gorilla is Painter* (1959) Film ID 1660.09, *Painting Chimps* (1966) Film ID 371.08, and *Chimp Artist* (1967) Film ID 2027.05.

¹⁴⁹ The exhibition was held at the Mayor Gallery, Cork Street, London, from 13 September to 14 October 2005. The online exhibition catalogue, which shows a small selection of the paintings, is available at *Artnet* <<http://www.artnet.com/galleries/Exhibitions.asp?gid=725&cid=80738>>, last accessed 8 June 2007.

¹⁵⁰ Wolfe, *Animal Rites*, p. 132.

¹⁵¹ Wolfe, *Animal Rites*, p. 1.

¹⁵² Philip Hensher, 'Art that Makes a Monkey out of Us All', *The Independent*, 22 June 2005, p. 33. All further references to Hensher are to this article.

¹⁵³ These two paintings can be viewed online at the URL given in note 149, above.

¹⁵⁴ The same phrase appears in other media coverage of Congo, for example Bill Moulard writes that ‘a deceased chimpanzee called Congo made a monkey out of the modern art world yesterday’. ‘The Monkey Master’, *Daily Mail*, 21 June 2005, p. 31.

¹⁵⁵ In terms of the analogy between cross-species and cross-gender performances, the narrative of this ‘fooling’ and the subsequent revelation echoes storylines involving transgendered characters in films such as *The Crying Game* (dir. Neil Jordan, 1992), in which the character Dil is eventually revealed as a cross-dressed man, or the television series *There’s Something About Miriam* (first broadcast 22 February 2004 on Sky One), in which six men competed for the affections of a beautiful woman before finally discovering that ‘she’ was, in fact, a pre-operative male-to-female transsexual.

¹⁵⁶ Neil Badmington, *Alien Chic: Posthumanism and the Other Within* (Abingdon and New York: Routledge, 2004), pp. 145–46.

¹⁵⁷ Waldemar Januszczak, ‘Congo the Chimpanzee’, *The Sunday Times*, 25 September 2005, Culture section, p. 10. That both Januszczak and Hensher refer to Congo as a ‘monkey’, when he was in fact an ape, is symptomatic of a general tendency to blur all nonhuman primates into one interchangeable mass. All further references to Januszczak are to this article.

¹⁵⁸ The art critic Tulsa Kinney makes a similar observation about the ‘deliberate’ brushwork in the conversation quoted above. When I visited the *Ape Artists* exhibition, I experienced similar feelings of uncanniness; it seems that humanism is very deeply rooted.

¹⁵⁹ Wolfe, *Animal Rites*, p. 1.

¹⁶⁰ Sebeok, *Perspectives in Zoosemiotics*, p. 60.

¹⁶¹ Professor Dexler, quoted in Watson, *Behavior*, p. 305.

¹⁶² Claude Lévi-Strauss, *The Savage Mind* (London: Weidenfeld & Nicolson, 1972), p. 204, emphasis added.

¹⁶³ Pamela J. Asquith, ‘Why Anthropomorphism Is *Not* Metaphor: Crossing Concepts and Cultures in Animal Behavior Studies’, in *Anthropomorphism, Anecdotes, And Animals*, as above, pp. 22–34 (p. 24).

¹⁶⁴ There are scientists who object vociferously to the use of this type of metaphor. For example, Alistair B. Fraser, Emeritus Professor of Meteorology at Pennsylvania State University, has written an essay entitled ‘The Pathetic Fallacy: Animism Masquerading as Science in Education’ <<http://www.ems.psu.edu/~fraser/Bad/PatheticFallacy.html>>, last accessed 12 October 2005. However, Fraser’s objections seem to result from a general dislike of inaccuracy rather than a humanist fear of disturbing the boundary between human and nonhuman.

¹⁶⁵ Hutcheon, *A Theory of Parody*, p. 37. Further references to Hutcheon are to this work and are given parenthetically in the text.

¹⁶⁶ Thomas A. Sebeok and Jean Umiker-Sebeok, ‘Performing Animals: Secrets of the Trade’, *Psychology Today* (November 1979), 78–91. Further references to this article are given parenthetically in the text.

¹⁶⁷ Harris, *Staging Femininities*, pp. 174–75.

¹⁶⁸ George Puttenham, *The Arte of English Poesie* (Richard Field: London, 1589), quoted in ‘Ape, n.’, *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50010090>>, last accessed 17 April 2007.

¹⁶⁹ H. G. Bohn, *Handbook of Proverbs* (London, 1857), quoted in ‘Ape, n.’, *Oxford English Dictionary*.

¹⁷⁰ Derrida, *Of Grammatology*, p. 29.

¹⁷¹ Harris, *Staging Femininities*, pp. 76–77.

¹⁷² Marjorie Garber, *Quotation Marks* (London and New York: Routledge, 2003), p. 12.

¹⁷³ Garber, *Quotation Marks*, p. 11.

¹⁷⁴ *Chimpanzee* (1954) British Pathe Film ID 1607.17.

¹⁷⁵ Freud, ‘The “Uncanny”’, p. 249.

¹⁷⁶ The dinner suit, fur coat, smoking, and so on connote luxury and excess. As Derrida has argued, this is culturally associated with representation, performance and the ‘external and artificial’. In his discussion of Rousseau’s *Letter to d’Alembert*, he writes:

It is normal that he who has taken up representation as a profession should have a taste for external and artificial signifiers, and for the perverse use of signs. Luxury, fine clothes, and dissipation are not signifiers incidentally coming about here and there, they are the crimes of the signifier or the representer itself.

Of Grammatology, p. 304.

¹⁷⁷ Butler, *Bodies that Matter*, p. 231. I have substituted ‘human behaviour’ for ‘heterosexually ideal genders’ here.

Chapter 3. Talking Human: Speech, the Unconscious, and Differance in Communication

¹ Jacques Derrida, 'And Say the Animal Responded?', in *Zoontologies: The Question of the Animal*, ed. by Cary Wolfe (Minneapolis: University of Minnesota Press, 2003), pp. 121-46 (p. 143), note.

² Jacques Derrida, *Of Grammatology*, trans. by Gayatri Chakravorty Spivak, corrected edn (Baltimore: The Johns Hopkins University Press, 1997), p. 258.

³ Similar lists can be found in Cary Wolfe, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (Chicago and London: The University of Chicago Press, 2003), p. 2, and Jacques Derrida, 'The Animal that Therefore I Am (More to Follow)', trans. by David Wills, *Critical Inquiry*, 28: 2 (Winter 2002), 369-418 (p. 373).

⁴ Wolfe, *Animal Rites*, p. 84.

⁵ Derrida, *Of Grammatology*, p. 37.

⁶ Derrida, 'And Say the Animal Responded?', p. 125. All further references to Derrida in this section are from this work, and are given parenthetically in the text.

⁷ Joel Wallman, *Aping Language* (Cambridge: Cambridge University Press, 1992), p. 5.

⁸ See for example Jane Van Lawick-Goodall, *In the Shadow of Man* (Glasgow: Fontana, 1974), pp. 47-49.

⁹ Marian Stamp Dawkins, *Through our Eyes Only? The Search for Animal Consciousness* (Oxford: Oxford University Press, 1998), pp. 71-72. Further references to this work in this section are given parenthetically in the text.

¹⁰ Richard E. Passingham, *The Human Primate* (Oxford and San Francisco: W. H. Freeman & Company, 1982), p. 2.

¹¹ Jacques Derrida, 'The Ends of Man', *Philosophy and Phenomenological Research*, 30: 1 (September 1969), 31-57 (p. 35). For further discussion of the naturalized 'we', see Neil Badmington, 'Introduction: Approaching Posthumanism', in *Posthumanism*, ed. by Neil Badmington (Basingstoke and New York: Palgrave, 2000), pp. 1-10 (p. 1, and p. 141, note). See also William V. Spanos, *The End of Education: Toward Posthumanism* (Minneapolis and London: University of Minnesota Press, 1993), p. 3.

¹² This is different in the case of constructing the boundaries between the human and other categories of the nonhuman, such as artificial intelligences. It is also culturally specific: for example, in Japan it is emotion rather than language or reason which is thought to be the most crucial difference between humans and other animals.

¹³ Ian Tattersall, *The Monkey in the Mirror: Essays on the Science of What Makes Us Human* (Oxford: Oxford University Press, 2002), p. 161, emphasis added.

¹⁴ Tattersall, *Monkey in the Mirror*, pp. 162-63, emphasis added. In *Eve Spoke*, Lieberman uses exactly the same metaphor ('set the stage') to describe the developments that preceded the beginning of language: 'Upright bipedal locomotion, the great initial hominid adaptation that differentiated the australopithecines from their ape cousins, set the stage for the evolution of human language' (p. 85). This metaphor of 'setting the stage' suggests the idea of performance, and reinforces the idea of speaking as a form of acting human.

¹⁵ Derrida, *Of Grammatology*, p. 120.

¹⁶ Claude Lévi-Strauss, *Introduction à l'oeuvre de Marcel Mauss*, p. 47, quoted in Derrida, *Of Grammatology*, p. 121, emphasis added.

¹⁷ Derrida, *Of Grammatology*, p. 258.

¹⁸ Wallman, *Aping Language*, p. 7.

¹⁹ Tattersall, *Monkey in the Mirror*, p. 165.

²⁰ Tattersall, *Monkey in the Mirror*, p. 163.

²¹ Derrida, *Of Grammatology*, p. 121.

²² Philip Lieberman, *Eve Spoke: Human Language and Human Evolution* (New York and London: W. W. Norton, 1998).

²³ John McCrone, *The Ape that Spoke* (London and Basingstoke: Macmillan, 1990), p. 1.

²⁴ Derrida, 'The Animal that Therefore I Am', p. 399.

²⁵ Steven Pinker, *The Language Instinct: The New Science of Language and Mind* (London: Penguin, 1995), p. 16.

²⁶ McCrone, *The Ape that Spoke*, p. 67.

²⁷ McCrone, *The Ape that Spoke*, p. 84.

²⁸ Derrida, 'And Say the Animal Responded?', p. 122.

²⁹ McCrone, *The Ape that Spoke*, p. 84.

³⁰ McCrone, *The Ape that Spoke*, p. 67.

³¹ Derrida, *Of Grammatology*, p. 242.

³² Ian Tattersall, *The Last Neanderthal: The Rise, Success, and Mysterious Extinction of our Closest Human Relatives* (New York: Peter N. Nevraumont / Macmillan, 1995), p. 172.

³³ See for example Tattersall, *The Last Neanderthal*, p. 173.

³⁴ Lieberman, *Eve Spoke*, p. xv.

³⁵ *Horizon*, 'Neanderthal'. First broadcast 10 February 2005 on BBC Two. Transcript available online at <http://www.bbc.co.uk/sn/tvradio/programmes/horizon/neanderthal_trans.shtml>.

³⁶ Lieberman, *Eve Spoke*, p. 71.

³⁷ Lieberman, *Eve Spoke*, p. 3.

³⁸ McCrone, *The Ape that Spoke*, pp. 130-31. McCrone's use of the conditional tense here ('would likely have tried', 'grammar would have been born', etc.) is reminiscent of Rousseau's 'Essay on the Origin of Languages' in which Rousseau describes 'the ideal of the language of origin'. Discussing this passage, Derrida writes:

The stage thus described in the conditional is *already* that of a language that has broken with gesture, need, animality, etc. But of a language that *has not yet* been corrupted by articulation, convention, supplementarity. The time of that language is the unstable, inaccessible, mythic limit between that *already* and this *not-yet*: time of a language *being born*, just as there was a time for 'society being born'. Neither before nor after the origin.

Of Grammatology, p. 244.

³⁹ Derrida, *Of Grammatology*, p. 72. On 'linearization' and its relationship to the idea of 'Man', see also *Of Grammatology*, p. 85.

⁴⁰ Lieberman, *Eve Spoke*, p. xv.

⁴¹ Jacques Derrida, '*Speech and Phenomena*' and *Other Essays on Husserl's Theory of Signs*, trans. by David B. Allison (Evanston: Northwestern University Press, 1973), p. 70.

⁴² Oliver Sacks, *Seeing Voices: A Journey into the World of the Deaf* (London and Basingstoke: Picador/Macmillan, 1991), pp. 8-9. Further references to this work are given parenthetically in the text.

⁴³ This prohibition was at its height in the first half of the twentieth century, following the 1880 Milan conference which officially proscribed the use of sign language in schools for deaf children.

⁴⁴ Ruth F. Deich and Patricia M. Hodges, *Language without Speech* (London: Souvenir Press (Educational and Academic) Ltd., 1977), p. 191.

⁴⁵ Julien Offray de La Mettrie, *Man a Machine* (1748), trans. by Gertrude C. Bussey and Professor M. W. Calkins (La Salle: Open Court, 1912), p. 103.

⁴⁶ See Sue Savage-Rumbaugh and Roger Lewin, *Kanzi: The Ape at the Brink of the Human Mind* (New York and Chichester: John Wiley & Sons, 1994), and Sue Savage-Rumbaugh, *Apes, Language, and the Human Mind* (Oxford and New York: Oxford University Press, 1998). For extensive current information about this Ape Language research, including video clips of the bonobos communicating and writing symbols, see the website of the *Great Ape Trust, Des Moines, Iowa* <<http://www.greatapetrust.org>>, last accessed 14 July 2007.

⁴⁷ Claudia Dreifus, 'She Talks to Apes and, according to Her, They Talk Back', *The New York Times*, 14 April 1998, Section F, p. 4.

⁴⁸ Lieberman, *Eve Spoke*, p. 4.

⁴⁹ See the following websites: *Viva! Vegetarians International Voice for Animals* <<http://www.viva.org.uk>>; *Animal Voice* <<http://www.animal-voice.org>>; *The Animals [sic] Voice Magazine* <<http://www.animalsvoice.com>>; 'Voices For The Voiceless', *IMOM.org* <<http://imom.org/voices>>; *Voiceless – The Fund for Animals* <<http://www.voiceless.org.au>>; *Advocates for Animals – Giving Voice, Taking Action* <<http://www.advocatesforanimals.org.uk>>.

⁵⁰ See for example Steve Baker, *The Postmodern Animal* (London: Reaktion, 2000), p. 9, p. 82.

⁵¹ Richard Kahn, 'Review of *Representing Animals*, ed. by Nigel Rothfels', *H-Net Reviews*, February 2005 <<http://www.h-net.org/reviews/showrev.cgi?path=321721117053061>>, last accessed 9 May 2007.

⁵² 'Represent, v. 1', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50203307>>, last accessed 15 May 2007.

⁵³ The frequent lack of awareness that this is problematic is shown, for example, by the parallel Kahn draws between Animal Studies and 'other counter-hegemonic disciplines like Women's Studies', without acknowledging the crucial difference that whereas most Women's Studies researchers are women, *all* Animal Studies researchers are human.

⁵⁴ Ella Wheeler Wilcox, 'The Voice of the Voiceless'

<<http://www.ellawheelerwilcox.org/poems/pvoice5.htm>>, last accessed 15 May 2007. First published in the United Kingdom in Ella Wheeler Wilcox, *Poems of Experience* (London: Gay and Hancock, 1910).

⁵⁵ Derrida, *Of Grammatology*, p. 166. Further references to Derrida in this section are to this work, and are given parenthetically in the text. I return to the problematic distinction between 'wordless cries' and 'articulate speech' later in this chapter.

⁵⁶ Mary Douglas also identifies articulation as a key concept in defining the limits of the human. She argues that the 'ritual play on articulate and inarticulate forms is crucial to understanding pollution' as it marks the margins of both society and of the individual mind (p. 95). *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London and New York: Ark/Routledge, 1984).

⁵⁷ Jean-Jacques Rousseau, *Emile*, quoted in Derrida, *Of Grammatology*, p. 248.

⁵⁸ Charles Darwin, 'The Descent of Man, and Selection in Relation to Sex' (1871), in *From So Simple a Beginning: The Four Great Books of Charles Darwin*, ed. by Edward O. Wilson (London and New York: W. W. Norton, 2006), pp. 767-1248 (p. 813). Further references to this work in this section are given parenthetically.

⁵⁹ René Descartes, 'Discourse on the Method of Rightly Conducting One's Reason and Seeking the Truth in the Sciences', in *The Philosophical Writings of Descartes*, trans. by John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1985), Vol I, pp. 111-51 (p. 140).

⁶⁰ John B. Watson, *Behavior: An Introduction to Comparative Psychology* (New York: Henry Holt & Company, 1929), pp. 328-29.

⁶¹ Deich and Hodges, *Language without Speech*, p. 24.

⁶² 'Parrot, n. 1', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50172013>>, and 'Parrot, v.', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50172014>>, last accessed 16 July 2007.

⁶³ John C. Squire, *Apes and Parrots: An Anthology of Parodies* (London: Herbert Jenkins, 1929).

⁶⁴ Dawkins, *Through our Eyes Only?*, p. 179.

⁶⁵ Lieberman, *Eve Spoke*, p. 154, note.

⁶⁶ In *The Savage Mind*, Lévi-Strauss offers a more ambivalent view when he describes the 'metaphorical relation' between birds and humans (p. 205). He writes that birds 'often engage in social relations with other members of their species; and they communicate with them by acoustic means recalling articulated language' (London: Weidenfeld & Nicolson, 1972), p. 204. The verb 'recalling' is somewhat ambiguous: is this resemblance merely superficial?

⁶⁷ Derrida, *Of Grammatology*, p. 45.

⁶⁸ Tattersall, *The Monkey in the Mirror*, p. 165, emphasis added.

⁶⁹ Roland Barthes, 'Lesson in Writing', in *Image Music Text*, trans. by Stephen Heath (London: Fontana, 1977), pp. 170-78 (p. 173).

⁷⁰ Derrida, *Of Grammatology*, p. 270.

⁷¹ Derrida, *Of Grammatology*, p. 34.

⁷² Lieberman, *Eve Spoke*, p. 154, note, emphasis added.

⁷³ Derrida, *Of Grammatology*, p. 34.

⁷⁴ Derrida, *Of Grammatology*, p. 270.

⁷⁵ Derrida, *Of Grammatology*, p. 20.

⁷⁶ Jamie Pyatt, 'Birdbrain Kidnaps Parrot', *The Sun*, 8 November 2005

<<http://www.thesun.co.uk/article/0,,2-2005510768,00.html>>, last accessed 15 July 2007.

⁷⁷ As Freud argues, 'a great deal that is not uncanny in fiction would be so if it happened in real life' 'The "Uncanny"', *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, trans. by James Strachey, in collaboration with Anna Freud, assisted by Alix Strachey and Alan Tyson (London: The Hogarth Press, 1955), Vol. XVII, pp. 217-52 (p. 249).

⁷⁸ Derrida, 'The Animal that Therefore I Am', p. 374.

⁷⁹ Alan Hamilton, 'How Ziggy the Indiscreet Parrot Gave a Cheating Girlfriend the Bird', *The Times*, 17 January 2006, p. 5.

⁸⁰ See for example: 'When Ziggy Shopped Sally', *Daily Telegraph*, 17 January 2006, p. 21; Paul Hardaker, 'Who's a Splitty Boy Then; Chris Dumps Girl as Parrot Squawks All', *Daily Record*, 17 January 2006, p. 3; Bill Moulard, 'Stool-Pigeon Parrot', *Daily Mail*, 17 January 2006, p. 3; Paul Jeeves, 'So, Who's a Silly Love Cheat Then?', *Express*, 17 January 2006, p. 11; 'Ziggy, the Parrot Who Said Too Much', *The Times*, 17 January 2006, p. 1; 'Tell-tale Parrot Exposes Cheating Girlfriend', *MSNBC*, 17 January 2006 <<http://www.msnbc.msn.com/id/10704041>>, last accessed 15 July 2007; 'Parrot Tells

Owner: Your Gal's Cheating', *Fox News*, 18 January 2006

<<http://www.foxnews.com/story/0,2933,181935,00.html>>, last accessed 15 July 2007.

⁸¹ 'They Said', *Birmingham Post*, 19 January 2006, p. 16, and 'Quotes of the Week', *Mail on Sunday*, 22 January 2006, p. 65.

⁸² The reporting of this story also relied heavily on puns (see the examples of newspaper headlines in the note above). As I argue in Chapter 2 of this thesis, the frequent use of puns in reference to animals indicates the simultaneous play of sameness and difference, and the fascinating but frightening possibility of mistaking an animal for a human.

⁸³ Pierre Boule, *Monkey Planet*, trans. by Xan Fielding (Harmondsworth: Penguin, 1966), pp. 95-96.

⁸⁴ 'The Animal that Therefore I Am', p. 379.

⁸⁵ See for example: George Page, *The Singing Gorilla: Understanding Animal Intelligence* (London: Headline, 1999), pp. 72-73, pp. 112-13, and p.182; Dawkins, *Through our Eyes Only?*, pp. 119-27; Charlotte Uhlenbroek, *Talking with Animals* (London: Hodder & Stoughton, 2002), pp. 224-25; and Margaret Atwood, *Oryx and Crake* (London: Bloomsbury, 2003), p. 54, p. 59, and p. 84.

⁸⁶ Irene Maxine Pepperberg, 'Cognition and Communication in an African Grey Parrot (*Psittacus erithacus*): Studies on a Nonhuman, Nonprimate, Nonmammalian Subject', in *Language and Communication: Comparative Perspectives*, ed. by Herbert L. Roitblat, Louis M. Herman, and Paul E. Nachtigall (Hillside, N.J., Hove and London: Lawrence Erlbaum Associates, 1993), pp. 221-48 (p. 222).

⁸⁷ Pepperberg, 'Cognition and Communication in an African Grey Parrot', p. 240.

⁸⁸ Uhlenbroek, *Talking with Animals*, p. 225.

⁸⁹ Dawkins, *Through our Eyes Only?*, p. 120. This particular incident of Alex saying 'I'm going away' also features in Atwood's *Oryx and Crake*, in which it is described as causing an 'uneasy' feeling (p. 84).

⁹⁰ For an account of Alex asking questions about 'what color' he himself is, and then later using the word 'gray' to describe other objects, see Jean Craighead George, *How to Talk to your Animals* (London: Hodder & Stoughton, 1986), p. 214-15.

⁹¹ George, *How to Talk to your Animals*, p. 212, emphasis added.

⁹² Uhlenbroek, *Talking with Animals*, p. 225, emphasis added.

⁹³ Jentsch, 'The Psychology of the Uncanny' (1906), quoted in Freud, 'The "Uncanny"', p. 226.

⁹⁴ Freud, 'The "Uncanny"', p. 235.

⁹⁵ Erle Stanley Gardner, *The Case of the Perjured Parrot* (Cleveland and New York: The World Publishing Company, 1948). Further references to this work are given parenthetically in the text.

⁹⁶ The second parrot can also be distinguished from Casanova by its tendency to swear. I discuss the issue of 'profane parrots' later in this chapter.

⁹⁷ Derrida, *Of Grammatology*, p. 30.

⁹⁸ Derrida, *Of Grammatology*, p. 44.

⁹⁹ Derrida, *Of Grammatology*, p. 31.

¹⁰⁰ Adam Lusher, 'Who's a Perverted Polly?', *Daily Telegraph*, 31 July 2005, p. 19.

¹⁰¹ Nora A. Stanley, 'Teaching your Bird to Talk', *The Aviary* <<http://www.theaviary.com/s1295-30.shtml>>, last accessed 6 May 2006.

¹⁰² Darwin, 'The Descent of Man', p. 911.

¹⁰³ See 'Rachel Berwick', in *Becoming Animal: Contemporary Art in the Animal Kingdom*, ed. by Nato Thompson (Massachusetts: Massachusetts Museum of Contemporary Art, 2005), pp. 32-37. See also the Rachel Berwick page on the *RealArtWays* website <<http://www.realartways.org/archive/Berwick.htm>>, last accessed 6 May 2006. Berwick discusses *may-por-é* on the radio programme 'The Art and Science of Restoration', *Talk of the Nation*. First broadcast 25 March 2005 on National Public Radio, USA. Programme available from the NPR website at

<<http://www.npr.org/templates/story/story.php?storyId=4561173>>, last accessed 15 July 2007.

¹⁰⁴ Mark Dion has also created art installations which incorporate living birds. See Baker, *The Postmodern Animal*, pp. 15-16.

¹⁰⁵ Sue Farlow, 'Bearers of a Lost Language', *Parrot Chronicles.com*, 2002

<<http://www.parrotchronicles.com/septoct2002/maypore.htm>>, last accessed 6 May 2006.

¹⁰⁶ Grant Allen, *The Great Taboo* (London: Chatto & Windus, 1890). Further references to the novel are given parenthetically in the text.

¹⁰⁷ Roland Barthes, 'From Speech to Writing', *The Grain of the Voice: Interviews 1962-1980*, trans. by Linda Coverdale (Berkeley and Los Angeles: University of California Press, 1991), pp. 3-7 (p. 3).

¹⁰⁸ Anne Karpf, *The Human Voice: How This Extraordinary Instrument Reveals Essential Clues about Who we Are*, advance reading copy (London: Bloomsbury, 2006), p. 183.

- ¹⁰⁹ A perceptive question from Jodie Matthews clarified this point for me.
- ¹¹⁰ Joe Joseph, 'Modern Morals', *The Times*, 5 March 2007, Times 2 section, p. 3. Further references to Joseph are from this article.
- ¹¹¹ Derrida, 'Speech and Phenomena', p. 70.
- ¹¹² Derrida, *Of Grammatology*, p. 144.
- ¹¹³ Derrida, *Of Grammatology*, p. 281.
- ¹¹⁴ Catherine Belsey, *Critical Practice* (London and New York: Methuen, 1980), p. 70.
- ¹¹⁵ Lévi-Strauss, *The Savage Mind*, p. 215.
- ¹¹⁶ Derrida, *Of Grammatology*, p. 37.
- ¹¹⁷ Derrida, *Of Grammatology*, p. 295.
- ¹¹⁸ Hamilton, 'Ziggy the Indiscreet Parrot'.
- ¹¹⁹ Brian Cummings, 'Animal Passions and Human Sciences: Shame, Blushing and Nakedness in Early Modern Europe and the New World', in *At the Borders of the Human: Beasts, Bodies and Natural Philosophy in the Early Modern Period*, ed. by Erica Fudge, Ruth Gilbert and Susan Wiseman (Basingstoke and New York: Palgrave, 2002), pp. 26-50 (p. 30). Further references to Cummings are to this work and are given parenthetically in the text.
- ¹²⁰ The burglar in the other news story discussed above is also betrayed, not by the parrot as he feared, but by the involuntary traces of his own body: his fingerprints and his DNA. I am grateful to Mark Saint John Ridley for this observation.
- ¹²¹ Julien Offray de La Mettrie suggests that 'a gentle and peaceful animal [...] will blush internally at having shed blood', but this is distinctly a minority view. *Man a Machine*, trans. by Gertrude C. Bussey and Professor M. W. Calkins (La Salle: Open Court, 1912), p. 117.
- ¹²² Charles Darwin, 'The Expression of the Emotions in Man and Animals' (1872), in *From So Simple a Beginning*, pp. 1255-1477. Further references to this work are given parenthetically in the text.
- ¹²³ The word infant derives from in-fans, meaning 'unable to speak'; if speech is identified with the human, this also suggests that infants are not considered to be fully human. 'Infant, n. 1', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50116118>>, last accessed 5 April 2007. I am indebted to Neil Badmington for this observation.
- ¹²⁴ Hamilton, 'Ziggy the Indiscreet Parrot'.
- ¹²⁵ Derrida, 'And Say the Animal Responded?', p. 127.
- ¹²⁶ McCrone, *The Ape that Spoke*, pp. 113-14.
- ¹²⁷ Lieberman, *Eve Spoke*, p. 133.
- ¹²⁸ Vilyanur S. Ramachandran and Sandra Blakeslee, *Phantoms in the Brain: Human Nature and the Architecture of the Mind* (London: Fourth Estate, 1999), p. 247.
- ¹²⁹ McCrone, *The Ape that Spoke*, p. 147.
- ¹³⁰ For accessible discussions of this research, see Uhlenbroek, *Talking with Animals*, p. 21-25, and Karpf, *The Human Voice*, pp. 49-51.
- ¹³¹ Derrida, 'And Say the Animal Responded?', p. 144, note.
- ¹³² F. Bryant Furlow, 'The Smell of Love', in *The Nonverbal Communication Reader: Classic and Contemporary Readings*, ed. by Laura K. Guerrero, Joseph A. DeVito, and Michael L. Hecht, 2nd edn (Prospect Heights: Waveland Press, 1999), pp. 118-25. Further references to this essay are given parenthetically in the text.
- ¹³³ Wolfe, *Animal Rites*, p. 2.
- ¹³⁴ Wolfe, *Animal Rites*, p. 3.
- ¹³⁵ Sigmund Freud, 'Fixation to Traumas – The Unconscious', in *Introductory Lectures on Psychoanalysis*, trans. by James Strachey, ed. by James Strachey and Angela Richards (London: Penguin, 1976), pp. 313-26 (p. 326).
- ¹³⁶ Sigmund Freud, *The Psychopathology of Everyday Life*, trans. by Alan Tyson, ed. by Angela Richards and James Strachey (Harmondsworth: Penguin, 1975), p. 106.
- ¹³⁷ Michael L. Hecht, Joseph A. DeVito, and Laura K. Guerrero, 'Perspectives on Nonverbal Communication: Codes, Functions, and Contexts', in *The Nonverbal Communication Reader*, pp. 3-18 (p. 12).
- ¹³⁸ Derrida, 'And Say the Animal Responded?', p. 125.
- ¹³⁹ 'Proper, adj., n., and adv.', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50190132>>, last accessed 17 April 2007. The meanings of 'ownership' and 'appropriateness' are more evident in the French word *propre*. In Derrida's *Of Grammatology*, Spivak translates it as 'self-same', as in this example: 'A feared writing must be cancelled because it erases the presence of the self-same [*propre*] within speech' (p. 270).

¹⁴⁰ See Laura K. Guerrero, Joseph A. DeVito, and Michael L. Hecht, 'Part II: Nonverbal Codes', in *The Nonverbal Communication Reader*, pp. 43-45 (p. 43).

¹⁴¹ Michael Argyle, 'Nonverbal Vocalizations', in *The Nonverbal Communication Reader*, pp. 135-48 (p. 136). All further references to Argyle are from the same page (p. 136) of this article.

¹⁴² On the attempt to separate language from paralanguage, see also Karpf, *The Human Voice*, p. 34 and p. 299, note.

¹⁴³ Derrida, *Of Grammatology*, p. 20.

¹⁴⁴ Roland Barthes, 'The Grain of the Voice', *Image Music Text*, trans. by Stephen Heath (London: Fontana, 1977), pp. 179-89 (pp. 181-82).

¹⁴⁵ Barthes, 'The Grain of the Voice', p. 182.

¹⁴⁶ Shoshana Felman, *The Scandal of the Speaking Body: Don Juan with J. L. Austin, or Seduction in Two Languages* (Stanford: Stanford University Press, 2003), p. 5.

¹⁴⁷ Felman, *The Scandal of the Speaking Body*, p. 65.

¹⁴⁸ 'Aphasia', *Oxford English Dictionary* <<http://dictionary.oed.com/cgi/entry/50010156>>, last accessed 6 April 2007.

¹⁴⁹ Oliver Sacks, *The Man Who Mistook his Wife for a Hat* (London: Pan/Picador, 1986), pp. 76-77.

Further references to this work are given parenthetically in the text.

¹⁵⁰ In *Seeing Voices*, Sacks also discusses this idea in the context of deafness. He quotes from the autobiography of David Wright, who became deaf and did not even realise himself that he was lip-reading since the illusion of hearing was so convincing (p. 5).

¹⁵¹ In the article discussed above, Michael Argyle notes the necessity for similar technological interventions in the converse situation of trying to exclude the *verbal* component of speech. 'Nonverbal Vocalizations', p. 137.

¹⁵² Temple Grandin and Catherine Johnson, *Animals in Translation: Using the Mysteries of Autism to Decode Animal Behaviour* (London: Bloomsbury, 2005), p. 24.

¹⁵³ Professor Terrence Deacon, in 'The Day We Learned to Think', *Horizon*. First broadcast 20 February 2003 on BBC Two. Transcript available online at <<http://www.bbc.co.uk/science/horizon/2003/learnthinktrans.shtml>>, last accessed 17 April 2007. This programme is also discussed in Chapter 1 of this thesis.

¹⁵⁴ Wolfe, *Animal Rites*, p. 3.

¹⁵⁵ George, *How to Talk to your Animals*, p. 57. Further references to George are to this work and are given parenthetically in the text.

¹⁵⁶ Wolfe, *Animal Rites*, p. 4.

¹⁵⁷ Paul Auster, *Timbuktu* (London: Faber and Faber, 2000). Further references to this work are given parenthetically in the text.

¹⁵⁸ Thomas A. Sebeok, *Perspectives in Zoosemantics* (The Hague: Mouton, 1972), p. 61. Further references to this work are given parenthetically in the text.

¹⁵⁹ Uhlenbroek, *Talking with Animals*, p. 10. Further references to this work are given parenthetically in the text.

¹⁶⁰ Wolfe, *Animal Rites*, p. 87.

¹⁶¹ Hugh Lofting, *The Story of Doctor Dolittle* (London: Jonathan Cape, 1922), p. 33.

¹⁶² Derrida, 'And Say the Animal Responded?', p. 127.

¹⁶³ Paul Kelbie, 'Talking Chimpanzee: Apes Use Screams to Send out Social Signals', *Independent*, 4 April 2005, p. 19.

¹⁶⁴ Pinker, *The Language Instinct*, p. 347.

¹⁶⁵ Judith Halberstam and Ira Livingston, eds, *Posthuman Bodies* (Bloomington and Indianapolis: Indiana University Press, 1995), p. 14. In this text, the description of 'man' as a 'featherless biped' is attributed to Aristotle rather than Plato.

¹⁶⁶ Matt Cartmill also briefly notes the interdependence of the terms 'human' and 'language':
What we mean by the word 'intelligence' is whatever distinguishes the human mind from those of beasts. Similarly, what we mean by 'language' is whatever substantiates the judgment that nonhuman animals are unable to talk.

'Human Uniqueness and Theoretical Content in Paleoanthropology', *International Journal of Primatology*, 11: 3 (1990), 173-92 (p. 184).

¹⁶⁷ Halberstam and Livingston, *Posthuman Bodies*, p. 14.

¹⁶⁸ Wolfe, *Animal Rites*, p. 84.

¹⁶⁹ Jacques Derrida, "'Eating Well", or the Calculation of the Subject: An Interview with Jacques Derrida', trans. by Peter Connor and Avital Ronell, in *Who Comes after the Subject?*, ed. by Eduardo

Cadava, Peter Connor, and Jean-Luc Nancy (New York: Routledge, 1991), pp. 96-119 (p. 116). I have followed the italicisation of '*différance*' in the original text.

¹⁷⁰ Derrida, 'Eating Well', p. 116.

¹⁷¹ Wallman, *Aping Language*, p. 7.

¹⁷² Derrida, *Of Grammatology*, p. 49.

¹⁷³ Derrida, *Of Grammatology*, p. 49.

Conclusion: Dismantling the Myth of the Human

¹ Jacques Derrida, 'The Animal that Therefore I Am (More to Follow)', trans. by David Wills, *Critical Inquiry*, 28: 2 (Winter 2002), 369-418 (p. 399).

² Derrida, 'The Animal that Therefore I Am', p. 399.

³ Jacques Derrida, 'Differance', in '*Speech and Phenomena*' and *Other Essays on Husserl's Theory of Signs*, trans. by David B. Allison (Evanston: Northwestern University Press, 1973), pp. 129-60 (pp. 148-49).

⁴ Catherine Belsey, *Poststructuralism: A Very Short Introduction* (Oxford: Oxford University Press, 2002), p. 39.

⁵ Belsey, *Poststructuralism*, p. 39.

⁶ See for example: Steve Connor, "'Pyow hack!' Monkeys Can Talk to Each Other Using Sentences', *The Independent*, 18 May 2006, p. 11. The original paper is Kate Arnold and Klaus Zuberbühler, 'Semantic Combinations in Primate Calls', *Nature*, 441 (18 May 2006), 303.

⁷ See for example the 'Flores Discovery' webpage on *Guardian Unlimited* <<http://www.guardian.co.uk/life/news/page/0,,1341652,00.html>>, last accessed 23 April 2007.

⁸ Kate Douglas, 'It's Good to Bark', *New Scientist*, 12 June 2004, pp. 52-53 (p. 52).

⁹ See for example Amanda Baggs' 2007 video 'In My Language', available on *Youtube* <<http://www.youtube.com/watch?v=JnylM1hI2jc>>, last accessed 18 March 2008.

¹⁰ The process of defining the human is inherently exclusionary; Costas Douzinas has described this as 'the inhuman preconditions of humanity'. 'Human Rights and Empire', lecture given at the London School of Economics, 6 March 2008.

¹¹ Jacques Derrida, 'And Say the Animal Responded?', in *Zoontologies: The Question of the Animal*, ed. by Cary Wolfe (Minneapolis: University of Minnesota Press, 2003), pp. 121-46 (p. 127).

Bibliography

'A Chimp off the Old Block', *Aberdeen Evening Express*, 22 March 2007, p. 8

Allen, Grant, *The Great Taboo* (London: Chatto & Windus, 1890)

Anonymous Autistic Adult, 'Faking NT vs Being Yourself', *Autism Information Library*, 2003 <<http://www.autistics.org/library/fakingnt.html>>

Argyle, Michael, 'Nonverbal Vocalizations', in *The Nonverbal Communication Reader: Classic and Contemporary Readings*, 2nd edn, ed. by Laura K. Guerrero, Joseph A. DeVito, and Michael L. Hecht (Prospect Heights: Waveland Press, 1999), pp. 135-48

Arnold, Kate, and Klaus Zuberbühler, 'Semantic Combinations in Primate Calls', *Nature*, 441 (18 May 2006), 303

Atwood, Margaret, *Oryx and Crake* (London: Bloomsbury, 2003)

Auel, Jean M., *The Clan of the Cave Bear* (London: Coronet / Hodder & Stoughton, 2002)

Auster, Paul, *Timbuktu* (London: Faber and Faber, 2000)

'Autistic Spectrum Disorder', *NHS Direct Health Encyclopaedia*, 6 July 2007

<<http://www.nhsdirect.nhs.uk/he.asp?ArticleID=41>>

Badmington, Neil, 'Introduction: Approaching Posthumanism', in *Posthumanism*, ed by Neil Badmington (Basingstoke and New York: Palgrave, 2000), pp. 1-10

Badmington, Neil, *Alien Chic: Posthumanism and the Other Within* (Abingdon and New York: Routledge, 2004)

Baggs, Amanda, 'This is What your "Treatments" Do to Us', *Autism Information Library*, 2003 <<http://www.autistics.org/library/dotous.html>>

Baker, Steve, *The Postmodern Animal* (London: Reaktion, 2000)

Barber, Richard, ed. and trans., *Bestiary: Being an English Version of the Bodleian Library, Oxford M.S. Bodley 764* (Woodbridge: Boydell Press, 1999)

Baron-Cohen, Simon, *Mindblindness: An Essay on Autism and Theory of Mind* (Cambridge, Mass. and London: MIT Press, 1997)

Baron-Cohen, Simon, Helen Tager-Flusberg, and Donald J. Cohen, eds,
*Understanding Other Minds: Perspectives from Developmental Cognitive
Neuroscience* (Oxford: Oxford University Press, 2000)

Baron-Cohen, Simon, 'Theory of Mind and Autism: A Fifteen Year Review', in
Understanding Other Minds, pp. 3-20

Barrie, James Matthew, 'Little White Bird' (1902), in *Farewell Miss Julie Logan: A
Barrie Omnibus*, ed. by Andrew Nash (Edinburgh: Canongate Classics, 2000), pp. 1-
216

Barthes, Roland, *Mythologies*, ed. and trans. by Annette Lavers (London: Granada,
1973)

Barthes, Roland, *The Pleasure of the Text*, trans. by Richard Miller (London: Jonathan
Cape, 1976)

Barthes, Roland, *Image Music Text*, trans. by Stephen Heath (London: Fontana, 1977)

Barthes, Roland, *The Grain of the Voice: Interviews 1962-1980*, trans. by Linda
Coverdale (Berkeley and Los Angeles: University of California Press, 1985)

Barthes, Roland, *Roland Barthes by Roland Barthes*, trans. by Richard Howard
(London: Papermac, 1995)

Bataille, Georges, *Theory of Religion*, trans. by Robert Hurley (New York: Zone Books, 1989)

Bates, Brian, and John Cleese, *The Human Face* (London: BBC Worldwide, 2001)

Belsey, Catherine, *Critical Practice* (London and New York: Methuen, 1980)

Berger, John, 'Why Look At Animals?', *About Looking* (London: Writers and Readers Publishing Cooperative, 1980), pp. 1-26

Berman, Judith C., 'Bad Hair Days in the Paleolithic: Modern (Re)Constructions of the Cave Man', *American Anthropologist*, New Series, 101: 2 (June 1999), 288-304

Blackstock, Colin, 'Tea Party is Over for the PG Chimps', *Guardian*, 12 January 2002, p. 7

Boaz, Noel. T., and Russell L. Ciochon, 'Brute of Dragon Bone Hill', *New Scientist*, 17 April 2004, pp. 32-35

Boulle, Pierre, *Monkey Planet*, trans. by Xan Fielding (Harmondsworth: Penguin, 1966)

Bronowski, Jacob, *The Ascent of Man* (London: Book Club Associates/BBC, 1975)

Brownell, Hiram, and others, 'Cerebral Lateralization and Theory of Mind', in *Understanding Other Minds* (see Baron-Cohen, above), pp. 306-33

Butler, Judith, *Bodies that Matter: On the Discursive Limits of 'Sex'* (London and New York: Routledge, 1993)

Butler, Judith, *Gender Trouble: Feminism and the Subversion of Identity*, 2nd edn (London and New York: Routledge, 1999)

Caird, Rod, *Ape Man: The Story of Human Evolution* (London: Boxtree, 1994)

Candland, Douglas Keith, *Feral Children and Clever Animals: Reflections on Human Nature* (Oxford and New York: Oxford University Press, 1993)

Cann, Rebecca, Mark Stoneking, and Allan Wilson, 'Mitochondrial DNA and Human Evolution', *Nature*, 325 (1 January 1987), 31-36

Cartmill, Matt, 'Human Uniqueness and Theoretical Content in Paleoanthropology', *International Journal of Primatology*, 11: 3 (1990), 173-92

Charman, Tony, 'Theory of Mind and the Early Diagnosis of Autism', in *Understanding Other Minds* (see Baron-Cohen, above), pp. 422-41

Chaucer, Geoffrey, 'The General Prologue', in *The Riverside Chaucer*, 3rd edn, ed. by Larry D. Benson and F. N. Robinson (Oxford: Oxford University Press, 1988), pp. 23-36

Chaucer, Geoffrey, 'The Shipman's Tale', in *The Riverside Chaucer*, pp. 203-08

'Chimp House Hopes to Become Champ', *BBC News*, 5 April 2006

<<http://news.bbc.co.uk/1/hi/england/devon/4879302.stm>

Clark, Stephen R. L., 'Is Humanity a Natural Kind?', in *What is an Animal?*, ed. by Tim Ingold (London and New York: Routledge, 1994), pp. 17-34

Cole, Sonia, *The Prehistory of East Africa* (Harmondsworth: Penguin, 1954)

Connor, Steve, 'Fashion-Conscious Chimps Ape Habits of their Friends', *Independent*, 22 August 2005, p. 16

Connor, Steve, "'Pyow hack!" Monkeys Can Talk to Each Other Using Sentences', *Independent*, 18 May 2006, p. 11

Cummings, Brian, 'Animal Passions and Human Sciences: Shame, Blushing and Nakedness in Early Modern Europe and the New World', in *At the Borders of the Human: Beasts, Bodies and Natural Philosophy in the Early Modern Period*, ed. by

Erica Fudge, Ruth Gilbert, and Susan Wiseman (Basingstoke and New York: Palgrave, 2002), pp. 26-50

Darwin, Charles, 'On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life (1859)', in *From So Simple a Beginning: The Four Great Books of Charles Darwin*, ed. by Edward O. Wilson (London and New York: W. W. Norton, 2006), pp. 441-760

Darwin, Charles, 'The Descent of Man, and Selection in Relation to Sex (1871)', in *From So Simple a Beginning*, pp. 767-1248

Darwin, Charles, 'The Expression of the Emotions in Man and Animals' (1872), in *From So Simple a Beginning*, pp. 1255-1477

Daston, Lorraine, and Gregg Mitman, eds, *Thinking with Animals: New Perspectives on Anthropomorphism* (New York: Columbia University Press, 2005)

Dawkins, Marian Stamp, *Through our Eyes Only? The Search for Animal Consciousness* (Oxford: Oxford University Press, 1998)

Dawkins, Richard, *The Blind Watchmaker* (Harmondsworth: Penguin, 1988)

Dawkins, Richard, *River out of Eden: A Darwinian View of Life* (London: Weidenfeld and Nicolson, 1995)

Dawson, Michelle, 'Missing Persons', *New Scientist*, 3 June 2006, p. 22

Deich, Ruth F., and Patricia M. Hodges, *Language without Speech* (London: Souvenir Press (Educational and Academic) Ltd., 1977)

Derrida, Jacques, 'The Ends of Man', *Philosophy and Phenomenological Research*, 30: 1 (September 1969), 31-57

Derrida, Jacques, '*Speech and Phenomena*' and *Other Essays on Husserl's Theory of Signs*, trans. by David B. Allison (Evanston: Northwestern University Press, 1973)

Derrida, Jacques, 'Geschlecht II: Heidegger's Hand', trans. by John P. Leavey, Jr., in *Deconstruction and Philosophy: The Texts of Jacques Derrida*, ed. by John Sallis (Chicago and London: University of Chicago Press, 1987), pp. 161-96

Derrida, Jacques, "'Eating Well", or the Calculation of the Subject: An Interview with Jacques Derrida', trans. by Peter Connor and Avital Ronell, in *Who Comes after the Subject?*, ed. by Eduardo Cadava, Peter Connor, and Jean-Luc Nancy (New York: Routledge, 1991), pp. 96-119

Derrida, Jacques, *Of Grammatology*, trans. by Gayatri Chakravorty Spivak, corrected edn (Baltimore: The Johns Hopkins University Press, 1997)

Derrida, Jacques, 'The Animal that Therefore I Am (More to Follow)', trans. by David Wills, *Critical Inquiry*, 28: 2 (Winter 2002), 369-418

Derrida, Jacques, 'And Say the Animal Responded?', trans. by David Wills, in *Zoontologies: The Question of the Animal*, ed. by Cary Wolfe (Minneapolis and London: University of Minnesota Press, 2003), pp. 121-46

Derrida, Jacques, and Elizabeth Roudinesco, *For What Tomorrow... A Dialogue*, trans. by Jeff Fort (Stanford: Stanford University Press, 2004)

Descartes, René, 'Discourse on the Method of Rightly Conducting One's Reason and Seeking the Truth in the Sciences', in *The Philosophical Writings of Descartes*, trans. by John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1985), Vol. I, pp. 111-51

Diamond, Jared, *The Rise and Fall of the Third Chimpanzee* (London: Hutchinson Radius, 1991)

Diamond, Jared, *Guns, Germs and Steel: A Short History of Everybody for the Last 13,000 Years* (London: Vintage, 1998)

Douglas, Kate, 'It's Good to Bark', *New Scientist*, 12 June 2004, pp. 52-53

Douglas, Mary, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London and New York: Ark/Routledge, 1984)

Douthwaite, Julia, 'Rewriting the Savage: The Extraordinary Fictions of the "Wild Girl of Champagne"', *Eighteenth-Century Studies*, 28: 2 (1994-5), 163-192

Dreifus, Claudia, 'She Talks to Apes and, according to Her, They Talk Back', *New York Times*, 14 April 1998, section F, p. 4

Felman, Shoshana, *The Scandal of the Speaking Body: Don Juan with J. L Austin, or Seduction in Two Languages* (Stanford: Stanford University Press, 2003)

Fernández-Armesto, Felipe, *So You Think You're Human?: A Brief History of Humankind* (Oxford and New York: Oxford University Press, 2004)

Fleming, Chris and Jane Goodall, 'Dangerous Darwinism', *Public Understanding of Science*, 11 (2002), 259-271

Foucault, Michel, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage, 1973)

Fraser, Alistair B., 'The Pathetic Fallacy: Animism Masquerading as Science in Education', *Bad Science*, undated

<<http://www.ems.psu.edu/~fraser/Bad/PatheticFallacy.html>>

-
- Freud, Sigmund, 'The "Uncanny"', *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, trans. by James Strachey, with Anna Freud, assisted by Alix Strachey and Alan Tyson (London: The Hogarth Press, 1955), Vol. XVII, pp. 217-52
- Freud, Sigmund, *The Psychopathology of Everyday Life*, trans. by Alan Tyson, ed. by Angela Richards, general ed. James Strachey (Harmondsworth: Penguin, 1975)
- Freud, Sigmund, *Introductory Lectures on Psychoanalysis*, trans. by James Strachey, ed. by Angela Richards, general ed. James Strachey (London: Penguin, 1976)
- Freud, Sigmund, *The Origins of Religion: Totem and Taboo, Moses and Monotheism, and Other Works*, trans. by Angela Richards, ed. by Albert Dickson, general ed. James Strachey (London: Penguin, 1985)
- Fudge, Erica, *Animal* (London: Reaktion, 2002)
- Fuss, Diana, 'Introduction', in *Human, All Too Human*, ed. by Diana Fuss (London: Routledge, 1996), pp. 1-7
- Gane, Nicholas, 'When We Have Never Been Human, What Is to Be Done?: Interview with Donna Haraway', *Theory Culture & Society*, 23: 7-8 (2006), 135-58

Garber, Marjorie, 'Heavy Petting', in *Human, All Too Human* (see Fuss, above), pp. 11-36

Garber, Marjorie, *Vested Interests: Cross-Dressing and Cultural Anxiety* (New York: Routledge, 1997)

Garber, Marjorie, *Quotation Marks* (London and New York: Routledge, 2003)

Gardner, Erle Stanley, *The Case of the Perjured Parrot* (Cleveland and New York: The World Publishing Company, 1948)

'Gene Study Suggests Early Humans Traded Mighty Bite for Bigger Brains', *Scientific American*, 25 March 2004 <<http://www.sciam.com/article.cfm?articleID=000126D6-200B-1062-A00B83414B7F0000&sc=I100322>>

George, Jean Craighead, *How to Talk to your Animals* (London: Hodder & Stoughton, 1986)

Grandin, Temple, and Catherine Johnson, *Animals in Translation: Using the Mysteries of Autism to Decode Animal Behaviour* (London: Bloomsbury, 2005)

Gray, John, *Straw Dogs: Thoughts on Humans and Other Animals* (London: Granta, 2002)

Guerrero, Laura K., Joseph A. DeVito, and Michael L. Hecht, 'Part II: Nonverbal Codes', in *The Nonverbal Communication Reader* (see Argyle, above), pp. 43-45

Haddon, Mark, *The Curious Incident of the Dog in the Night-time* (London: Jonathan Cape, 2003)

Halberstam, Judith, and Ira Livingston, eds, *Posthuman Bodies* (Bloomington and Indianapolis: Indiana University Press, 1995)

Hamilton, Alan, 'How Ziggy the Indiscreet Parrot Gave a Cheating Girlfriend the Bird', *The Times*, 17 January 2006, p. 5

Hanafi, Zakiya, *The Monster in the Machine: Magic, Medicine, and the Marvelous in the Time of the Scientific Revolution* (Durham and London: Duke University Press, 2000)

Haraway, Donna J., *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York and London: Routledge, 1989)

Haraway, Donna J., *Simians, Cyborgs, and Women: The Reinvention of Nature* (London: Free Association Books, 1991)

Haraway, Donna, *The Companion Species Manifesto: Dogs, People, and Significant Otherness* (Chicago: Prickly Paradigm Press, 2003)

Haraway, Donna, 'A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s', in *The Haraway Reader* (London and New York: Routledge, 2004), pp. 7-45

Haraway, Donna, 'Otherworldly Conversations; Terran Topics; Local Terms', in *The Haraway Reader*, pp. 125-50

Haraway, Donna, 'Race: Universal Donors in a Vampire Culture. It's All in the Family: Biological Kinship Categories in the Twentieth-Century United States', in *The Haraway Reader*, pp. 251-93

Haraway, Donna, 'Cyborgs to Companion Species: Reconfiguring Kinship in Technoscience', in *The Haraway Reader*, pp. 295-320

Haraway, Donna, *When Species Meet* (University of Minnesota Press, forthcoming).

Hardaker, Paul, 'Who's a Splitty Boy Then; Chris Dumps Girl as Parrot Squawks All', *Daily Record*, 17 January 2006, p. 3

Harris, Geraldine, *Staging Femininities: Performance and Performativity* (Manchester and New York: Manchester University Press, 1999)

Harrison, David and Tony Freinberg, 'Autistic Liberation Front Fights the "Oppressors Searching for a Cure"', *Daily Telegraph*, 9 January 2005, p. 3

Hecht, Michael L., Joseph A. DeVito, and Laura K. Guerrero, 'Perspectives on Nonverbal Communication: Codes, Functions, and Contexts', in *The Nonverbal Communication Reader* (see Argyle, above), pp. 3-18

Henderson, Mark, 'Neanderthal DNA Will Help to Unlock the Secrets of Humanity', *The Times*, 16 November 2006, p. 29

Hensher, Philip, 'Art that Makes a Monkey out of Us All', *Independent*, 22 June 2005, p. 33

Holmes, Bob, 'Chimp Genome Preview: The Great Inventors', *New Scientist*, 21 February 2004, pp. 40-43

Horton, Richard, *Second Opinion: Doctors, Diseases and Decisions in Modern Medicine* (London: Granta, 2003)

Howell, F. Clark, *Early Man* (New York: Time-Life International, 1966)

Hutcheon, Linda, *A Theory of Parody: The Teachings of Twentieth-Century Art Forms* (New York and London: Methuen, 1985)

Ingold, Tim, 'Introduction', in *What Is an Animal?*, ed. by Tim Ingold (London and New York: Routledge, 1994), pp. 1-16

Itard, Jean, *Mémoire sur les premiers développements de Victor de L'Aveyron* (1801)
<<http://www.feralchildren.com/en/pager.php?df=itard1801&pg=14>>

Itard, Jean, *Rapport sur les nouveaux développements de Victor de L'Aveyron* (1806)
<<http://www.feralchildren.com/en/pager.php?df=itard1806&pg=18>>

Januszczak, Waldemar, 'Congo the Chimpanzee', *The Sunday Times*, 25 September 2005, Culture section, p. 10

Jeeves, Paul, 'So, Who's a Silly Love Cheat Then?', *Express*, 17 January 2006, p. 11

Jones, Dan, 'The Neanderthal Within', *New Scientist*, 3 March 2007, pp. 28-32

Joseph, Joe, 'Modern Morals', *The Times*, 5 March 2007, Times 2 section, p. 3

Kahn, Richard, 'Review of *Representing Animals*, ed. by Nigel Rothfels', *H-Net, H-Net Reviews*, February 2005
<<http://www.h-net.org/reviews/showrev.cgi?path=321721117053061>>

Karpf, Anne, *The Human Voice: How This Extraordinary Instrument Reveals Essential Clues about Who We Are*, advance reading copy (London: Bloomsbury, 2006)

Kelbie, Paul, 'Talking Chimpanzee: Apes Use Screams to Send out Social Signals', *Independent*, 4 April 2005, p. 19

Kennedy, John S., *The New Anthropomorphism* (Cambridge: Cambridge University Press, 1992)

Klin, Ami, Robert Schultz, and Donald J. Cohen, 'Theory of Mind in Action: Developmental Perspectives on Social Neuroscience,' in *Understanding Other Minds* (see Baron-Cohen, above), pp. 357-89

Koenigswald, G. H. R. von, 'Early Man: Facts and Fantasy', *The Journal of the Royal Anthropological Institute of Great Britain and Ireland*, 94: 2 (June-December 1964), 67-79

Köhler, Wolfgang, *The Mentality of Apes*, trans. by Ella Winter (London: Kegan Paul, Trench, Trubner & Co, 1925)

La Mettrie, Julien Offray de, *Man a Machine*, trans. by Gertrude C. Bussey and Professor M. W. Calkins (La Salle: Open Court, 1912)

Leakey, Richard, and Roger Lewin, *Origins Reconsidered: In Search of What Makes Us Human* (London: Little, Brown and Company, 1992)

Lévi-Strauss, Claude, *The Savage Mind* (London: Weidenfeld & Nicolson, 1972)

Lieberman, Philip, *Eve Spoke: Human Language and Human Evolution* (New York and London: W. W. Norton, 1998)

“‘Life Code’ of Chimps Laid Bare’, *BBC News*, 31 August 2005

<<http://news.bbc.co.uk/1/hi/sci/tech/4197844.stm>>

Linnaei, Caroli, *Systema Naturae: A Photographic Fascimile of the First Volume of the Tenth Edition (1758)* (London: The British Museum (Natural History), 1956)

Lofting, Hugh, *The Story of Doctor Dolittle* (London: Jonathan Cape, 1924)

Lusher, Adam, ‘Who’s a Perverted Polly?’, *Daily Telegraph*, 31 July 2005, p. 19

Martin Luther, *Colloquia Mensalia* (1566) LXVII, trans. by William Hazlitt

(Philadelphia: The Lutheran Publication Society) <<http://www.lutherdansk.dk/Table-Talk/index1.htm>>, last accessed 20 October 2005.

Lynch, John, and Louise Barrett, *Walking with Cavemen: Eye-to-Eye with your Ancestors* (London: Headline / BBC, 2002)

Lyotard, Jean-François, *The Differend: Phrases in Dispute*, trans. by Georges Van Den Abbeele (Minneapolis: University of Minnesota Press, 1988)

Lyotard, Jean-François, *The Inhuman: Reflections on Time*, trans. by Geoffrey Bennington and Rachel Bowlby (Stanford: Stanford University Press, 1991)

Lyotard, Jean-François, *The Postmodern Explained to Children: Correspondence 1982-1985*, trans. by Julian Pefanis et. al. (London: Turnaround, 1992)

McCall, Becky, 'New Light Shed on Chimp Genome', *BBC News*, 5 April 2004
<<http://news.bbc.co.uk/1/hi/sci/tech/3594937.stm>>

McCrone, John, *The Ape that Spoke* (London and Basingstoke: Macmillan, 1990)

Mitchell, Robert W., Nicholas S. Thompson, and H. Lyn Miles, eds,
Anthropomorphism, Anecdotes, and Animals (Albany: State University of New York Press, 1997)

Mithen, Steven, 'Paleoanthropological Perspectives on the Theory of Mind', in
Understanding Other Minds (see Baron-Cohen, above), pp. 488-502

Mithen, Steven, *The Singing Neanderthals: The Origin of Music, Language, Mind and Body* (London: Phoenix / Orion, 2006)

Morgan, Elaine, *The Descent of Woman* (London: Souvenir Press, 1972)

Mori, Masahiro, 'The Uncanny Valley', trans. by Karl F. MacDorman and Takashi Minato

<<http://www.androidscience.com/theuncannyvalley/proceedings2005/uncannyvalley.html>> Originally published in *Energy*, 7:4 (1970), 33-35

Morris, Desmond, *The Biology of Art: A Study of the Picture-Making Behaviour of the Great Apes and its Relationship to Human Art* (London: Methuen, 1962)

Morris, Desmond, *The Naked Ape* (London: Corgi, 1968)

Morris, Desmond, *The Human Animal: A Personal View of the Human Species* (London: BBC Books, 1994)

Morris, Steven, 'Monkey Business: Chimpanzee's Paintings Go on Sale', *Guardian*, 12 May 2005, p. 4

Mouland, Bill, 'The Monkey Master', *Daily Mail*, 21 June 2005, p. 31

Mouland, Bill, 'Stool-Pigeon Parrot', *Daily Mail*, 17 January 2006, p. 3

Muir, Hugh, 'Neanderthal Thinking', *Guardian Unlimited*, 8 March 2007

<http://commentisfree.guardian.co.uk/hugh_muir/2007/03/by_the_time_i_met.html>

Nash, Christopher, ed., 'Foreword', in *Narrative in Culture: The Uses of Storytelling in the Sciences, Philosophy, and Literature* (London and New York: Routledge, 1994), pp. xi-xiv

Newton, Michael, 'Bodies without Souls: The Case of Peter the Wild Boy', in *At the Borders of the Human* (see Cummings, above), pp. 196-214

Nietzsche, Friedrich, *Thus Spake Zarathustra: A Book for All and None*, trans. by Alexander Tille (London and Leipzig: T. Fisher Unwin, 1908)

Norman, Richard, *On Humanism* (London and New York: Routledge, 2004)

Orwant, Robin, 'Chimp Genome Preview: What Makes Us Human', *New Scientist*, 21 February 2004, pp. 36-39

Page, George, *The Singing Gorilla: Understanding Animal Intelligence* (London: Headline, 1999)

Palmer, Douglas, *Neanderthal* (London: Channel 4 Books / Macmillan, 2000)

Parker, Andrew, and Eve Kosofsky Sedgwick, eds, *Performativity and Performance* (London and New York: Routledge, 1995)

'Parrot Tells Owner: Your Gal's Cheating', *Fox News*, 18 January 2006

<<http://www.foxnews.com/story/0,2933,181935,00.html>>

Passingham, Richard E., *The Human Primate* (Oxford and San Francisco: W. H. Freeman & Company, 1982)

Pease, Allan, *Body Language: How to Read Others' Thoughts by their Gestures* (London: Sheldon Press, 1997)

Pepperberg, Irene Maxine, 'Cognition and Communication in an African Grey Parrot (*Psittacus erithacus*): Studies on a Nonhuman, Nonprimate, Nonmammalian Subject', in *Language and Communication: Comparative Perspectives*, ed. by Herbert L. Roitblat, Louis M. Herman, and Paul E. Nachtigall (Hillside, N.J., Hove and London: Lawrence Erlbaum Associates, 1993), pp. 221-48

Perry, Jeffrey, 'Music, Evolution and the Ladder of Progress', *Music Theory Online: The Online Journal of the Society for Music Theory*, 6:5 (November 2000)

<<http://mto.societymusictheory.org/issues/mto.00.6.5/mto.00.6.5.perry.html>>

'PG Tips', *Unilever Foodsolutions United Kingdom*, 2007

<http://www.unileverfoodsolutions.co.uk/company/brands/show/42.pg_tips.html>

'PG Tips: A Manchester Brew', *BBC Manchester*, 8 March 2005

<http://www.bbc.co.uk/manchester/content/articles/2005/03/01/pg_tips_75th_anniversary_feature.shtml>

Pinker, Steven, *The Language Instinct: The New Science of Language and Mind* (London: Penguin, 1995)

Povinelli, Daniel J., and Daniela K. O'Neill, 'Do Chimpanzees Use their Gestures to Instruct Each Other?', in *Understanding Other Minds* (see Baron-Cohen, above), pp. 459-87

Prick, J. J. G., *Infantile Autistic Behaviour and Experience: A New Clinical Picture* (Rotterdam: Rotterdam University Press, 1971)

Pyatt, Jamie, 'Birdbrain Kidnaps Parrot', *Sun*, 8 November 2005
<<http://www.thesun.co.uk/article/0,,2-2005510768,00.html>>

'Quotes of the Week', *Mail on Sunday*, 22 January 2006, p. 65

Ramachandran, Vilayanur, and Sandra Blakeslee, *Phantoms in the Brain: Human Nature and the Architecture of the Mind* (London: Fourth Estate, 1999)

Ramachandran, Vilayanur, and Lindsay Oberman, 'Autism: The Search for Steven',
New Scientist, 17 May 2006, p. 48

Reader, John, *Missing Links: The Hunt for Earliest Man* (London: Penguin, 1990)

Ritvo, Harriet, 'Border Trouble: Shifting the Line between People and Other Animals',
Social Research, 62: 3 (Fall 1995), 481-500

Ritvo, Harriet, *The Platypus and the Mermaid and Other Figments of the Classifying Imagination* (Cambridge, Mass. and London: Harvard University Press, 1998)

Riviere, Joan, 'Womanliness as a Masquerade', *International Journal of Psychoanalysis* 10 (1929), 303-13

Robinson, Arthur, 'The Principles of Genetics and Heredity', in *Encyclopaedia Britannica*, 15th edn (Chicago and London: Encyclopaedia Britannica Inc., 1994), Vol. XIX, pp. 699-740

Roget, Peter and D. C. Browning, *Roget's Thesaurus of English Words and Phrases: The Everyman Edition* (London: Chancellor, 1986)

Rothman, Barbara Katz, *Genetic Maps and Human Imaginations: The Limits of Science in Understanding Who We Are* (London and New York: W. W. Norton, 1998)

-
- Rousseau, Jean-Jacques, *The Discourses and Other Early Political Writings*, ed. and trans. by Victor Gourevitch (Cambridge: Cambridge University Press, 1997)
- Sacks, Oliver, *The Man Who Mistook his Wife for a Hat* (London: Pan/Picador, 1986)
- Sacks, Oliver, *Seeing Voices: A Journey into the World of the Deaf* (London and Basingstoke: Picador/Macmillan, 1991)
- Sacks, Oliver, *An Anthropologist on Mars: Seven Paradoxical Tales* (London and Basingstoke; Pan/Macmillan, 1995)
- Sandars, N. K., ed., *The Epic of Gilgamesh* (London: Penguin, 1972)
- Saussure, Ferdinand de, *Course in General Linguistics*, trans. by Wade Baskin, ed. by Charles Bally and Albert Sechehaye (New York: McGraw Hill, 1966)
- Savage-Rumbaugh, Sue, and Roger Lewin, *Kanzi: The Ape at the Brink of the Human Mind* (New York and Chichester: John Wiley & Sons, 1994)
- Savage-Rumbaugh, Sue, *Apes, Language, and the Human Mind* (Oxford and New York: Oxford University Press, 1998)
- Schiebinger, Londa, 'Taxonomy For Human Beings', in *The Gendered Cyborg: A Reader*, ed. by Gill Kirkup et. al. (London and New York: Routledge, 2000), pp. 11-37

Schwartz, Jeffrey H., *The Red Ape: Orang-utans and Human Origins* (London: Elm Tree Books / Hamish Hamilton, 1987)

Sebeok, Thomas A., *Perspectives in Zoosemiotics* (The Hague: Mouton, 1972)

Sebeok, Thomas A., and Jean Umiker-Sebeok, 'Performing Animals: Secrets of the Trade', *Psychology Today* (November 1979), 78-91

Seidel, Kathleen, 'The Autistic Distinction', *Neurodiversity.com*, 20 August 2004
<http://www.neurodiversity.com/autistic_distinction.html>

Shackley, Myra, *Still Living? Yeti, Sasquatch and the Neanderthal Enigma* (New York: Thames & Hudson, 1986)

Sinclair, Jim. 'Don't Mourn for Us', *Autism Information Library*
<<http://www.autistics.org/library/dontmourn.html>>

Skeat, Rev. Walter W., *An Etymological Dictionary of the English Language* (Oxford: Clarendon Press, 1910)

Solecki, Ralph S., *Shanidar: The Humanity of Neanderthal Man* (London: Allen Lane The Penguin Press, 1972)

Soper, Kate, *Humanism and Anti-Humanism* (London: Hutchinson, 1986)

Spanos, William V., *The End of Education: Toward Posthumanism* (Minneapolis and London: University of Minnesota Press, 1993)

Spearman, Michael, 'One Hundred and Ape-ty', *Sun*, 13 January 2006

<<http://www.thesun.co.uk/article/0,,3-2006020078,00.html>>

Squire, John C., *Apes and Parrots: An Anthology of Parodies* (London: Herbert Jenkins, 1929)

Tattersall, Ian, *The Last Neanderthal: The Rise, Success, and Mysterious Extinction of our Closest Human Relatives* (New York: Peter N. Nevraumont / Macmillan, 1995)

Tattersall, Ian, *The Monkey in the Mirror: Essays on the Science of What Makes Us Human* (Oxford: Oxford University Press, 2002)

'Tell-tale Parrot Exposes Cheating Girlfriend', *MSNBC*, 17 January 2006

<<http://www.msnbc.msn.com/id/10704041>>

The National Autistic Society, 'How Many People Have Autistic Spectrum Disorders?', May 2007 <<http://www.nas.org.uk/nas/jsp/polopoly.jsp?d=299&a=3527>>

'They Said', *Birmingham Post*, 19 January 2006, p. 16

Thompson, Nato, ed., *Becoming Animal: Contemporary Art in the Animal Kingdom*, (Massachusetts: Massachusetts Museum of Contemporary Art, 2005)

Tinbergen, Niko FRS, and Elisabeth A. Tinbergen, *'Autistic' Children: New Hope for a Cure* (London: George Allen & Unwin, 1983)

Tompkins, Peter, and Christopher Bird, *The Secret Life of Plants* (Harmondsworth: Penguin, 1975)

Tudge, Colin, *The Variety of Life: A Survey and a Celebration of all the Creatures that Have Ever Lived* (Oxford: Oxford University Press, 2002)

Tyler, Tom, 'If Horses Had Hands...', *Society and Animals*, 11: 3 (2003), 267-281

Uhlenbroek, Charlotte, *Talking with Animals* (London: Hodder & Stoughton, 2002)

US Department of Energy, *To Know Ourselves*, 1996

<http://www.ornl.gov/sci/techresources/Human_Genome/publicat/tko/>

Van Lawick-Goodall, Jane, *In the Shadow of Man* (Glasgow: Fontana, 1974)

Vinden, Penelope G., and Janet Wilde Astington, 'Culture and Understanding Other Minds', in *Understanding Other Minds* (see Baron-Cohen, above), pp. 503-20

Walker, Stephen, *Animal Thought* (London: Routledge and Kegan Paul, 1985)

Wallman, Joel, *Aping Language* (Cambridge: Cambridge University Press, 1992)

Ward, Andrew, 'Autism and Feral Children', *FeralChildren.com*, undated
<<http://www.feralchildren.com/en/autism.php>>

Watson, John B., *Behavior: An Introduction to Comparative Psychology* (New York: Henry Holt & Company, 1929)

Wellman, Henry M., and Kristin H. Lagattuta, 'Developing Understandings of Mind,' in *Understanding Other Minds* (see Baron-Cohen, above), pp. 21-49

Wells, H. G., *The Outline of History: Being a Plain History of Life and Mankind* (London: George Newnes, undated [1919-20]), Vol. I

Wendt, Herbert, *From Ape to Adam: The Search for the Ancestry of Man*, trans. by Susan Cupitt (London: Thames & Hudson, 1972)

'When Ziggy Shopped Sally', *Daily Telegraph*, 17 January 2006, p. 21

Wilcox, Ella Wheeler, 'The Voice of the Voiceless' (1910)
<<http://www.ellawheelerwilcox.org/poems/pvoice5.htm>>

Williams, Donna, *Nobody Nowhere: The Remarkable Autobiography of an Autistic Girl* (London and Philadelphia: Jessica Kingsley Publishers, 1999)

Wilson, Edward O., *On Human Nature* (Cambridge, Mass., and London: Harvard University Press, 1978)

Wolfe, Cary, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (Chicago and London: The University of Chicago Press, 2003)

Wolfe, Cary, 'Learning from Temple Grandin, or, Animal Studies, Disability Studies, and Who Comes after the Subject', *New Formations*, forthcoming

Woodhouse, Barbara, *Almost Human* (Rickmansworth: Woodhouse, 1976)

'Ziggy, the Parrot Who Said Too Much', *The Times*, 17 January 2006, p. 1

Television, Radio and Film

'Neanderthal', *Horizon*. First broadcast 10 February 2005 on BBC Two. Transcript available online at

<http://www.bbc.co.uk/sn/tvradio/programmes/horizon/neanderthal_trans.shtml>

‘The Day We Learned to Think’, *Horizon*. First broadcast 20 February 2003 on BBC

Two. Transcript available online at

<<http://www.bbc.co.uk/science/horizon/2003/learnthinktrans.shtml>>

‘Are We Neanderthals?’, *The Science Show*. First broadcast 24 July 2004 on ABC

(Australian Broadcasting Corporation) Radio. Transcript available online at

<<http://www.abc.net.au/rn/science/ss/stories/s1151858.htm>>

‘Episode 1: Big Heads’ and ‘Episode 2: Copycats’, *What Makes Us Human?*. First

broadcast 12 and 19 August 2006 on Channel 4. For more information see the website

<http://www.channel4.com/science/microsites/W/what_makes_us_human>

‘The Art and Science of Restoration’, *Talk of the Nation*. First broadcast 25 March

2005 on National Public Radio, USA. Programme available from the NPR website at

<<http://www.npr.org/templates/story/story.php?storyId=4561173>>

British Pathe films, all available from *The British Pathe Online Archive* at

<<http://www.britishpathe.com>>:

Animal Oddities: Barflies Now Wear Fur Coats (1940-1949) Film ID 2242.19

Chimp and Infernal Machine (1967) Film ID 2027.06

Chimp Artist (1967) Film ID 2027.05

Chimpanzee (1954) Film ID 1607.17

Chimpish Intelligence (1937) Film ID 1144.19

Chimps Take Over (1962) Film ID 1719.28

Darwin was Right aka Gorilla is Painter (1959) Film ID 1660.09

Painting Chimps (1966) Film ID 371.08

Trying out Darwin? (1951) Film ID 1435.09

Truffaut, François, dir, *The Wild Child* (1969), distributed by MGM Home Entertainment (Europe), produced by Les Films du Carrosse and Les Productions Artistes Associés. [on DVD]

Websites

'40th Anniversary Slide Show', *Twycross Zoo*

<<http://www.twycrosszoo.com/flash/40thanniversaryslideshow.swf>>

Advocates For Animals – Giving Voice, Taking Action

<<http://www.advocatesforanimals.org.uk>>

Animal Voice <<http://www.animal-voice.org>>

Autism Network International <<http://ani.autistics.org>>

Autistic People Against Neuroleptic Abuse

<<http://www.dinahm.pwp.blueyonder.co.uk>>

Brooke Bond Tea Cards and Collectables <<http://www.brookebondcollectables.co.uk>>

‘Caveman Challenge – Science and Nature’, *BBC.co.uk*

<<http://www.bbc.co.uk/science/cavemen/challenge/index.html>>

‘Center for Evolutionary Psychology’, *University of California, Santa Barbara*

<<http://www.psych.ucsb.edu/research/cep>>

Cradle Of Humankind <<http://www.cradleofhumankind.co.za>>

‘Department of Human Sciences’, *Loughborough University*

<<http://www.lboro.ac.uk/departments/hu>>

Feral Children <<http://www.feralchildren.com>>

‘Flores Discovery’, *Guardian Unlimited*

<<http://www.guardian.co.uk/life/news/page/0,,1341652,00.html>>

Friends of Washoe <<http://www.friendsofwashoe.org>>

Great Ape Trust, Des Moines, Iowa <<http://www.greatapetrust.org>>

‘Human Sciences’, *Oxford University* <<http://www.human-sciences.ox.ac.uk>>

Institute for the Study of the Neurologically Typical <<http://isnt.autistics.org>>

'KokoMart', *Gorilla Foundation* <<http://www.koko.org/friends/kokomart.koko.html>>

Oxford English Dictionary <<http://dictionary.oed.com>>

Neurodiversity.com <<http://www.neurodiversity.com>>

'Sex ID – Science and Nature', *BBC.co.uk*

<<http://www.bbc.co.uk/science/humanbody/sex>>

The Animals [sic] Voice Magazine <<http://www.animalsvoice.com>>

'The Mayor Gallery – Ape Artists of the 1950s', *Artnet*

<<http://www.artnet.com/galleries/Exhibitions.asp?gid=725&cid=80738>>

Viva! Vegetarians International Voice For Animals <<http://www.viva.org.uk>>

Voiceless – The Fund For Animals <<http://www.voiceless.org.au>>

'Voices For The Voiceless', *IMOM.org* <<http://imom.org/voices>>

